MIHAELA TOFAN
IRINA BILAN
ELENA CIGU
(EDITORS)

EUFIRE 2021

Pandemic Challenges for European Finance, Business and Regulation

EDITURA UNIVERSITĂŢII „ALEXANDRU IOAN CUZA” DIN IAŞI

Mihaela Tofan • Irina Bilan • Elena Cigu
(editors)

Pandemic Challenges for European Finance, Business and Regulation

EUFIRE 2021

“With the support of the Erasmus+ Programme of the European Union”

Co-funded by the
Erasmus+ Programme
of the European Union

„This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.”

This volume is the result of the project Jean Monnet CHAIR European Financial Regulation, reference no. 574702-EPP-1-2016-1-RO-EPPJMO-CHAIR, supported by the Erasmus+ Programme of the European Union, and reunites a selection of the papers presented at the International Conference on „European Finance, Business and Regulation - EUFIRE 2021”, organized at Alexandru Ioan Cuza University of Iasi, Faculty of Economics and Business Administration, in May 2021.

Scientific advisors:
Professor Ph.D. Alin Marius Andrieș
Associate Professor Ph.D. Cosmin Flavius Costaș

ISBN online: 978-606-714-682-0

700109 – Iaşi, str. Pinului, nr. 1A, tel./fax: (0232) 314947
http://www.editura.uaic.ro e-mail: editura@uaic.ro
Director: prof. univ. dr. Constantin Dram

Mihaela Tofan • Irina Bilan • Elena Cigu

(editors)

Pandemic Challenges for European Finance, Business and Regulation

---

EUFIRE 2021

EDITURA UNIVERSITĂŢII „ALEXANDRU IOAN CUZA” DIN IAŞI
2021

Mihaela TOFAN is full professor at Alexandru Ioan Cuza University of Iași, Faculty of Economics and Business Administration - Department of Finance, Money and Public Administration and litigant lawyer. She has a degree in legal sciences from the Law Faculty of Alexandru Ioan Cuza University of Iași (1999), PhD. in legal sciences from the University of Bucharest (2008) – Faculty of Law and habilitation in administrative science from Babeș-Bolyai University of Cluj-Napoca. She is Professor Jean Monnet, director of the Jean Monnet Chair European Financial Regulation EUFIRE (eufire.uaic.ro) and member of the Center of Excellence in European Studies, within Alexandru Ioan Cuza University of Iași. She is Fulbright alumni, Emile Noel Senior Fellow at the New York University School of Law (2019), ERASMUS professor and invited guest for research and teaching at universities in Italy, Turkey, Cyprus, Portugal, France, United Kingdom, Spain, Czech Republic, Poland, Ukraine, Republic of Moldova, Iceland, Israel, United States of America and Germany. She is the author, co-author and editor of 20 volumes and 65 articles in volumes and journals indexed in international databases. Her expertise areas are EU Law, tax harmonization and Business Law.

Irina BILAN holds a PhD. in Finance from the Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iași. She is currently associate professor at the Department of Finance, Money and Public Administration, within the same faculty. Her area of expertise includes public finance, international finance, and money and banking systems. She performed research and documentation visits at Paris Dauphine University (France, 2010), University of Poitiers (France, 2015), University of Bolton (the United Kingdom, 2018), University of Zaragoza (Spain, 2018) and University of Michigan-Flint (the USA, 2019), and taught within the Erasmus programme in Italy, Turkey, Kazakhstan, Belgium, Spain, Morocco, Kyrgyzstan, Egypt, Croatia and Vietnam. She attended training programs on the subject of "Management of tertiary activities" (2011), "SAP, ERP and School Management" (2011-2012), "Didactics of teaching humanities" (2012), "Panel data econometrics" (2018). She published as an author or coauthor a book, several book chapters, and more than 70 papers in journals indexed in international databases or volumes of national and international conferences.

Elena CIGU, PhD. (in Finance), is associate professor at the Faculty of Economics and Business Administration of Alexandru Ioan Cuza University of Iași, Romania. She researches in the field of European studies since 2004, on local tax law, and in the field of Public Administration since 2004, on local administrative and financial autonomy in the EU countries. Her research involved a postdoctoral fellowship on financial autonomy and implications on the sustainable development of local communities in the knowledge society. She had research mobilities at the University of Bolton (the UK) and at the University of Parma (Italy). She authored and co-authored 10 books, along with over 40 articles published in journals indexed in international databases, 60 articles published in conference proceedings, and attended over 70 international conferences. She has experience in project management as director or member in several structural and research projects (such as Erasmus+, Erasmus Mundus, POSDRU, POCU, UEFCSDI, CEEX), in the organizing committee of 10 international conferences and in international teaching through Erasmus and Erasmus+ programmes. Her teaching activities have focused so far on local public finance and public administration.

TABLE OF CONTENTS

SECTION 4. EU BUSINESS AND GREEN FINANCE

SECTION 5. EU MACROECONOMIC POLICIES: HEALTH SECTOR CRISIS AND EXIT STRATEGIES

SCIENTIFIC COMMITTEE

PRESIDENT:

- **Mihaela ONOFREI,** Alexandru Ioan Cuza University of Iași, Romania

MEMBERS:

- **Alin Marius ANDRIEȘ,** Alexandru Ioan Cuza University of Iași, Romania
- **Ana Maria BERCU**, Alexandru Ioan Cuza University of Iași, Romania
- **Radu BUFAN**, West University, Timişoara, Romania
- **Cosmin Flavius COSTAȘ**, Babeș-Bolyai University, Cluj-Napoca, Romania
- **Daniel DEAK**, Corvinus University, Budapest, Hungary
- **Simona GHERGHINA**, University of Bucharest, Romania\
- **Miguel Poires MADURO,** European University Institute, Florence, Italy
- **Bogdan NEGREA**, Bucharest University of Economic Studies, Romania
- **Dan Costin NIȚESCU**, Bucharest University of Economic Study, Romania
- **Teodora ROMAN**, Alexandru Ioan Cuza University of Iași, Romania
- **Dan Drosu SAGUNA**, University of Bucharest, Romania
- **Mihaela TOFAN**, Alexandru Ioan Cuza University of Iași, Romania

LIST OF REVIEWERS

- **Alin-Marius ANDRIEȘ,** Alexandru Ioan Cuza University of Iași, Romania
- **Sorin-Gabriel ANTON,** Alexandru Ioan Cuza University of Iași, Romania
- **Constantin-Marius APOSTOAIE,** Alexandru Ioan Cuza University of Iași, Romania
- **Ana Maria BERCU**, Alexandru Ioan Cuza University of Iași, Romania
- **Irina BILAN,** Alexandru Ioan Cuza University of Iași, Romania
- **Radu BUFAN,** West University, Timișoara, Romania
- **Bogdan CĂPRARU,** Alexandru Ioan Cuza University of Iași, Romania
- **Elena CIGU,** Alexandru Ioan Cuza University of Iași, Romania
- **Cosmin-Flavius COSTAS**, Babes-Bolyai University of Cluj, Romania
- **Bogdan FÎRȚESCU,** Alexandru Ioan Cuza University of Iași, Romania
- **Simona GHERGHINA**, University of Bucharest, Romania
- **Sandra GRĂDINARU,** Alexandru Ioan Cuza University of Iași, Romania
- **Iulian IHNATOV,** Alexandru Ioan Cuza University of Iași, Romania
- **Salah KOUBAA,** Hassan II University of Casablanca, Morocco
- **Dan LUPU,** Alexandru Ioan Cuza University of Iași, Romania
- **Codrin MACOVEI,** Alexandru Ioan Cuza University of Iași, Romania
- **Bogdan NEGREA**, Bucharest University of Economic Studies, Romania
- **Ciprian PĂUN,** Babes-Bolyai University of Cluj, Romania
- **Mihai-Bogdan PETRIŞOR,** Alexandru Ioan Cuza University of Iași, Romania
- **Ada-Iuliana POPESCU,** Alexandru Ioan Cuza University of Iași, Romania
- **Jarmila ŠEBESTOVÁ**, Silesian University in Opava, Czech Republic
- **Dan DROSU SAGUNA**, University of Bucharest, Romania
- **Mihaela TOFAN**, Alexandru Ioan Cuza University of Iași, Romania
- **Bogdan-Gabriel ZUGRAVU,** Alexandru Ioan Cuza University of Iași, Romania

Section I

EU BANKING
AND FINANCIAL STABILITY

A COMPLETED EURO ZONE– A DREAM OR A FUTURE REALITY?

IOANA BUHAC
Alexandru Ioan Cuza University of Iași
Iași, România
ioana.buhac@yahoo.com

Abstract
The Eurozone was conceived by the founders as the center of the European integration process, bringing many economic benefits to trade, eliminating currency risk, transaction costs, and avoiding shocks in financial markets. But with these benefits, there are risks, often underestimated, but highlighted only after the financial crisis. A decision on accession must therefore be carefully examined.
Inadequate mechanisms and policies are closely linked to the Eurozone crisis. The desire for the Euro to be a force with relentless action for real convergence has proved too optimistic. Weak domestic institutions, insufficient productivity growth, and structural rigidities are some of the reasons why less developed countries cannot have real sustainable convergence provided by the Eurozone.
During the crisis, structural and institutional weaknesses of some EMU countries, including Greece, Spain and Portugal, were highlighted. The same states that in the post-crisis period registered high rates of economic growth, but which paradoxically with the onset of the crisis faced significant falls in real GDP / capita. Thus, the competitiveness gaps between Member States illustrated relevant imbalances in the Eurozone.
The need for real sustainable convergence, based on solid and non-cyclical foundations, is one of the most significant issues to be considered by every state wishing to be part of the Eurozone.
The report of the 5 presidents talks about "a sequence of short-term and longer-term steps" that will help the political union. In the short term, the main priority is to regain confidence in the European project so that citizens can believe in solving the problems related to migration, the Schengen area, cybersecurity, the de-escalation of relations with Turkey, Syria, Ukraine, and the Transatlantic Partnership Trade and Investment. In the longer term, the crisis has underlined the fact that EMU cannot resist without deeper integration. The European project needs much better political coordination and policies. Restoring confidence and renewing solidarity for the continuity of the European Project are preconditions that require special attention from politicians in the event of another crisis. After all these challenges there is one more question: the countries outside the Eurozone are ready to make the zone complete?
Keywords: *Euro; convergence criteria; monetary integration; Maastricht.*
JEL Classification: F0, G0

1. INTRODUCTION

Following World War II, in 1950 some of the European countries decided to unite both politically and economically, thus forming the European Coal and Steel Community. The founders of this community were France, Germany, Belgium, the Netherlands, Luxembourg, and Italy. Later, in 1957, the European Economic Community was created under the Treaty of Rome.

In 1960 the partner countries stopped applying customs duties, thus replacing them with a much greater benefit - trade. This decision has brought economic growth and balance, with all states beginning to benefit from the necessary food and surplus. Trade, in this case, was the advantage of economic uniformity.

Thirteen years later (in 1973), three more countries joined the Community - Denmark, the United Kingdom and Ireland. The energy crisis caused by the Arab-Israeli war, the fall of the Salazar regime in Portugal, the death of General Franco in Spain, brought major changes in Europe. The created union has started to develop in terms of infrastructure and jobs, with the European Parliament making its mark on the affairs of the whole region.

In 1981, Greece joined as a Member State, followed by Spain and Portugal five years later. At the same time, the Single European Act was signed, giving birth to the single market.

Between 1990 and 1999, the fall of communism in Central and Eastern Europe brought with it the addition of the four freedoms (free movement of goods, services, people and capital) to the single market and the signing of two important treaties (the Maastricht and Amsterdam Treaties) in 1993 and 1999 respectively.

Concerns about security, environmental protection and defence are becoming areas of interest for those in the European Union.

Austria, Sweden, and Finland also joined the EU in 1995, and communication between states is becoming easier, with the movement of people from one state to another, starting to intensify due to agreements that have promoted travel without a passport. On 1 January 1999, eleven European countries decided to convert their currencies into a single currency.

2. THE EUROPEAN UNION - THE EMERGENCE OF THE CENTRAL BANK AND MONETARY INTEGRATION

Monetary Economic Union (EMU) was conceived earlier in 1988-1989 by a committee consisting mainly of central bankers who led the Maastricht Treaty. The Treaty laid down budgetary and monetary rules for countries wishing to join EMU called convergence criteria. The criteria were designed to be a basis for qualification for EMU and cover the size of the national budget deficit, debt, inflation, interest rates and exchange rates. Denmark, Sweden, and the United Kingdom have chosen not to join from the beginning.

The "Euro system" comprised the European Central Bank (ECB), with 11 central banks of the participating states taking responsibility for monetary policy.

Like the Roman Empire in antiquity, Europe came to have a single currency. The members were sovereign countries with their own tax systems. Greece failed to qualify but was subsequently admitted on 1 January 2001. "Euro" took the form of banknotes and coins in 2002 and replaced national currencies. From 11 euro areas in 1999, the number has risen to 19.

The euro was not only a simple economic justification, but also a political one. A single currency was perceived as a symbol of politics and social integration in post-World War II Europe and a catalyst for further integration into other spheres. At the micro level, the use of a common currency is expected to increase competition, integration, and efficiency in the markets for goods, services, and capital. These developments were expected to reduce transaction costs. The fundamental logic for economies to integrate and adopt a single currency was largely based on the "theory of optimal monetary areas", a pioneer in the work of Robert Mundell (Mundell, 1961).

At the macroeconomic level, a single monetary policy in the Eurozone aimed at price stability was to be expected. According to the ECB, monetary policy in the euro system has been guided by two pillars. First, an inflation target based largely on an assessment of future price developments and risks to price stability in the Eurozone, as measured by the Harmonized Index of Consumer Prices (HICP), and second, a benchmark for the growth of a broad monetary aggregate.

The commitment of the Euro price stabilization system should contribute to the long-term stability and credibility of the euro and promote its attractiveness as a currency. In the long run, the development and integration of euro area financial markets is expected to increase the attractiveness of the euro.

Since the euro entered into force in 1999, and later in physical form in 2002, scepticism has remained about its future, so some members have failed to remain within the rules of the Pact for Growth and Stability. However, the euro area monetary and financial markets have changed rapidly with the introduction of the new currency. The bond markets that were segmented were integrated in a short time. From 1999 to 2002, and beyond, there has been a convergence of government bond yields. The interest rate dispersion rate between the rates offered by different banks has also decreased.

To be part of the Eurozone, each state must meet some convergence criteria.

The convergence criteria emphasize that a Member State is ready to adopt the euro and that its accession to the Eurozone will not cause economic risks for that state or for the whole Eurozone. The criteria are set out in Article 140 (1) of the Treaty on the Functioning of the European Union.

The economic conditions for joining the Eurozone help to ensure that a country is ready for integration into the monetary regime of the euro area. The economic criteria of nominal convergence are:

1. Price stability - The inflation rate cannot be higher than 1.5% above the rate of the 3 best performing Member States.

2. Sound and sustainable public finances - The budget deficit cannot be higher than 3% of GDP.

4. Public debt may not exceed 60% of GDP.

3. Exchange rate stability - The state must participate in the exchange rate mechanism (ERM II) for at least 2 years without significant deviations from the ERM II exchange rate and without a devaluation of the bilateral central exchange rate of its currency against the euro during the same period.

5. Long-term interest rates - The long-term interest rate should not be higher than 2% above the rate of the 3 Member States with the best results in terms of price stability (Treaty on the Functioning of the European Union, Article 140).

Candidates for accession to the Eurozone must also ensure that their national laws and regulations provide for the independence of their national central banks and that their statutes comply with the provisions of the Treaties and are compatible with the Statute of the European Central Bank (ECB) and the European System of Central Banks (ESCB).

There is also the notion of real convergence that seeks to balance the standard of living, being defined by the European Commission, "economic and social cohesion" in the European Union. There is no convergence criteria very well established by the Treaties, but the following indicators are followed: unemployment, per capita income, the structure of the external balance of payments, the level of government expenditures, innovation, etc.

The assumptions regarding the convergence of a country to a monetary area are initially defined by Galor (Galor, 1996):

- The “Club” Convergence hypothesis (polarization, persistent poverty and grouping) - the per capita incomes of countries that are identical in terms of structural characteristics converge with each other in the long run only if their initial conditions are also similar.

- The Assumption of Absolute (or Unconditional) Convergence: - the per capita incomes of countries converge on each other in the long run, regardless of the initial conditions in these countries. If the countries fail to converge on each other, then the problem is a failure of the institutions responsible for this process.

- Conditional Convergence Assumption - the per capita incomes of countries that are identical in their structural characteristics (e.g. preferences, technologies, population growth rates, government policies, etc.) converge with each other in the long run, regardless of their initial conditions. Convergence occurs only in structurally similar countries.

3. NOMINAL CONVERGENCE ANALYSIS FOR COUNTRIES OUTSIDE THE EUROZONE

The countries that will be part of this model are those currently outside the Eurozone: Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Sweden and the analysed period will be 2011-2019, in order to capture their eligibility in terms of nominal convergence.

The variables used are the following:

- GDP
- Inflation
- Long-term interest rate
- Public debt
- Budget deficit
- Foreign exchange rates

The data used to compile the database is taken from Eurostat and World Bank Data.

3.1. Maastricht criteria on inflation

Price stability = 1.5% + average of the EU countries with the lowest value (2011-2019) (Table 1).

Table 1. Values of the Maastricht criteria on inflation in the period 2011-2019

Country	2011	Country	2012	Country	2013
Slovenia	1.8	Sweden	0.9	Greece	-0.9
Czech Rep.	1.9	Greece	1.5	Cyprus	-0.4
Germany	2.1	Ireland	1.7	Sweden	0.0
Maastricht	3.4	Maastricht	2.8	Maastricht	1.07
Country	**2014**	**Country**	**2015**	**Country**	**2016**
Bulgaria	-1.4	Cyprus	-2.1	Romania	-1.5
Cyprus	-1.4	Greece	-1.7	Cyprus	-1.4
Greece	-1.3	Lithuania	-0.9	Croatia	-1.1
Maastricht	0.14	Maastricht	0.06	Maastricht	0.17
Country	**2017**	**Country**	**2018**	**Country**	**2019**
Ireland	0.3	Ireland	0.5	Cyprus	0.3
Cyprus	0.5	Greece	0.6	Greece	0.3
Finland	0.8	Denmark	0.8	Portugal	0.3
Maastricht	2	Maastricht	2.1	Maastricht	1.8

Source: own processing

The Maastricht criteria on inflation was calculated in the table presented. We identify in this table the presence of countries that are repeatedly considered when calculating the Maastricht criteria on inflation. These include - Cyprus and Greece, which means that they were the most stable in terms of prices.

Table 2. Values of countries outside the Eurozone

Time	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bulgaria	4.2	3.0	0.9	-1.4	-0.1	-0.8	2.1	2.8	3.1
Czech Rep.	1.9	3.3	1.4	0.3	0.3	0.7	2.5	2.1	2.8
Croatia	2.3	3.4	2.2	-0.2	-0.5	-1.1	1.1	1.5	0.8
Hungary	3.9	5.7	1.7	-0.2	-0.1	0.4	2.3	2.9	3.3
Poland	4.2	3.6	1.0	0.1	-0.9	-0.7	2.1	1.8	2.2
Romania	5.8	3.3	4.0	1.1	-0.6	-1.5	1.3	4.6	3.8
Sweden	3.0	0.9	0.0	-0.2	0.0	1.0	1.8	2.0	1.8
Maastricht	3.4	2.8	1.07	0.14	0.06	0.17	2	2.1	1.8

Source: own processing

We notice that these criteria fluctuated in the period 2011-2019, the maximum point being in 2011 with a maximum of 3.4%, and the minimum, in 2015 being 0.06% (Table 2).

3.2. Maastricht criteria on interest

Long-term interest rate = 2% + the rate of the 3 Member States with the best results in terms of price stability (2011-2019) (Table 3).

Table 3. Values of the Maastricht criteria regarding interest in the period 2011-2019

Country	2011	Country	2012	Country	2013
Slovenia	4.97	Sweden	1,59	Greece	10.5
Cz. Republic	3.71	Greece	22.5	Cyprus	6.5
Germany	2.61	Ireland	6.17	Sweden	2.12
Maastricht	5.76	Maastricht	12	Maastricht	8.37
Country	**2014**	**Country**	**2015**	**Country**	**2016**
Bulgaria	3.35	Cyprus	4,54	Romania	3.32
Cyprus	6	Greece	9.67	Cyprus	3.77
Greece	6.93	Lithuania	1.38	Croatia	3.49
Maastricht	7.42	Maastricht	7.19	Maastricht	5.52
Country	**2017**	**Country**	**2018**	**Country**	**2019**
Ireland	0.8	Ireland	0.95	Cyprus	1.07
Cyprus	2.62	Greece	4.19	Greece	2.59
Finland	0.55	Denmark	0.45	Portugal	0.76
Maastricht	3.32	Maastricht	3.86	Maastricht	3.47

Source: own processing

Table 4. Values of countries outside the Eurozone

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bulgaria	5.36	4.5	3.47	3.35	2.49	2.27	1.6	0.89	0.43
Czech Rep.	3.71	2.78	2.11	1.58	0.58	0.43	0.98	1.98	1.55
Croatia	6.54	6.13	4.68	4.05	3.55	3.49	2.77	2.17	1.29
Hungary	7.63	7.89	5.92	4.81	3.43	3.14	2.96	3.06	2.47
Poland	5.96	5	4.03	3.52	2.7	3.04	3.42	3.2	2.35
Romania	7.29	6.68	5.41	4.49	3.47	3.32	3.96	4.69	4.54
Sweden	2.61	1.59	2.12	1.72	0.72	0.54	0.65	0.65	0.04
Maastricht	5.76	12	8.37	7.42	7.19	5.52	3.32	3.86	3.47

Source: own processing

The Maastricht criteria on interest according to the formula was also calculated for the period 2011-2019. From this table we extract the maximum value of the Maastricht criteria regarding the interest rate, this being 12% in 2012 and the minimum value 3.32% in 2017 (Table 4).

3.3. Deficit value for non-euro area countries (2011-2019)

The specialized literature claims that the main negative effects of the budget deficit are the low level of investments and the high level of interest rates, an aspect transposed under the name of crowding out (Table 5).

Table 5. Public deficit for non-euro area countries

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bulgaria	-2	-0.3	-0.5	-5.4	-1.7	0.1	1.1	2	1.9
Czech Rep.	-2.7	-3.9	-1.3	-2.1	-0.6	0.7	1.5	0.9	0.3
Croatia	-8	-5.5	-5.6	-5.5	-3.5	-0.9	0.8	0.2	0.4
Hungary	-5.2	-2.3	-2.6	-2.8	-2	-1.8	-2.4	-2.1	-2.1
Poland	-5	-3.8	-4.2	-3.6	-2.6	-2.4	-1.5	-0.2	-0.7
Romania	-5.4	-3.7	-2.1	-1.2	-0.6	-2.6	-2.6	-2.9	-4.4
Sweden	-0.2	-1	-1.4	-1.5	0	1	1.4	0.8	0.5

Source: own processing

We notice in this table many negative values, which underlines the fact that the states receive higher loans than those they offer, a positive aspect as it falls within the convergence criteria which aims to ensure that the budget deficit does not exceed 3%.

3.4. Exchange rate stability in non-euro area countries

This table (Table 6) indicates the evolution of exchange rates in relation to the Euro currency, in the period 2011-2019, the highlight being made at the level of Hungary which had an increase over time from 279.37 to 325.3.

Table 6. Exchange rate

Curency	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bulgarian lev	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Czech koruna	24.59	25.14	25.98	27.53	27.27	27.03	26.32	25.64	25.67
Croatian kuna	7.43	7.52	7.57	7.63	7.61	7.53	7.46	7.41	7.41
Hungarian forint	279.37	289.25	296.8	308.71	310	311.44	309.19	318.89	325.3
Polish zloty	4.12	4.18	4.19	4.18	4.18	4.36	4.25	4.26	4.29
Romanian leu	4.23	4.45	4.41	4.44	4.44	4.49	4.56	4.65	4.74
Swedish krona	9.02	8.70	8.65	9.09	9.35	9.46	9.63	10.25	10.58

Source: own processing

3.5. Public debt of countries outside the Eurozone in 2011-2019

The convergence criteria on public debt in the Maastricht Treaty says that it must not exceed 60% of GDP and must be maintained. Thus, from this table (Table 7), we can see that Hungary and Croatia do not fall into this criteria at any time during the analysed period.

Tabel 7. Public debt

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019
Bulgaria	15.2	16.7	17.1	27.1	26	29.3	25.3	22.3	20.2
Czech Rep.	39.7	44.2	44.4	41.9	39.7	36.6	34.2	32.1	30.2
Croatia	64.3	70.1	81.2	84.8	84.3	80.8	77.5	74.3	72.8
Hungary	80.4	78.4	77.4	76.7	75.8	74.9	72.2	69.1	65.4
Poland	54.7	54.4	56.5	51.1	51.3	54.2	50.6	48.8	45.7
Romania	34	37.1	37.6	39.2	37.8	37.4	35.1	34.7	35.3
Sweden	37.2	37.5	40.2	45	43.7	42.3	40.7	38.9	35.1

Source: own processing

4. CONCLUSIONS

The banking sector has always been considered one of the most vital sectors for the economy to function. Its importance as the "blood" of economic activity, in the collection of deposits and the granting of loans to states and individuals, households and enterprises is undeniable. Therefore, all economic systems, banks play the leading role in planning and implementing financial policy. The difference lies in prioritizing the objectives and how they are achieved.

The European Union and the Eurozone have been formed to help states build strong ties for economic development and sustain economic and financial balance. Although there were periods when some states became quite unbalanced, they had the support of the stronger ones, thus underlining the motto on which the EU was built - "Unity in diversity". There are already 19 states in the Eurozone, excluding Denmark, the other 7 countries are on the "waiting list" for various reasons. They fail to meet all the convergence criteria at the same time.

The period analysed in this report is 2011-2019. Thus, some aspects worth mentioning stood out. At the level of public debt, Croatia and Hungary did not meet the criteria in any of the years under review. Also, the values of the budget deficit do not exceed the value of the Maastricht criteria, therefore all the analysed states are in normal parameters.

Regarding the interest rate, it suffers values below the requirements of the Eurozone only in Romania in the last three years of the analysed period. A slight difference from the criteria, with Poland also in 2017. Inflation also had many changes fluctuating over time in all states, with Sweden being the most stable in this respect, except for 2016. On the contrary, the Czech Republic is very bad in this regard, as of the nine years analysed, it has known stability only in the first year (2011). Foreign exchange rates have been stable, Hungary being the only one that has undergone changes between 2011-2019

Taking into account the analysed data, it can be concluded that out of the seven countries outside the Eurozone, only Sweden is approaching the values of the nominal convergence criteria, otherwise none is ready to join the Monetary Economic Union.

References

1) European Commission, (2021). *Database.* [online] Available at: https://europa.eu/european-union/index_ro [Accessed 05.04.2021].
2) Galor, O. (1996). Convergence? Inferences from Theoretical Models. *The Economic Journal,* 106(437), pp. 1056-69.
3) Mundell, R. (1961*).* A Theory of Optimum Currency Areas. *American Economic Review,* 51(4), pp. 657–665.
4) Treaty on the Functioning of the European Union (1957). [online] Available at: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12012E/TXT:en:PDF [Accessed 05.04.2021].
5) Treaty of Maastricht (1992). [online] Available at: https://assets. publishing. service.gov.uk/government/uploads/system/uploads/attachment_data/file/273143/2485.pdf [Accessed 05.04.2021].
6) Treaty of Amsterdam (1997). [online] Available at: https:// www.europarl.europa.eu/topics/treaty/pdf/amst-en.pdf [Accessed 05.04.2021].

CROSS-BORDER BANKING REGULATIONS IN THE EVENT OF CRISIS

ALIONA CARA-RUSNAC
Moldova State University
caraaliona2019@gmail.com

Abstract
The article will analyze the impact of different waves of crisis on the Moldovan banking activity. There will be presented the Moldovan banking activity and its resistance to the crisis during different waves of crisis: big world crisis 2007-2009, Moldovan banking crisis 2014, the Greek sovereign debt crisis in the spring of 2010 and finally health crisis (2020-present). In conclusion, the author will come up with recommendations referring mitigating regulatory risks of the banking activity in particular emphasizing its relations to the customers, regarding improving the regulatory banking framework during crisis based on the best strategies implemented by the developed countries. It will be argued that there is a need to tackle solutions to banks problems at the European, International level that the national level, and will be considered the role of the International, European and national monitoring institutions to provide appropriate solutions and if necessary to adopt restrictions. The crisis periods have shown that past and/or current legislative framework is inadequate to face the financial and/or health crisis, also the banking crisis that took place in Moldova and 2014 and the collapse of three banks showed the gaps in the national legislation and weak cross border cooperation in investigating financial crimes. Another issue is that the banks played a crucial role during crisis in supporting and/or no supporting client as the first impact of the crisis is the hit on the economy and in particular on the small and medium enterprises, though it is in state's duty to support small and medium enterprises, by subventions, cooperation with banks to wave penalties and/or interests, pay rents and other facilities. Currently countries are struggling with health crisis, banks are experiencing clients' resistance and impossibility in paying the debts, in these case the banks had to change their strategies this is particularly the case for cross-border banks, where many assets from a variety of countries may be held by founders from different countries, thus applying different jurisdiction. By April 2020, about half of the world's population was under lockdown, the banks have switched from classic to electronic payments.
Keywords: *financial crisis; Greek crisis; banking activity; health crisis; pandemic; Moldovan banking activity.*
JEL Classification: P37

1. GENERAL OVERVIEW OF THE CRISIS EVENTS

Globalization is related in the last period with crisis: financial crisis, migration crisis, political crisis and lately the new health crisis. We live in the world of crisis. Unfortunately, it become a daily used world/expression we tend to cover world's problems under the word "CRISIS". Why this happens misunderstanding, miscommunications, fight for power. The familiar notion of crisis encompasses both personal and global crises and all possible between these two extremes, crisis has become one of the most overworked words in the language (Krystec, 1987). Professor Krystec (1987) defines company crisis '*...as an unwanted and unplanned process of a limited duration and susceptive with an ambivalent way out, terminated by the non-achievement of its dominant goals*'.

The volume of the money that circulate back and forth in the entire globe today is indeed huge, and the number of crisis has increased in the last several decades. Despite the fact the world is clearly divided in rich and poor countries, the crisis does not avoid any of the countries, it spreads its roots in any corner of the world, not sparing any part and/or someone. In this article, we will present the situation of the banking activity in the Republic of Moldova and development of the banking regulations within the territory of the Republic of Moldova that has been influenced by different waves of crisis. As it was mentioned not matter whether it is a developed country as e.g. Unites States, Germany, France, United Kingdom or developing countries e.g. Ukraine, Moldova, Belarus the crisis affects the financial and non-financial domains of the countries. The main implications of a systemic banking crisis in a country are noted when its financial and banking entities face enormous problems contracts on time (World Bank, 2016). Untorturable, the systemic banking crisis can be very harmful and contagious, they tend to affect economies into deep recessions and sharp current account reveals.

2. CROSS-BORDER CRISIS REGULATIONS AND THEIR IMPACT ON BANKING ACTIVITY

Firstly, we will present the notion of the financial crisis and the types of the world's crises that changed the course of banking regulations and activity.

Financial crisis is any of a broad variety of situations in which some financial assets suddenly lose a large part of their nominal value in the 19^{th} and early 20^{th} centuries, many financial crises were associated with banking panics, and many recessions coincided with these panics.

Banks are susceptible to a range of risks, these might include following risks: non-performance loan risk (loans and other assets turn bad and ceasing to perform), liquidity risks (withdrawals exceed the available fund), and interest rate risk (rising interest rates reduce the value bonds held by the bank and force the bank to pay relatively more on its deposits than it receives on its loans). Bank problems can also be triggered or deepened if a bank faces too many liabilities coming due and does not have enough cash (or other assets that can be easily turned into cash) to satisfy those liabilities (depositors run on the bank). A (systemic) banking crisis occurs when many banks in a country are in serious solvency or liquidity problems at the same time – either because there are all hit by the same outside shock or because failure in one bank or in a group of banks spreads to other banks in the system. (e.g. when a country's corporate and financial sectors experience a large number of defaults and financial institutions and corporations face great difficulties repaying contracts on time). Systemic banking crises can be very damaging. They tend to lead affected economies into deep recessions and sharp current account reveals (World Bank, 2016).

The worldwide economic contraction of 2007-2009 was the first instance since the Great Depression of early 1930s in which world GDP – the aggregate GDP of all nations – declined. The United States suffered major banking crisis in 1819, 1837, 1857, 1873, 1893, 1907, and 1929-1933, as well as the **Great Crisis** of 2007-2009.

As professor Lloyd B. Thomas mentioned '*In 2007, problems that originated in the U.S. subprime mortgage market set off a worldwide financial crisis of a magnitude not witnessed in 75 years* (Lloyd, 2011)'.

Professor Lloyd stated in his work that here are four types of financial crisis (sovereign debt defaults, government defaults on debt – foreign, domestic, or both; hyperinflation; exchange rate of currency crisis; and banking crisis) (Lloyd, 2011). In his work, Professor indicated two regimes central bank may impose: 1) a targeted rule ('for example, if a central bank employees 2% inflation targeting rules, it will raise interest rate when actual or expected inflation exceeds 2 percent, and reduce interests' rates when inflation or expected inflation falls below 2 %); 2) a system of discretionary monetary policy (Lloyd, 2011). With regard, to the monetary rule, unfortunately it might become an effective tool in the politicians and policymakers' hands. 'To that extent that the central bank is not structured to be independent of the legislative and executive branches of government, the conduct of monetary policy is likely to be influenced by political considerations' (Lloyd, 2011).

The severe drop in federal taxes receipts, combined with stimulus programs aimed at reducing the severity of the economic contraction, sharply boosted the federal deficit in the United States and many other countries. By 2009, the U.S. deficit exceeded 10 percent of GDP, a level unprecedented except in times of all-out war. The magnitude of the deficit placed the fiscal plight of the United States in proximity to that of Greece, Ireland, Spain, Portugal, and other nations experiencing the simmering European sovereign debt crisis – itself a consequence of the Worldwide Great Crisis – that surfaced in spring 2010.

The transnational **Financial crisis** that was initiated by the U.S. supreme mortgage meltdown – the Great Crisis – is classified as a banking crisis, albeit one in which 'banking' is broadly defined to include the 'shadow banking system', comprising hedge funds, investment banks, and other nonbank institutions that engage in financial intermediation (Lloyd, 2011).

The number of households underwater on their homes in mid - 2010 was estimated to be about 15 million, or approximately one fourth of all residential properties with mortgages. Some 5 million of these homeowners were more that 20 percent underwater.

The financial crisis that ended up costing the nation more than 8 million jobs and more than $2,000 billion of lost income was triggered by this unprecedented decline in home prices. The decline in house prices led directly to a large decline in the value of mortgage-backed bonds and related derivatives that had been created in the previous 15 years by financial engineers. This is set off a huge chain reaction that severely impaired the financial condition of many of our financial institutions and triggered a 'run' of many bans and nonbank institutions that had borrowed in short-term money markets to purchase the mortgage-backed bonds and other long-term instruments.

The depression, in which real gross domestic product (GDP) fell by 25% and the unemployment rate reached 25 %, dwarfed anything in U.S. experience, before and after (Lloyd, 2011).

The great crisis impaired the banking system and unleashed forces that adversely impacted consumption and investment expenditures. By reducing economic activity, the crisis and ensuing recession also severely impaired the state and local government revenues and led to cutbacks in state-local government spending (Lloyd, 2011).

The resultant combination of declining economic activity and rising unemployment then unleashed an adverse feedback loop that further impaired the banking sector and other components of the financial system.

In 2009 and 2010 more than 250 U.S. banks failed, and several of the nation's largest banks (for example, Citigroup and Bank of America) would likely have joined the list had they not been saved by the U.S. government (Lloyd, 2011).

As a nation grows over time, the quantity of money needs to grow in line with the growth of economic activity to maintain a stable price level and overall economic stability. In addition, the ability of a nation to manage the quantity of money for purposes of contributing to economic stability brings potential benefits to an advanced society.

As indicated in the discussion of hyperinflation, history is replete with examples of central bank misconduct associated with potential expediency. It is also important the implication of the fractional reserve banking. It has been a remedy for banking crisis periods. In case of absence of such an institution or lack of its activity of banking sector or of certain institutions such as credible deposit insurance system and a competent central bank, a fractional reserve banking system seems to be inevitably experience periodic episodes of panic that spill over to adversely affect economic activity. Indeed, even in the presence of such institutions, in out contemporaneous world (modern industrial nations) have been unable to avoid the scourge of banking crisis, albeit typically in different forms that in earlier times. 'The recession that began in the U.S. in 2009 and spread to most other parts of the world has had a deeper and more global effect on migration that any other economic downturn in the post-World War II era' (MPI, 2009). The major laws that were enacted in US following crisis of 2007-2009 were: Dodd-Frank Wall Street Reform and Consumer Protection Act, which introduced a raft of measures designed to regulate the activities of the financial sector and protect consumers, amended many existing legislations (Security Exchange of 1934 improvements to the regulation of credit rating agencies, including the establishment of the Security Exchange Commission Office of Credit Ratings for oversight) and created many standalone provisions, setting standards for securities and financial markets, it built several new types of protection, namely the Consumer Financial Protection Bureau, an important agency in helping monitor and protect the financial interests of American Consumers; Emergency Economic Stabilization Act provided \$700 billion in bailout relief, to purchase troubled assets, mostly bank shares and mortgage backed securities, \$426,4 billion bailing out institutions including American Group Inc, Bank of America, Citigroup, JP Morgan and General Motors; Troubled Asset Relief Program and Federal Reserve took up many new additional measures of its own.

The **big world crisis of 2007-2009**, has influenced banking regulations and activity in the Republic of Moldova not only by the financial crisis, that lead to the fact that many creditors increased their prices as consequently it increased the consumers' loans and credit prices, the effects of the great financial crisis were felt almost a decade.

In 2009, Moldova was hit severely by two major shocks – trade and liquidity crisis (Veverita, Cainarean and Veverita, 2011). Republic of Moldova experienced not only the big world financial crisis but also the stormy political times. In April 2009, took place big political demonstrations and consequently the ruling Party of Communists of RM who won the elections were forced to cease the political partnership, consequently the new political parties took the control of the Government. The fact that political crisis overlapped with the economic/financial crisis has risen the tensions and the conflicts between old and new political parties, as they both denied any responsibility and each blames the other. The crisis was not disclosed by the politicians due to upcoming elections in 2009, the communist party were trying to maintain artificially the economic situation, however later on by the officials were declared that: "*the crisis is a fire, a catastrophe*", by that time the Minister of Finance stated the banking domain is stable and face the risks of crisis, … '*during 2009, the capitalization of banks increased by 26,8%, assets by 22,3% and credit portfolios by 19,4%...*' in reality the situation looked completely different due to economic crisis, many domestic banks have stopped granting credit to individuals for personal consumption and mortgages and even to companies, as the later, particularly in the building sector, were incapable to repay loans. The economy declined with 6% compared to 2008. The Liquidity crisis was primarily conditioned by a 30% dramatic decrease of remittances dependent economy, being the fifth country with the biggest remittances share out GDP – 30%. With regard to the branches of economy the imports decreased, industry and constructions sectors were mostly affected by recession, decreasing 20-30%.

According the National Bank of Moldova data the currency reserves in April 2009 constituted USD 1.086 billion, having diminished by almost USD 586 million (35%) compared to December 2008 (Mocanu, 2009). The banks instable situation and the depreciation of the currency lead directly to the fact that economy has decreased and the remittances have also decreased compared to same periods of the previous years, despite this fact there were no recorded returns of the migrants due to financial crisis. The NBM's actions to diminish the effects of the financial crisis of 2009 were the following: increasing transparency in banks 'activities; enforcing liquidity management regulations; was adopted the Economic Stabilization and Recovery Plan as part of Memorandum Agreement signed between IMF (2010) and Moldavia Republic. The plan came as a conditionality for three years' assistance, which aimed to recover Moldova from economic crisis. The actions targeted three important areas: monetary and fiscal regulations, regulatory reform and social policies. Graceful to the external donors 'support, the Government has succeeded to implement the guillotine regulations aiming to reduce the bureaucracy and to improve and attract the investors, to reform the pension system and ensure a correct and equitable allocation of social aids, implementation of administrative reforms. The European Neighborhood Policy and the political context have favored signing the DCFTA – 2011, Visa Liberalization Agreement (2014) and Association Agreement.

A different crise that left the trace in history of financial crisis was the crises. *The Greek sovereign debt crisis in the spring of 2010* – due to the financial crisis initially started in United States in 2008, it quickly spread abroad. Especially in Europe in early May 2010 experienced a systemic crisis that threatened to spread globally. There is also the fact that the European countries have been seriously weakened by the first round of the financial crisis (2008-2009) as well as by its second round (spring of 2010). The projections for growth in Europe are not positive; and its banks have huge amounts of hidden losses. According to the statistics, EU quickly put together a one trillion-dollar facility in order to safeguard the situation. One of the most affected country turned to be Greece (Swedberg, 2011). It was really interesting to establish the influence of Greek crisis on the Eurozone crisis, especially taking into account that Greece constitutes only 2% of the Eurozone GDP – trigger a systemic crisis for the euro that brought global financial markets to the brink (Baldwin, Gros and Laeven, 2010). In early December 2009, the crisis escalates and shares fall around the world after ratings agency Fitch cuts Greece's long term debt to BBB+, from A-. This was the first time in a decade that Greece decreased its credit rating and pushed up the cost of borrowing. In April 2010, EU and IMF officials hold crunch talks with German leaders, rumors of 120 billion Euro package calm the markets. After days of frantic negotiations, the IMF, the EC and the European Central Bank hammer out a three-year package to rescues Greece. As anger erupts across Athens at the scale of the cutbacks that Greece must now implement, stock markets fall sharply and gold hit a record high as investors started to doubt whether the bailout would actually save the situation (Graeme, 2010). However, Greek crisis does not influence much the Moldovan crisis, as there are few banks' founders from Greece and the banking system does not suffer much as effect of the crisis, however it felt from remittances point of view, as there were and still are Moldovan migrants that lived and live in Greece, and it terms of remittances this influenced the situation.

The biggest/giant crisis hit Moldovan banking system in 2014, a report revealed that in 2014 up to $1 billion, equivalent to more than 1/8 of the country's GDP, had been stolen from three banks. 'Relative to the size of its economy, that may be biggest bank fraud of all time. The most surprising fact was that the neighboring countries were mired in financial crisis of their own' (The Economist, 2017). During August 17th, 2012 – November 30th, 2014 three banks (Banca de Economii, Unibank and Social Bank) were consequently subjects to significant shareholders' changes, which had the effect of transferring ownership to a series of apparently unconnected individuals or entities. A number of transactions with dubious character, with no solid economic reasoning and which consequently leaded to the fact significantly deteriorated the banks, that were not able to activate further. The banks have cooperated with a large group of Moldovan Companies (so called Shor group) that increased their ownership interests in the three banks in an apparent attempt to facilitate the fraud, and thereby control the banks. This context favored high risk exposure and money laundering schemes, involving Russian, Latvian and English Banks. Mechanism that allowed to occur the fraud and remained undetected included: misrepresentation of liquidity ratios by the banks to the NBM, the securing of loans against questionable collateral, the exclusion of certain board members' frim decision-making process and the ignoring of concerns raised by senior employees at the banks, which together lead to unsustainable levels in 2014.

As consequence of the giant banking crisis in Moldova, three banks were declared bankrupt and disappeared from banking arena. The International Monetary Fund (further named as IMF) in their report expressed concern about the political, economic and financial developments in the country, and cautioned that significant risks remain to the outlook (IMF, 2017). As effect of the crisis, Moldova has been forced to modify entirely the banking framework, National Bank of Moldova (NBM) as well as other supervisory institutions received technical assistance in order to improve the banking framework. Consequently, by the National Commission for Financial Markets (NCFM) were adopted the Corporate Governance Code and passed new regulations intended to simplify the issuance of corporate securities and increase the transparency of transactions on the Moldova stock Exchange. The Government adopted new strategy for the development on non-financial sectors through adopting European Standards in financial market regulation and supervision. Amendments to the law on joint stock companies including transactions with conflict of interests, the law on financial institutions were abolished except for same chapters on bankruptcy, the new law on banking activity were adopted. The International organizations stressed the importance of ensuring the soundness of the remaining financial institutions along with improvements in the regulatory and supervisory frameworks, including in the insurance and non-bank financial sectors and the AML/CFT frameworks. From the EU Framework, remaining measures will enhance existing regulation and supervision of capital and liquidity adequacy, also aligning with Basel requirements, if not the latest Basel III standards starting to take effective in 2023. It was also intended to implement an internal ratings-based (IRB) approach to credit risk that will not be implemented in practice. One aspect that should be decided upon by NBM is whether to move from strict regulatory provisioning requirements to resilience on (generally lower) IFRS 9 impairment numbers. (International Monetary Fund Report, 2021) There were approved by NBM regulations strengthening the governance in the banking sector, welcomed external review of the banking activities by supervisory process, with impact of banking security. Also, there were highlighted the independence, powers and crisis management toolkits of both NBM and National Commission for Financial Markets. Currently, out of eleven banks, first three banks account 64% of the total bank assets, MAIB – 19.7 billion MDL, Moldincombank – 14,49 billion MDL and Victoriabank 12.61 billion MDL. Interventions on shareholder transparency are outstanding at two banks, one of which (a non-systemic bank) has been under temporary administration for over two years. Five of the eleven are subject to (non-statutory) intensive supervision, reflecting risks including litigation. The cause still remains the uncertainties due to the political and judicial system (International Monetary Fund Report, 2021).

And finally, health crisis (2020-present), the pandemic situation that reshaped the concept of banking activity, switching from classic banking transaction to electronic transactions. The Covid – 19 health crises had come instantly with negative and positive aspects. Firstly, it is seen negatively as the population were not ready to face the challenges of online commerce and online banking transactions, on the other hand it was the fastest and most efficient financial education performed.

Different countries have managed health crisis situation differently. For example, in Romania, according to KPMG data the ordinance no 33/2020 provided incentives – a discount-for on-time payments or corporate income tax or the tax on the income of micro-enterprises that are due on 25 April 2020 for the first quarter of 2020 as a response to the coronavirus (COVID 19) (KPMG, 2020).

The Romanian Government adopted economic measures to stipulate small and medium enterprises (SME) by raising the ceiling for credit guarantees for

SMEs affected by the coronavirus crisis by LEI 5 billion, which depending on the financing needs of SMEs, can be increased ever further to LEI 30 billion. Interest is 100% subsidized. For loan amounts of up to 1 million the guarantee will cover 90% of it and 50% for credits over 1 million.

3. HEALTH CRISIS AND BANKING REGULATIONS AND IMPACT ON ACTIVITY

According to International Monetary Fund report on *Moldovan Financial Sector Stability Review*, the NBM is about to completing a prudential regulatory and supervisory framework based on EU standards, which also addresses local vulnerabilities. NBM's interventions using powers in 2017 legislation have addressed most bank shareholder suitability and transparency issues. Until ourdays while foreign owners, including five EU banks, now account nearly 90% of share capital, also contributing to stronger governance and risk management. Capital ratios exceed the minimum, including the substantial (average 4.4 percent) buffers imposed after supervisory review. NPLs have continues a downward trend and banks are liquid on all measures, including the newly effective Liquidity Coverage Ratio (International Monetary Fund Report, 2021).

The population of the Republic of Moldova is around three million people, taking into account the emigrants who live abroad in different countries. According to the National Bank of Moldova (NBM) data in the Republic of Moldova at the end of the third quarter of 2020, there were 2153139 issued banking cards by payment service providers. Most of the cards, namely 1151790 were issued under the Visa International, another 997497 Master Card Worldwide and 3852 by American Express cards, according to NBM the absolute majority of cards – 2105142 are debit cards and only 47997 are credit cards (National Bank of Moldova Report, 2021). As we can mention the majority of the cards are debit cards, out of the total number of cards in circulation, 954825 were issued based salary projects, another 418269 based on social projects and 722768 under general conditions. The NBM report on the results of the monitoring of financial market infrastructure is an analysis of indicators of payments systems and non-cash payment instruments trends during the third quarter of 2020 and their development prospects. NBM is monitoring the activity of the participants in the payment system SAPI, by ensuring the stability and the efficient operation. According to the NBM statistics in the third quarter of 2020, the indicators of activity with payment cards maintained their upward trend, the number of cards in circulation increasing by 9.4 % compared to the same period of the previous year, and the number of non-cash payments made with cards issued in the country increased by 39.8 % compared to the same period of the previous year.

The Bank Association from Moldova stated at the beginning of the lock down period due to COVID 19 (March 17th, 2020) that the Banks have drawn up Business Continuity Plans (PCOs) for critical situations, being prepared to honor customer requests for card operation and payment settlement, ensuring adequate liquidity, carrying out business in territorial subdivisions, etc. As a primary health insurance measure, it is recommended that people make non-cash payments through automated remote service systems provided by banks, as well as through cards or online payments. Customers are constantly informed about the need to avoid direct physical contact in branches and agencies whenever possible. In this regard, banks will take measures to serve individual customers through the online environment, including the application of electronic signatures for as many products and services as possible (InfoMarket, 2021). Automated remote service systems (SADD) are becoming increasingly popular among users in the number of SADD holders at the end on the 2020 compared to the same period of the previous year, which is due to the considerable increase in users of the mobile-payment systems. The number of active holders recorded an increasing trend of 45.1 % compared to the third quarter of 2019, due to increasing need to use automated remote service systems to make payments, especially in the context of epidemiological situation in the country caused by Covid-19 pandemic. At the same time the value of remittances received by individuals increased by 32.5 % compared to the third quarter of 2019, and those made increased by 32.4% (National Bank of Moldova Report, 2020).

4. CONCLUDING REMARKS AND RECOMMENDATIONS. LESSONS FROM THE PAST, QUESTIONS FOR THE FUTURE

The international financial system is very unstable and weak to unpredictable events such as crisis. The crisis events influenced the economy of the entirely globe in particular of some countries, as it was presented in this article. The goal of the paper was to demonstrate the reader that the effects of crisis on banking activity may lead to different non-expected effects: increase or decrease of the migration (Great crisis vs. Health Crisis), financial measures for consumers, disappearance of the banks, SMEs. The results of the crisis are expressed by: international shake of different currencies, local currency depreciation, increase of interest for loans decrease the interest for deposits, bankruptcy of small enterprises (the health crisis affected the giant companies), rising of unemployment, reducing legal transfers of remittances (case of the Republic of Moldova).

The big banking crisis in Moldova and the collapse of three banks lead to the fact that the banking framework has been strengthened and improved by recordation of the financial and banking EU regulations at the national level.

As it was highlighted the crisis may ever to intensify the number of the banking transactions or whether to suspend/block for an uncertain period of time. The crisis cannot be stopped only in one country; it might be mitigated by common efforts at the international level. As it was previously mentioned in the IMF recent report, the regulatory authorities took measures to diminish the effects of the bank crisis in 2014 and the health crisis. Thus, there were enhanced supervisory and resourcing processes, however there are things to be done in this domain. Off-site supervision centers of analyses of extensive reporting by banks to an NBM central risk register, which is being extended with shareholder and AML/CFT information (InfoMarket, 2021). Despite the fact, the shareholders are tightly supervised by the authorities, it is still an ongoing process of passing securities from previous owners to the new and vice versa. Processes that create a bad image for the Republic of Moldova financial sector. The unicity of monitoring and supervision, the concentration of supervisory empowerments to the NBM and switching from dual supervisory system (NCFM and NBM) to unique supervisory system, exclusively by the NBM might create confusion and possible abuse, as it was reported the dual supervisory system is much more efficient (e.g. Poland, US a.o.).

The recommendations that should be implemented in the banking activity supervision that need to be improved are:

- the enhancement of supervisory practices on risk assessment, evaluation of governance, risk management frameworks,
- development of cross-border cooperation in the supervisions and preparedness for consolidated supervision
- and alignment of regulatory provisioning.

Unfortunately, the COVID -19 health crisis, has impacted in a negative manner the economies of the countries, many big companies have failed also many companies in HORECA domain have struggled the impact of the lockdown. In order to ameliorate the EU after the COVID-19, at the EU level it was planned the budget (Multiannual Financial Framework 2021-2027- European Council, 2020), which has as main aim to improve the EU countries' economy.

The health crisis switched the classic banking transactions to the electronic transactions, in a manner it financially educated the society in the entire world.

The lessons learned from health crisis Covid-19 and the recommendations are the following:

- The population have to be financially educated firstly by the state institutions (as National Banks of each country), secondly by the private institutions (banks) and by NGOs, especially elder population;
- The Government have to support small and medium business, including by adopting Regulations that would encourage surviving of small and medium businesses;
- The Government also has to support banking services as they would suffer too, due to health crisis, by adopting regulations on tax moratorium or diminishing taxes;
- The positive outcome was that in developing countries there were developed the delivery services businesses, in will be efficient to maintain this services.

References

1) Baldwin, R., Gros, D. and Laeven, L., eds. (2010). *Completing the Eurozone rescue: What more needs to be done?* [online] Available at: http://www.voxeu.org/index.php?q=node/5194 [Accessed 21.05.2021].
1) European Council, (2020). Multiannual Financial Framework 2021-2027. [online] Available at: https://www.consilium.europa.eu/en/policies/the-eu-budget/long-term-eu-budget-2021-2027/ [Accessed 11.11.2020].
2) Graeme, W. (2010). *Greece debt crisis: timeline*. [online] Available at: https://www.theguardian.com/business/2010/may/05/greece-debt-crisis-timeline [Accessed 10.01.2021].
3) IMF – International Monetary Fund, (2017). *IMF report*. [online] Available at: https://www.imf.org/external/pubs/ft/scr/2016/cr1619.pdf [Accessed 10.01.2021].
4) IMF – International Monetary Fund, (2021). *Moldovan Financial Stability Sector review.* Chisinau.
5) InfoMarket, (2021*). Bancile din Moldova sunt gata sa-si sustina clientii in perioada pandemiei COVID-19.* [online] Available at: http://infomarket.md/ro/banks/Bncile_din_Moldova_sunt_gata_s-i_susin_clienii_n_periaoda_pandemiei_COVID-19 [Accessed 10.01.2021].
6) KPMG, (2020). *KPMG Report: Romania Government and Institution measures in response to Covid*. [online] Available at: https://home.kpmg/xx/en/home/insights/2020/04/romania-government-and-institution-measures-in-response-to-covid.html [Accessed 11.11.2020].
7) Krystec U. (1987). *Unternehmungenkrisen*. Wiesbaden: Gabler.
8) Lloyd, B. T. (2011). *The financial crisis and the Federal reserve policy*. New York: Palgrave Macmillan.
9) Memorandum Agreement signed between IMF and RM (2010). [online] https://www.imf.md/pub-memo.html [Accessed 21.05.2021].
10) MPI, (2009). *The Recession's Impact on Immigrants*. [online] Available at: http://www.migrationpolicy.org/article/top-10-issues-2009-issue-1-recessions-impact-immigrants [Accessed 10.01.2021].
11) Mocanu, D. (2009). *Partnership for Development Center. There is a crisis after all.* [online] Available at: https://www.socialwatch.org/node/865 [Accessed 10.01.2021].
12) NBM, (2020). *Raportul privind rezultatele monitorizării infrastructurii pieței financiare din Republica Moldova, trimestrul III 2020*. [online] Available at: https://www.bnm.md/ro/content/raportul-privind-rezultatele-monitorizarii-infrastructurii-pietei-financiare-din-republica?fbclid=IwAR3ZbZldUKk91KdabidcNDuZJjb2DG7pNXklfjpKhqR4ft2ewl3ufpjNrxo [Accessed 10.01.2021].
13) NBM, (2021). *National Bank of Moldova Report*. [online] Available at: ,www.bnm.md [Accessed 10.01.2021].
14) Swedberg, R. (2011). *The European sovereign debt crisis (2009-2010): The role of confidence and other social factors. Castellano-Machega de Ciencias Sociales Journal*, 12(1), pp.15-36.

15) The Economist, (2017). *How Moldova escaped the effects of a giant banking crisis*. [online] Available at: https://www.economist.com/europe/2017/02/16/how-moldova-escaped-the-effects-of-a-giant-banking-crisis [Accessed 10.01.2021].
16) Visa Liberalization Agreement (2014). [online] Available at: https://mfa.gov.md/en/content/moldova-eu-visa-liberalization-dialogue [Accessed 10.01.2021].
17) Veverita P., Cainarean N. and Veverita, E. (2011). The Impact of the Global financial Crisis on Education and Healthcare in the Economies of the Former Soviet Union – The Case of Moldova. *SSRN Electronic Journal,* pp.1-86.
18) World Bank, (2016). *Bank Crisis.* [online] Available at: https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/banking-crisis [Accessed 10.01.2021].

THE RELATIONSHIP BETWEEN ROMANIAN SMEs AND BANKING UNITS DURING THE COVID-19 PANDEMIC

RĂZVAN-IONUȚ DRUGĂ
Alexandru Ioan Cuza University of Iași
Iași, Romania
drugarazvanionut@gmail.com

Abstract
The COVID-19 pandemic is one of the most difficult periods faced by many Small and Medium-sized Enterprises (SMEs) in Romania, but also around the world. Some of them were no longer able to carry out their activity, due to the restrictions imposed. This was supported either by the specifics of the sector of activity or by the financial problems faced by the organizations. In response to the challenges, the authorities carried out social responsibility actions to reduce the negative impact of the pandemic. Certain measures concerned the relationship that SMEs have with banking units. Thus, the paper aims to analyze, through a survey, how the relationship between SMEs in Romania and the banking units with which they collaborate was affected, because of the COVID-19 pandemic. Also, the behavioural intentions of the representatives of SMEs regarding the previously mentioned collaboration were analyzed. The conclusions of the paper highlight that the relationships between most SMEs, included in this study, and the banking units with which they collaborate were not affected.
Keywords: *banks; COVID-19 pandemic; SMEs; social responsibility.*
JEL Classification: G21, L29, M14

1. INTRODUCTION

Due to the COVID-19 pandemic, which was started in March 2020, worldwide economic activity has gone through a major shock. As the authorities imposed certain measures to limit the spread of the new coronavirus, some Small and Medium-sized Enterprises (SMEs) were forced to cease their operations temporarily or permanently. Due to the lack of constant revenues, this has automatically led to an increase in the number of unemployed persons or an increase in debt.

Also, another negative effect of the decisions taken, among SMEs, was the affectation of certain relations with the stakeholders. An example, in this regard, can be represented by the collaborations between these organizations and the banking units. To mitigate the impact caused by the pandemic, the authorities have also ordered a set of measures. Being pressured by the contractual obligations, those in charge of SMEs were put in a position to resort to these measures of support. These aimed, on the one hand, to maintain and strengthen the ties between the two sides, and, on the other hand, to support the national economy. But were these effective?

Through its contents, this paper will try to answer the previous question. In the first part, some key concepts from the literature will be presented, which support the carrying out of the case study. The latter consisted of marketing research, conducted among representatives of SMEs in Romania. The second part of the paper will present the most significant results and the conclusions of the research conducted.

2. THEORETICAL BACKGROUND

SMEs, through their structure, can often face various problems, such as loss of employees, increasing expenses, decreasing revenues, threatening competitors, tax problems and the list goes on.

However, for all types of organizations, the emergence of the COVID-19 pandemic was an extra shock, in addition to those mentioned above. For this reason, the situation triggered in this context is "the worst global crisis since the Second World War" (Oman Observer, 2020). According to the UN Secretary-General, the gravity of this crisis is given by the fact that: "we face simultaneously an epochal health crisis, the biggest economic calamity and job losses since the Great Depression, and dangerous new threats to human rights" (The Economic Times, 2020). Thus, society, in general, has had to face, at the same time, the following two challenges: "health challenge and economic challenge globally" (Ojukwu, 2021, p. 3).

For both types of challenges, the authorities have mobilized and taken several measures to mitigate the negative effects that affect both people and organizations around the world.

Perhaps one of the most significant answers to these issues was the implementation of social responsibility policies, especially within the economic activity. According to the European Commission, an organization is socially responsible when it cumulatively meets the following conditions: to integrate the "social, environmental, ethical, consumer, and human rights concerns into their business strategy and operations", and to follow the law (European Commission, 2021).

As the COVID-19 pandemic is an external factor that cannot be controlled, this can lead to a negative reputation among organizations (El Chaarani and El Abiad, 2020). Thus, the aforementioned policies can also have had an additional role, namely strengthening the image and reputation of companies.

Even after the disappearance of the COVID-19 pandemic, social responsibility measures can still be applied. Thus, these would turn into CSR actions. By implementing CSR measures, companies can benefit from many advantages, which lead to micro-performance, such as "reputation enhancement, potential to charge a premium price for products as well as the enhanced ability to recruit and to retain high-quality workers", or to macro-performance, represented by "environmental improvement and reduction in social inequality" (Wu and Shen, 2013, p. 3529).

3. CASE STUDY

3.1. Research methodology

a) Question and objectives of the research

For the case study was chosen a survey. The main purpose was to present an overview of how the COVID-19 pandemic has influenced the collaboration relationship between a Romanian SME and a banking unit. Thus, the question that triggered this research is: How were the behavioral intentions of the representatives of SMEs in Romania affected, by the effects of the COVID-19 pandemic, concerning the banking units with which they collaborate?

The research objectives have been:

- to identify the way how the collaborative relationship between the Romanian SMEs and the banking units with which they collaborate was affected.
- to identify the measures taken by the banking units to support the SMEs in Romania with which they collaborate.
- to identify the level of appreciation of the representatives of SMEs in Romania regarding the collaboration relationship they have with the banking units.

b) Research tool and software used:

The research tool was a questionnaire. It included no less than 21 questions, which concerned both the profile of SMEs from which the respondents came and the achievement, more concretely, of the research objectives.

Also, most of the questions were closed-ended, for one question was used a 5-point semantic differential scale, ranging from 1 (Very Unfavorable) to 5 (Very Favorable), and for three questions was used a 7-point Likert scale, ranging from 1 (Total Disagreement) to 7 (Total Agreement).

The questionnaire was shared online, between January and March 2021, using both the email addresses of the representatives of SMEs in Romania, as well as some specific groups on social networks. Also, all the provisions of the GDPR were observed.

The software and platforms used in the research approach were Google Forms platform, for the design of the questionnaire and its sharing in the online environment; IBM SPSS Statistics software for processing and analyzing data collected; Microsoft Office for highlighting the research results by making certain charts and tables.

3.2 Results and discussions

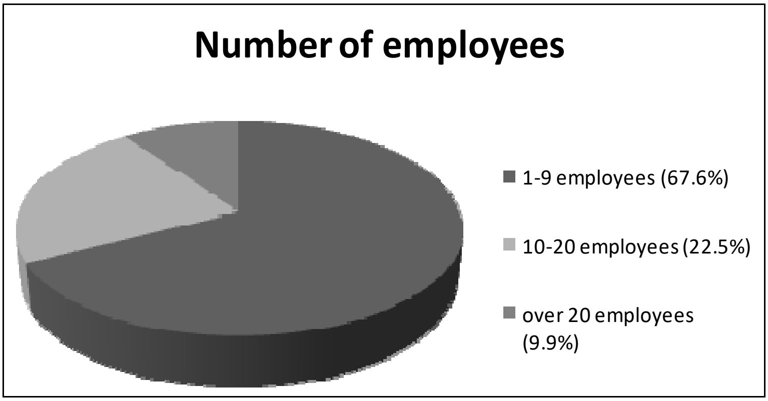
a) Data on the profile of respondents and the structure of SMEs included in the sample:

142 questionnaires were collected. Of these, 91.5% were filled in by the staff holding a decision-making position within SMEs. This value can be a strong point for research. The remaining 8.5% were filled in by the staff holding an executive position.

The fields of activity from which the respondents' organizations come are diverse, from education and training to consulting services, transport, IT services, agriculture, HORECA or other categories of industries and services.

In Figure 1 can be observed the distribution of SMEs depending on the number of employees.

Figure 1. The distribution of SMEs depending on the number of employees



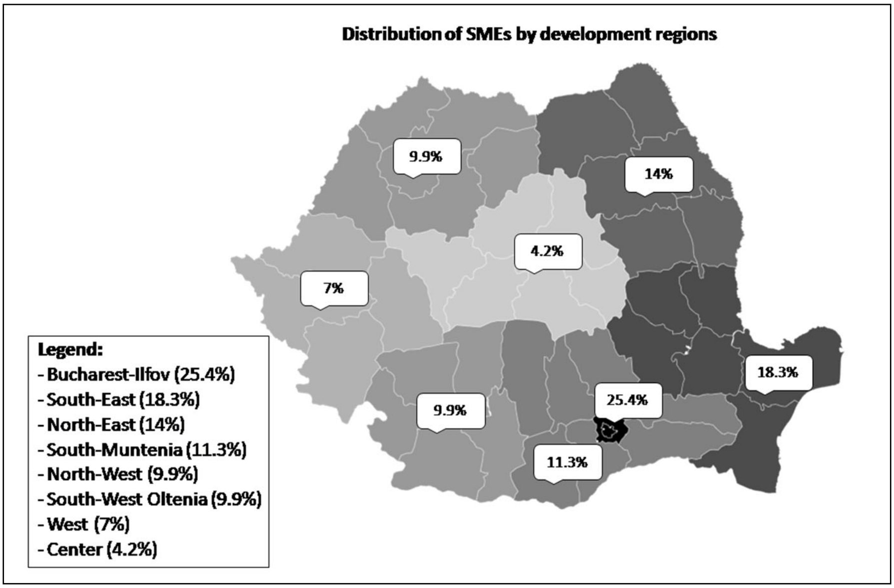
Source: author's processing

According to the information presented in the previous figure (Figure 1), most SMEs included in the case study have several employees between 1 and 9 persons.

Regarding the seniority on the market, 40.8% of SMEs are quite new, having at most 5 years of activity. 31% of the entities have between 6 and 10 years of experience on the market, while only 28.2% of them have more than 10 years of activity.

The following figure (Figure 2) shows the development regions of which the organizations participating in the research are part. The best-represented area is the Bucharest-Ilfov Region, where 25.4% of the organizations have their headquarters. The least represented are the organizations from the Center Region (4.2%), the West Region (7.0%), respectively the South-West Oltenia Region (9.9%) and the North-West Region (9.9%).

Figure 2. The distribution of SMEs by development regions in Romania



Source: author's processing

Continuing the previous idea, 83.1% of SMEs are headquartered in urban areas, while 16.9% of them are headquartered in rural areas.

b) Data regarding the relationship that the SMEs included in the research sample had with the banking units, during the COVID-19 pandemic:

The most popular banking units, with which the SMEs of the respondents collaborate, are Transilvania Bank (38%) and ING Bank (21.1%). The rest of the banking units have a share of less than 10%, each separately.

Regarding the collaboration duration, most SMEs have a collaboration between 3-5 years (29.6%), respectively 6-10 years (29.6%) with the banking units.

The main reasons that led to the aforementioned relationships are the offer of banking units (40.8%), the quality of employees (25.4%), recommendations from other entrepreneurs (21.1%) and the location of banking units (12.7%).

Over 57% of those surveyed answered that the expectations they had, before starting the collaboration with the respective banking units were met. This is also reflected in the question regarding the appreciation of the relationship with banks, where was used the 5-point semantic differential scale, ranging from 1 (Very Unfavorable) to 5 (Very Favorable). The results are presented in Table 1.

Table 1. Appreciation of the collaboration relationship between Romanian SMEs and banking units

Item	N	Mean	Median	Mode	Std. Deviation	Min.	Max.
Appreciation of the collaboration	142	3.59	4.00	4	1.046	1	5

Source: author's processing; SPSS data

The data in the table above (Table 1) reflect a positive appreciation of the collaboration between the two parties, over time.

Regarding the services contracted by SMEs from partners, these have been bank credit services (40.8%), current account services (35.2%) and internet banking services (24%).

Of the total respondents, only 22.5% answered positively, when asked whether the relationship between the business unit in which they operate and the banking unit with which the latter collaborates was affected by the COVID-19 pandemic. A determining factor in this statement can be represented by the activity field of SMEs since not all units have suspended their activity during the pandemic. Consulting services (22.5%) and the IT industry (15.5%) are the two most common fields among SMEs included in the research sample. The least represented were the agricultural field (4.2%), the transport field (4.2%) and the vocational education and training field (2.8%). Only 9.9% of the organizations participating in this research are part of the HORECA field, perhaps one of the most sensitive fields of activity to the effects caused by the COVID-19 pandemic.

Of the total affected, 43.7% referred to the receipt of refusals from the representatives of the banking units, regarding the obtaining of certain financing. However, this problem is not a new one among Romanian SMEs. According to the data presented by the European Commission (2020), in the period 2018-2020, the rejection rate of bank loans requested by Romanian SMEs has been increasing. It is interesting to analyze the reasons why organizations have failed to obtain such funding. If for 2020, an explanation can be represented by the COVID-19 pandemic, for the period 2018-2019, the reasons are different and have supported this trend. However, in 2020, the application rate for a bank loan by Romanian SMEs increased from 21%, in 2019, to 27% (European Commission, 2019; European Commission, 2020).

Other ways how the aforementioned relationship was affected were: the closure of certain branches of the banking units (18.8%), the impossibility to pay the instalments (12.5%), the increase in the commissions (12.5%) and the adjustment of interests (12.5%).

Only 6.3% of SME representatives with a relationship that was affected stated that certain measures had been taken by the banking units to mitigate these negative effects. The measures that came in their help were represented by the decrease in commissions for the use of e-banking services and the postponement of the payment of instalments.

Of the total respondents, only 15.5% know other CSR actions, which the representatives of the banking units carried out, to mitigate the negative effects of the COVID-19 pandemic, in society. As examples, on the one hand, the representatives of the SMEs mentioned the actions through which the hospitals were equipped, due to several significant donations (54.5%), and on the other hand, the awareness campaigns of the citizens, by sharing messages among the population (45.5%).

The following table (Table 2) highlights the results of the analysis of the behavioral intentions that SME representatives have on the relations with the banking units with which they currently collaborate. A 7-point Likert scale, ranging from 1 (Total Disagreement) to 7 (Total Agreement) was used for this analysis.

Table 2. The results of the analysis of the behavioral intentions

Items	N	Mean	Median	Mode	Std. Deviation	Min.	Max.
The intention to continue the collaboration	142	4.37	4.00	7	2.071	1	7
The intention to develop the collaboration	142	4.08	3.00	7	2.332	1	7
The intention to recommend the collaboration	142	4.14	4.00	7	2.274	1	7

Source: author's processing; SPSS data

As it can be seen in Table 2, three behavioral intentions were analyzed: the intention to continue the collaboration, the intention to develop the collaboration and the intention to recommend the collaboration. The results of the first intention have achieved the highest scores. This can also be given by the appreciation of the relationship that the two parties have had so far. The least appreciated was the intention to develop the collaboration. An explanation for the lower results may be given by the effects of the COVID-19 pandemic, which, for some SMEs, were negative.

Considering the assessment of the behavioral intentions of the Romanian SMEs representatives, the banking units will be able to make certain reports through which to publish the results of the social responsibility actions, which they undertook during this period. The results should not be selective, but some that provide an overview of the efforts they have made. Otherwise, one can discuss a "corporate hypocrisy", through which the banking units only tried to manipulate their customers (Frecea, 2017, p. 3). To keep the portfolio intact, but also in forming a positive reputation, this idea can be induced at some point.

Also, in a similar study conducted in 2020 among consumers, their intentions were positive, in response to the measures taken by the banking units (Drugă, 2020). And in the respective research, being a pilot one, carried out near the period when the COVID-19 pandemic was stated, the ethics of these social responsibility actions were discussed.

3.3 Testing the research hypotheses

Nine statistical hypotheses were formulated, which were subsequently tested, by using different tests:

H_1: There is a positive correlation between the appreciation of the collaboration relationship with the banking unit, made by the representatives of Romanian SMEs and their intention to continue the collaboration with the respective organization.

Results: $r_s(136) = .517$, $p < .01$, the hypothesis is being accepted.

H_2: There is a positive correlation between the appreciation of the collaboration relationship with the banking unit, made by the representatives of Romanian SMEs and their intention to develop the collaboration with the respective organization.

Results: $r_s(136) = .545$, $p < .01$, the hypothesis is being accepted.

H_3: There is a positive correlation between the appreciation of the collaboration relationship with the banking unit, made by the representatives of Romanian SMEs and their intention to recommend the collaboration with the respective organization.

Results: $r_s(136) = .615$, $p < .01$, the hypothesis is being accepted.

H_4: There is a significant difference in the assessment of the intention to continue the collaboration with the banking unit, between the representatives of Romanian SMEs that were affected and the representatives of Romanian SMEs that were not affected by the COVID-19 pandemic in this relationship.

Results: A Mann-Whitney U test revealed a significant difference in the assessment of the intention to continue the collaboration with the banking unit, between the representatives of Romanian SMEs that were affected (Md = 3.00, n = 32) and the representatives of Romanian SMEs that were not affected (Md = 5.00, n = 104) by the COVID-19 pandemic in this relationship, U = 930, z = -3.85, p = .00, r = 0.33.

H_5: There is a significant difference in the assessment of the intention to develop the collaboration with the banking unit, between the representatives of Romanian SMEs that were affected and the representatives of Romanian SMEs that were not affected by the COVID-19 pandemic in this relationship.

Results: A Mann-Whitney U test revealed a significant difference in the assessment of the intention to develop the collaboration with the banking unit, between the representatives of Romanian SMEs that were affected (Md = 3.00, n = 32) and the representatives of Romanian SMEs that were not affected (Md = 5.50, n = 104) by the COVID-19 pandemic in this relationship, U = 928, z = -3.87, p = .00, r = 0.33.

H_6: There is a significant difference in the assessment of the intention to recommend the collaboration with the banking unit, between the representatives of Romanian SMEs that were affected and the representatives of Romanian SMEs that were not affected by the COVID-19 pandemic in this relationship.

Results: A Mann-Whitney U test revealed a significant difference in the assessment of the intention to recommend the collaboration with the banking unit, between the representatives of Romanian SMEs that were affected (Md = 3.00, n = 32) and the representatives of Romanian SMEs that were not affected (Md = 5.00, n = 104) by the COVID-19 pandemic in this relationship, U = 1074, z = -3.09, p = .00, r = 0.27.

H_7: There is a significant difference in the assessment of the intention to continue the collaboration with the banking unit, between the representatives of Romanian SMEs whose expectations were met and the representatives of Romanian SMEs whose expectations were not met, regarding this relationship.

Results: A Mann-Whitney U test revealed a significant difference in the assessment of the intention to continue the collaboration with the banking unit, between the representatives of Romanian SMEs whose expectations were met (Md = 6.00, n = 82) and the representatives of Romanian SMEs whose expectations were not met (Md = 3.00, n = 50), regarding this relationship, U = 1038, z = -4.85, p = .00, r = 0.42.

H_8: There is a significant difference in the assessment of the intention to develop the collaboration with the banking unit, between the representatives of Romanian SMEs whose expectations were met and the representatives of Romanian SMEs whose expectations were not met, regarding this relationship.

Results: A Mann-Whitney U test revealed a significant difference in the assessment of the intention to develop the collaboration with the banking unit, between the representatives of Romanian SMEs whose expectations were met (Md = 6.00, n = 82) and the representatives of Romanian SMEs whose expectations were not met (Md = 3.00, n = 50), regarding this relationship, U = 1138, z = -4.39, p = .00, r = 0.38.

H_9: There is a significant difference in the assessment of the intention to recommend the collaboration with the banking unit, between the representatives of Romanian SMEs whose expectations were met and the representatives of Romanian SMEs whose expectations were not met, regarding this relationship.

Results: A Mann-Whitney U test revealed a significant difference in the assessment of the intention to recommend the collaboration with the banking unit, between the representatives of Romanian SMEs whose expectations were met (Md = 6.00, n = 82) and the representatives of Romanian SMEs whose expectations were not met (Md = 3.00, n = 50), regarding this relationship, $U = 960$, $z = -5.23$, $p = .00$, $r = 0.46$.

4. LIMITATIONS AND FUTURE RESEARCH

A limit of this study may be the number of SMEs included in the research sample and which did not encounter issues with the banking units during the COVID-19 pandemic. Since the fill-in of the questionnaires was done exclusively online, access to certain organizations was difficult. However, considering the data presented in a European Commission report, the importance of SMEs problems has changed (European Commission, 2020). The biggest difficulties encountered by SMEs in Romania in 2020, amid the COVID-19 pandemic, were those of finding customers or those related to unit staff (European Commission, 2020). Thus, this limit may be insignificant.

Therefore, there may be two scenarios for future research. The first scenario could be the inclusion of several organizations affected by the consequences of the COVID-19 pandemic, in a relationship with a bank, if the sample will be more representative. The second scenario could be represented by conducting interviews with the representatives of the banking units, to find out their opinion regarding the reaction that the public had after the launch of those measures of support.

5. CONCLUSIONS AND REMARKS

Even if, during certain unfavorable events, it is recommended to support the business units by taking certain measures, sometimes they are delayed or not very well known by the target public. The same happened in this research. Most organizations that were in a relationship with a banking unit and were affected by the COVID-19 pandemic did not benefit from certain measures for support. Some explanations, in this regard, can be represented by the conditions imposed by the banks to be able to provide this support.

Therefore, a point of concern of the research is the lack of information faced by SME employees. When they were put in a position to present certain CSR actions which helped the society, carried out by the banking units, most of them have not heard of such measures. This issue is worth further investigation to find out whether responses were formulated out of a lack of interest on the part of SME representatives or whether they were based on other causes.

Given the objectives of this research, the following were found:

a) Most relations between the Romanian SMEs, included in the research sample and the banking units with which they collaborate, were not affected by the effects of the COVID-19 pandemic. However, most of those affected have had difficulties in obtaining certain funding.

b) From the information submitted by the respondents, to support the Romanian SMEs, the banking units have taken the following measures: the possibility to postpone the payment of instalments; decreasing certain fees for using e-banking services.

c) The representatives of the Romanian SMEs, who participated in this research, appreciated as favorable the collaboration relationship with the partner banking units.

Following the testing of statistical hypotheses, it is noted that the behavioral intentions of SME representatives can be positively influenced by the following factors: the favorable assessment of the collaboration relationship with the banking units; the lack of certain external factors, such as the COVID-19 pandemic, which would negatively influence the collaboration relationship with the banking units; meeting the expectations set by SME representatives.

Along with the variables mentioned above, during unforeseen events, social responsibility actions, respectively CSR actions, can contribute to the formation of favorable behavioral intentions. These will further support the collaboration relationships of SMEs with other stakeholders. The only condition is that they should be as visible as possible to the general public.

In conclusion, by taking measures to support organizations and society in general, the collaborative relationships between them and other stakeholders can be long-lasting.

ACKNOWLEDGEMENTS

The author received financial support for the publication of this article from the Doctoral School of Economics and Business Administration - Alexandru Ioan Cuza University of Iași.

References

1) Drugă, R. I. (2020). The Importance of Social Responsibility in the Banking Sector of Romania, in the Context of the COVID-19 Pandemic. In: *EUFIRE 2020: European Finance, Business and Regulation* (pp. 31-45). Iași: Editura Universităţii „Alexandru Ioan Cuza”.
2) El Chaarani, H. and El Abiad, Z. (2020). Determinants of banks reputation during crises. *Journal of Internet Banking and Commerce*, 25(95), pp. 1-10.

3) European Commission, (2019). *SME access to finance in the EU countries 2019*. [online] Available at: https://ec.europa.eu/docsroom/documents/38442 [Accessed: 12.06.2021].
4) European Commission, (2020). *SME access to finance in the EU countries 2020.* [online] Available at: https://ec.europa.eu/docsroom/documents/43869 [Accessed: 12.06.2021].
5) European Commission, (2021). *Corporate social responsibility & Responsible business conduct*. [online] Available at: https://ec.europa.eu/growth/industry /sustainability/corporate-social-responsibility_en#:~:text=European%20 Commission%20strategy%20on%20CSR,and%20global%20approaches%20to%20 CSR [Accessed: 11.04.2021].
6) Frecea, G.-L. (2017). The People-Oriented Approach of CSR for the Banking Industry in Romania. *European Journal of Interdisciplinarity Studies*, 9(1), pp. 1-16.
7) Ojukwu, C. O. (2021). Impact of COVID-19 on Financial Performance of Micro-Entreprises in Nigeria. *Journal of Good Governance and Sustainable Development in Africa (JGGSDA)*, 6(1), pp. 1-17.
8) Oman Observer, (2020). *Covid-19 pandemic: Worst global crisis since World War II*. [online] Available at: https://www.omanobserver.om/covid-19-pandemic-worst-global-crisis-since-world-war-ii/ [Accessed: 20.04.2021].
9) The Economic Times, (2020). *UN at 75 faces worst crisis since World War-II; India reaches out to coronavirus-hit planet.* [online] Available at: https://economictimes.indiatimes.com/news/international/world-news/un-at-75-faces-worst-crisis-since-world-war-ii-india-reaches-out-to-coronavirus-hit-planet/articleshow/79936132.cms [Accessed: 20.04.2021].
10) Wu, M.-W. and Shen, C.-H. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. *Journal of Banking & Finance*, 37(1), pp. 3529-3547.

INVESTMENT, DEBT AND ECONOMIC GROWTH - AN ARDL PANEL COINTEGRATION ANALYSIS

BOGDAN FÎRȚESCU
Alexandru Ioan Cuza University of Iași
Iași, Romania
firtescu@uaic.ro

MIHAELA ONOFREI
Alexandru Ioan Cuza University of Iași
Iași, Romania
onofrei@uaic.ro

CLAUDIA BOGHICEVICI
Aurel Vlaicu University
Arad, Romania
c.com77@yahoo.com

GINA-SIMONA FÎRȚESCU
D.G.R.F.P
Iași, Romania
gina.firtescu@gmail.com

Abstract
The paper empirically investigates the short and long-run relationship between investments and capital formation, public debt and economic growth in the EU and OECD countries, using data in a timespan from 1995 to 2018. For investments, the authors have used as proxy the gross fixed capital formation, which measures as the acquisition of produced assets, while for the economic growth we have used as proxy Gross Domestic Product per capita. In this study, we implied several econometric methods related to ARDL (auto regressive distributed lag models) such as pooled mean group (PMG), mean group (MG) and dynamic fixed effects (DFE). The usual stationarity tests and cointegration tests have been performed, to support the usage of the proposed methodology. The empirical results sustain the necessity of using the public policy for increasing the investments (capital formation), as a premise for economic growth and the use with caution of the public debt.
Keywords: *ARDL; public debt; capital formation; OECD Countries.*
JEL Classification: E22, E47, F34, H63

1. INTRODUCTION

The analysis of the relationship between investment, public debt and growth domestic product has been a growing subject among scholars, being also important for the policy makers. The topic has greater involvement for the governates in developing countries, but it is essential for developed countries, as well. The paper is structured in four parts, with Introduction, that present important findings in literature, Methodology and Data, explaining the methodology used and data description, Empirical results, presenting the stationarity, cointegration tests and ARDL model results, and Conclusions. There are a lot of papers that investigate this connection, some of them showing that the existence of a public dept to GDP ratio above 90% is usually associated with a lower growth rate (Reinhart and Rogoff, 2010), while other studies suggest that there is no depth threshold. Some authors (Asteriou, Pilbeam and Pratiwi, 2021) identifies two mechanisms that explains the connection between GDP and public debt. First of one is referring to the fact that low economic growth has directly consequence to GDP ratio sales GDP is the denominator this ratio. The second one is that low economic growth. To determine the effects on GDP per capita of the health expenditure, we have estimated the short run and the long run effects of GDP per capita on health expenditure per capita by using the MG (Pesaran and Smith, 1995) and PMG models (Pesaran, Shin and Smith, 1999) using the methodology proposed by Blackburne and Frank (Blackburne III and Frank, 2007). The literature of public debt implications on economic growth (debt-development nexus) shows that there are different approaches/directions (Clements, Bhattacharya and Nguyen, 2003). The relationship between external debt and growth continues to attract considerable interest from policymakers and academics alike. There is, also, a substantial literature on the impact of external debt on growth, but relatively few studies have focused on low-income countries. Most of the literature on the debt/growth nexus (developed in the context of emerging market economies) must be interpreted with caution in assessing the debt/growth relationship in a low-income context. The following paragraph provides some information about the literature review regarding the impact of public debt and capital formation on economic growth (development).

The theoretical literature retains different facts regarding debt financing, some of major theories being reported as follows (Clements, Bhattacharya and Nguyen, 2003; Attard, 2019):

- the relationship between the (external) debt and growth is largely focused on adverse effects of “debt overhang” (Krugman, 1988);
- there is still a limited number of empirical studies (Baum, Checherita-Westphal and Rother, 2013; Checherita-Westphal and Rother, 2012; Abbas and Christensen, 2010);
- debt overhang slows investments and growth by increasing uncertainty (Oks and Van Wijnbergen, 1995);

• empirical literature addresses the problems related to the external debt in low-income countries and emerging economies (Krugman, 1988; Clements, Bhattacharya and Nguyen, 2003)

• foreign borrowing has a positive impact on investment and growth up to a certain threshold level, but beyond this level, the impact is adverse, as the relationship between the face value of debt and investment can be represented as a kind of "Laffer curve" (Cohen, 1993);

• mixed empirical support for the "debt overhang", some authors find evidence of debt overhang (Deshpande, 1997; Elbadawi, Ndulu and Ndungu, 1997; Serven, 1996; Herndon, Ash and Pollin, 2014), while other concludes that the debt crisis did not depress investment (Warner, 1992);

• some support for a non-linear Laffer-type relationship between stock of external debt and growth (Pattillo, Poirson and Ricci, 2011);

• some empirical studies have assessed the effects of debt service on private investment or the composition of public spending: external debt service dampens private investment (Greene and Villanueva, 1991), and the link between debt service and total investment;

• high levels of debt are negatively correlated with growth - when debt-to-GDP ratio is more than 90% it will negatively and substantially impact economic growth, see (Reinhart and Rogoff, 2010);

• some critics related to latest, stating that public debt and economic growth nexus differs significantly across countries and time periods, in opposition the idea that there is a single fixed threshold for every country (Herndon, Ash and Pollin, 2014; Ghosh *et al.,* 2013; Egert, 2015; Eberhardt and Presbitero, 2015).

The methodology and data are explained in the following section.

2. METHODOLOGY AND DATA

We start the description of the methodology with the presentation of general information regarding ordinary least squares model (OLS). In OLS, a major problem that could be encountered is the presence of non-stationarity in data, a situation when spurious regression can arise. The data must be tested for stationarity, so the OLS methodology could be applied. The most common way for testing the existence of non-stationarity is (in a general model), for instance, the Dickey and Fuller test (Dickey&Fuller, 1979). The test is being equivalent to check for the existence of a unit root, based on the AR(1) model, presented in equation no. 1:

$$Y t = \phi Y t{-}1 + \mu t \quad (1)$$

In equation 1, it is to be tested $\phi = 1$ and if the value is equal to one, the unit root is present. In some situation, it is used an augmented version of the test (ADF test) that includes additional lagged terms of the dependent variable to control serial correlation in the test equation. Alternative tests usually used are

KPSS (Kwiatkowski *et al.,* 1992) or augmented Dickey-Fuller using GLS (Baum and Sperling, 2001). On time series, and as in our case - panel data (that accounts for individual means) the variables can be cointegrated, so an error-correction model (ECM) is needed. In this case, even if the data is not stationary in level (error-term could also not be stationary), the first difference can be applied, resulting an error-correction model that is stationary. The data (variables) should be stationary in level (noted I(0)) or in first-difference (noted I(1)). The proposed methodology could not be used if data is I(2), or non-stationary in first-difference. We have presented in equation (3) the methodology for auto-regressive distributed lag models with one lag - ARDL (1,1), as a theoretical base for ECM model
(4).

To test the stationarity in panels (equation no. 2), we have employed a variety of tests (for unit roots) in the panel dataset. Some tests (Levin, Lin and Chu, 2002; Harris and Tzavalis, 1999; Breitung and Das, 2005; Im, Pesaran and Shin, 2003; Choi, 2001) have as the null hypothesis H_0 : *all the panels contain a unit root*. The Hadri Lagrange multiplier (LM) test (Hadri, 2000) has as the null hypothesis H_0: *all the panels are (trend) stationary*. The second group of tests check the cointegration between variables. These tests are based on equation 2:

$$Y_{it} = \alpha_{it} + \rho_i Y_{i,t-1} + \mu_t \quad (2)$$

Regarding the auto-regressive distributive lag model (abbreviated A.R.D.L.), it is necessary that T must be large enough, such that the model can be fitted for each group separately. Time trends and other fixed regressors may be included(λ_{it}). If the variables in (3) are, for example, I(1) and co-integrated, then the error term is an I(0) process for all i. A principal feature of co-integrated variables is that the responsiveness to any deviation from long-run equilibrium can be estimated. This feature also implies an error correction model in which the short-run dynamics of the variables (in the system) may be influenced by their deviation from equilibrium. Thus, it is common to re-parameterise (3) into the error correction equation (4).

The methodology, that we used, is shown in line with equations (3) and (4), and it is referring to the estimation of non-stationary heterogeneous panels (Blackburne III and Frank, 2007). The choice for this methodology is related to the following important facts: some variables are not-stationary in levels, so classical panel data models (fixed and random effects) could not be applied; the variables are cointegrated; the time (29 years) is larger than units (21 countries); *Gross Domestic Product per capita GDPcap* is usually a lagged-dependent variable, so lagged models should be applied.

$$y_{it} = \sum_{j=1}^{p} \lambda_{ij} y_{i,t-j} + \sum_{j=0}^{q} \delta'_{ij} X_{i,t-j} + \mu_i + \epsilon_{it} \qquad (3)$$

In the case of non-stationary variables, and cointegration, an error-correction term is used, so the model became as in equation no. 4.

$$\Delta y_{it} = \phi_i \left(y_{i,t-1} - \theta'_i X_{it} \right) + \sum_{j=1}^{p-1} \lambda^*_{ij} n \Delta y_{i,t-1} + \sum_{j=0}^{q-1} \delta'^*_{ij} \Delta X_{i,t-j} + \mu_i + \epsilon_{it} \qquad (4)$$

where:

i = 1, 2, . . . , N are the number of groups;
t = 1, 2, . . . , T are the number of periods;
X is a k × 1 vector of explanatory variables;
δit = it are the k × 1 coefficient vectors;
(p,q1,...,qk) are A.R.D.L. lags
ij are scalars;
and *i* is the group-specific effect.

The data information is presented as follows, the dataset having 504 observations, the time span for the data being between 1995 and 2018 (29 years), and the unit panel is referring to 21 countries from European Union (considering the United Kingdom before BREXIT) and OECD (AUT, BEL, CZE, DEU, DNK, ESP, EST, FIN, FRA, GBR, GRC, HUN, ITA, LTU, LVA, NLD, POL, PRT, SVK, SVN, SWE). The variable GDPcap in logarithmic values has an average mean of 10.15, a minimum of 8.61, a maximum of 10.96, a variance of 0.23, and a standard deviation of 0.47. The variable Capital formation (logarithmic values) has an average mean of 11.07, a minimum of 7.57, a maximum of 13.77, a variance of 1.82, and a standard deviation of 1.35. The variable Debt (in logarithmic values) has an average mean of 4.08, a minimum of 1.89, a maximum of 5.27, a variance of 0.41, and a standard deviation of 0.64. The data shows sufficient variability between units (countries) to perform panel data analysis. Data description by countries is presented in Table 1.

Table 1. Descriptive statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
year	overall	2006.5	6.9291	1995	2018	N = 504
	between		0	2006.5	2006.5	n = 21
	within		6.9291	1995	2018	T = 24
Country	overall	-	-	1	29	N = 504
	between	-	-	1	29	n = 21
	within	-	-	-	-	T = 24

Variable		Mean	Std. Dev.	Min	Max	Observations
GDPcap	overall	10.1536	0.4746	8.6106	10.9606	N = 504
	between		0.3389	9.5456	10.5709	n = 21
	within		0.3401	9.1949	10.9955	T = 24
Capital formation	overall	11.0722	1.349	7.571	13.7721	N = 504
	between		1.338	8.7519	13.2967	n = 21
	within		0.3339	9.7575	11.769	T = 24
Debt	overall	4.0826	0.6425	1.8944	5.2663	N = 504
	between		0.5949	2.3245	4.8632	n = 21

Source: authors' calculation

The data was obtained from OECD database and Eurostat database. The empirical results are explained in the next section.

3. EMPIRICAL RESULTS

We start the explanation of the empirical results with the unit-root tests and cointegration tests findings. The results for stationarity tests (Levin-Lin-Chu, Im-Pesaran-Shin, Harris-Tzavalis, Breitung, Hadri Lagrange multiplier stationarity test) are presented in the following.

The null hypothesis for Levin-Lin-Chu is Ho: Panels contain unit roots, for Im-Pesaran-Shin is Ho: All panels contain unit roots, for Harris-Tzavalis is Ho: Panels contain unit roots, for Breitung is Ho: Panels contain unit roots, for Hadri Lagrange multiplier stationarity test is Ho: All panels are stationary.

For the variable GDPcap (in levels, logarithmic values) the p-value of adjusted t* statistic is -4.2785, for *Zt-tilde-bar* is 1.6289, for z statistic is 3.5008, for lambda is 14.1482, for z is 64.2095, suggesting that the variable is not stationary in levels.

Regarding the variable Capital formation (in levels, logarithmic values) the p-value of adjusted t* statistic is -1.8416, for *Zt-tilde-bar* is 2.0686, for z statistic is 1.4541, for lambda is 8.7805, for z is 53.5663, suggesting that the variable is not stationary in levels.

The variable Debt has the p-value of adjusted t* statistic of -1.7168, for Z_t*−tilde−bar* the value is 2.7134, for z statistic is 1.6362, for lambda is 1.2228, for z is 45.6085, suggesting that the variable is not stationary in levels.

For the variable GDPcap in first-difference the p-value of adjusted t* statistic is -8.7279, for Zt-tilde-bar is -9.0040, for z statistic is -22.9223, for lambda is -11.1996, for z is 2.5843, suggesting that the variable is stationary in first-difference.

For the variable Capital Formation, the p-value of adjusted t* statistic is -9.5190, for Zt-tilde-bar is -7.9208, for z statistic is -21.0022, for lambda is -

9.3642, for z is 1.9845, suggesting that the variable is stationary in first-difference.

The variable Debt in first-difference has the p-value of adjusted t* statistic of -6.2632, for *Zt-tilde-bar* the value is -7.7209, for z statistic is -21.9714, for lambda is -8.8790, for z is 1.4749, suggesting that the variable is stationary in first-difference.

Table 2. Panel Unit Root Tests

Variable name: GDPcap					
Testing stationarity	***LLC***	***IPS***	***Harris-Tzavalis***	***Breitung***	***Hadri***
Levels	1.6289	-4.2785***	3.5008	14.1482	64.2095***
First-difference	-9.004***	-8.7279***	-22.9223***	-11.1996***	2.5843***
Variable name: Capital Formation					
Testing stationarity	***LLC***	***IPS***	***Harris-Tzavalis***	***Breitung***	***Hadri***
Levels	2.0686	-1.8416**	1.4541	8.7805	53.5663***
First-difference	-7.9208***	-9.519***	-21.0022***	-9.3642***	1.9845**
Variable name: Debt					
Testing stationarity	***LLC***	***IPS***	***Harris-Tzavalis***	***Breitung***	***Hadri***
Levels	2.7134	-1.7168**	1.6362	1.2228	45.6085***
First-difference	-7.7209***	-6.2632***	-21.9714***	-8.879***	1.4749*

Source: authors' calculation

Cointegration tests results are available in Table 3. The cointegration tests results shows regarding GDP cap and Capital Formation appear to be cointegrated in concordance with four statistics (*Augmented Dickey-Fuller t, Unadjusted modified Dickey-Fuller, Unadjusted Dickey-Fuller t, Modified Phillips-Perron t*), results being confirmed by negative and statistically significant ECT coefficient in all equations from Table 4. The null hypothesis of *no cointegration* can be rejected in the fourth cases mentioned above. Related to the cointegration between GDP cap and Debt, the statistics results in six tests are confirming the long-run relationship (*Dickey-Fuller t, Augmented Dickey-Fuller t, Modified Phillips-Perron t, Phillips-Perron t, Augmented Dickey-Fuller t, Variance ratio*). The statistics concludes the rejection of the null hypothesis of *no cointegration*, sustained also by the results of ECT term (negative and statistically significant at 1% level, see ECT term values in Table 5). The short-run and long-run relationship (ARDL model coefficients) between economic growth (proxy used GDP cap) and capital formation are available on Table 4.

Table 3: Cointegration testing between variables

Cointegration test name and statistics	GDPcap, Capital Formation	GDPcap, Debt
Kao		
Modified Dickey-Fuller t	0.8965	0.3496
Dickey-Fuller t	1.0126	-1.4843*
Augmented Dickey-Fuller t	-1.477*	-1.5023*
Unadjusted modified Dickey-Fuller	1.3416*	0.864
Unadjusted Dickey-Fuller t	1.4242*	-1.1052
Pedroni		
Modified Phillips-Perron t	1.4325*	4.4586***
Phillips-Perron t	0.6321	1.8824**
Augmented Dickey-Fuller t	1.1939	1.6161*
Westerlund		
Variance ratio	-0.0961	4.037***

Source: authors' calculation

Regarding the analysis on the short run, all models implied (MG, PMG, and DFE) suggests the positive effect of the capital formation to economic growth, an increase with one unit in capital formation impose a growth by 0.2 units in GDP (the coefficients are 0.273*** in MG, 0.281*** in PMG, and 0.261*** for DFE).

The error-correction term (ECT) is negative and statistically significant at 1% level, effective results being -0.0769*** for MG, -0.0600*** for PMG, and -0.0341*** for DFE (see table 4). On the long-run, there is a positive impact of the capital formation to economic development, an increase with one unit in capital formation implying a growth with 0.763, 0.824 and 0.863 units in GDP cap, the results being obtained from MG, PMG and DFE models.

The Hausman test is suggesting that PMG model is appropriate (the results are available on demand). We can conclude that an increase with one unit in capital formation extends, on average, the GDP cap by 0.8 units, *ceteris paribus*.

Table 4. ARDL results for economic growth and gross fixed capital formation (investments)

VARIABLES	Mean Group (MG)	Pooled Mean Group (PMG)	Dynamic Fixed Effects (DFE)
ECT	-0.0769***	-0.0600***	-0.0341***
	(0.02)	(0.02)	(0.01)
D.Capital Formation	***0.273****	***0.281****	***0.261****
	(0.03)	(0.03)	-0.01

VARIABLES	Mean Group (MG)	Pooled Mean Group (PMG)	Dynamic Fixed Effects (DFE)
Capital Formation	**0.763***	**0.824***	**0.863***
	(0.03)	-0.02	(0.09)
Constant	*0.117****	*0.100****	*0.05*
	-0.04	(0.03)	(0.03)
Observations	483	483	483

Source: authors' calculation

The impact of debt is found to be negative on short-run (the calculated coefficients being -0.191*** for MG, -0.371*** for PMG, and -0.168*** for DFE, suggesting a decrease in growth elasticity if the public debt is increasing. The long-run coefficients show different results, the MG model suggesting a positive effect, while the other two showing a negative one. We cannot conclude, based on our models, some clear effect of debt on economic growth.

Table 5. ARDL results for economic growth and debt

VARIABLES	Mean Group (MG)	Pooled Mean Group (PMG)	Dynamic Fixed Effects (DFE)
ECT	-0.0179**		-0.0148***
	(0.00738)		(0.00452)
D.Debt	***-0.191****	***-0.371****	***-0.168****
	(0.0200)	(0.0711)	(0.0123)
Debt	1.477	-0.848	-0.729
	(1.645)		(0.532)
Constant	0.273***	-0.0946	0.243***
	(0.0515)	(0.129)	(0.0382)
Observations	483	483	483

Source: authors' calculation

Combining the capital formation and debt (see Table 6) suggests that the results are like those presented above, with a positive effect of the capital formation both on short-run (0.206*** - MG, 0.259***-PMG, and 0.230***-DFE), and on long-run (1.740** -MG, 0.824*** -PMG, and .846***- DFE). Based on Hausman test, we can conclude that the effect of capital formation, on average when increase with one unit, *ceteris paribus*, on economic growth (proxy used: GDPcap) is with 0.259 units in short-run, and with 0.824 units on long-run.

Our results suggests that a public policy that aids the extension of the capital formation, both on private and public sector, can contribute to the economic growth/development.

Table 6. ARDL results for economic growth and gross fixed capital formation (investments)

VARIABLES	Mean Group (MG)	Pooled Mean Group (PMG)	Dynamic Fixed Effects (DFE)
ECT	-0.135***	-0.0594***	-0.0413***
	(0.0343)	(0.0167)	(0.00955)
D.Capital Formation	0.206***	0.259***	0.230***
	(0.0266)	(0.0281)	(0.0136)
D.Debt	-0.0570***	-0.0315*	-0.0431***
	(0.0133)	(0.0168)	(0.0109)
Capital Formation	1.740**	0.824***	0.846***
	(0.752)	(0.0248)	(0.0720)
Debt	4.187	-0.0101	0.104
	(0.98)	(0.803)	(0.105)
Constant	0.108	0.102***	0.0492
	(0.0946)	(0.0247)	(0.0329)
Observations	483	483	483

Source: authors' calculation

The findings for impact of debt are negative in short-run and inconclusive on long-run. We may conclude that the use of public debt should be made with caution by public authorities, since the results usually suggest a negative effect on growth.

4. CONCLUSIONS

The scope of the paper is to empirically investigate the short and long-run relationship investments/capital formation and public debt on economic growth in the OECD European Union countries, using data between 1995 to 2018. For investments we have used as proxy the gross fixed capital formation (also known as investments) and for the economic growth we have used as proxy Gross Domestic Product per capita. We performed several econometric methods related to ARDL (auto regressive distributed lag models) such as pooled mean group (PMG), mean group (MG) and dynamic fixed effects (DFE). Regarding investments (proxy capital formation), the results shows that fixed capital formation is positively associated with economic growth on both short and long run, while debt is negatively associated with economic growth, at least on short-term. On long term, the results suggest no clear evidence regarding the long-run impact (of the debt) on economic development. We have analysed the literature, that shows also opposite findings related to debt impact on economic growth, with majority of studies quantifies a negative effect. A variety of tests for unit roots and for the stationarity have been conducted in our panel databases, suggesting that the data is stationary in first difference and there is cointegration between the variables implied. The empirical results sustain the necessity of using the public policy for increasing the investments (capital formation), as a premise for economic growth.

References

1) Abbas, S. A. and Christensen, J. E. (2010). The role of domestic debt markets in economic growth: An empirical investigation for low-income countries and emerging markets. *IMF Staff Papers*, 57(1), pp. 209-255.
2) Asteriou, D., Pilbeam, K. and Pratiwi, C. E. (2021). Public debt and economic growth: panel data evidence for Asian countries. *Journal of Economics and Finance*, 45(1), pp. 270-287.
3) Attard, J. (2019). *Public debt and economic growth nexus: a dynamic panel ARDL approach, MPRA Paper no. 96023*. [online] Available at: https://mpra.ub.uni-muenchen.de/96023/1/MPRA_paper_96023.pdf [Accessed 18.04.2021].
4) Baum, A., Checherita-Westphal, C. and Rother, P. (2013). Debt and growth: New evidence for the euro area. *Journal Of International Money and Finance*, 32(1), pp. 809-821.
5) Baum, C. and Sperling, R. (2001). *DFGLS: Stata module to compute Dickey-Fuller/GLS unit root test.* Department of Economics, Boston College. [online] Available at: https://ideas.repec.org/c/boc/bocode/s410001.html [Accessed 12.05.2021].
6) Blackburne III, E. F. and Frank, M. W. (2007). Estimation of nonstationary heterogeneous panels. *The Stata Journal*, 7(2), pp. 197-208.
7) Breitung, J. and Das, S. (2005). Panel unit root tests under cross-sectional dependence. *Statistica Neerlandica*, 59(4), pp. 414-433.
8) Checherita-Westphal, C. and Rother, P. (2012). The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area. *European Economic Review*, 56(7), pp. 1392-1405.
9) Choi, I. (2001). Unit root tests for panel data. *Journal of international money and Finance*, 20(2), pp. 249-272.
10) Clements, B., Bhattacharya, R. and Nguyen, T. Q. (2003). External debt, public investment, and growth in low-income countries. *IMF Working Paper*, 249. [online] Available at: https://www.imf.org/external/pubs/ft/wp/2003/wp03249.pdf [Accessed 12.05.2021].
11) Cohen, D. (1993). Low investment and large LDC debt in the 1980's. *The American Economic Review*, 83(3), pp. 437-449.
12) Deshpande, A. (1997). The debt overhang and the disincentive to invest. *Journal of development Economics*, 52(1), pp. 169-187.
13) Dickey, D. A. and Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal Of the American Statistical Association*, 74(366a), pp. 427-431.
14) Eberhardt, M. and Presbitero, A. F. (2015). Public debt and growth: Heterogeneity and non-linearity. *Journal of international Economics*, 97(1), pp. 45-58.

15) Egert, B. (2015). Public debt, economic growth and nonlinear effects: Myth or reality? *Journal of Macroeconomics*, 43(1), pp. 226-238.
16) Elbadawi, I., Ndulu, B. J. and Ndungu, N. (1997). Debt overhang and economic growth in sub-Saharan Africa. *External Finance for Low-Income Countries*, 3(249), pp. 49-76.
17) Ghosh, A. R., Kim, J. I., Mendoza, E. G., Ostry, J. D. and Qureshi, M. S. (2013). Fiscal fatigue, fiscal space and debt sustainability in advanced economies. *The Economic Journal*, 123(566), pp. 4-30.
18) Greene, J. and Villanueva, D. (1991). Private investment in developing countries: an empirical analysis. *Staff papers*, 38(1), pp. 33-58.
19) Hadri, K. (2000). Testing for stationarity in heterogeneous panel data. *The Econometrics Journal*, 3(2), pp. 148-161.
20) Harris, R. D. and Tzavalis, E. (1999). Inference for unit roots in dynamic panels where the time dimension is fixed. *Journal of Econometrics*, 91(2), pp. 201-226.
21) Herndon, T., Ash, M. and Pollin, R. (2014). Does high public debt consistently stifle economic growth? A critique of Reinhart and Rogoff. *Cambridge Journal of Economics*, 38(2), pp. 257-279.
22) Im, K. S., and Pesaran, M. H. and Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal Of Econometrics*, 115(1), pp. 53-74.
23) Krugman, P. (1988). Financing vs. forgiving a debt overhang. *Journal of development Economics,* 29(3), pp. 253-268.
24) Kwiatkowski, D., Phillips, P. C., Schmidt, P. and Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time series have a unit root? *Journal of Econometrics*, 54(1-3), pp. 159-178.
25) Levin, A., Lin, C. F. and Chu, C.-S. J. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of Econometrics*, 108(1), pp. 1-24.
26) Oks, D. and Van Wijnbergen, S. (1995). Mexico after the debt crisis: is growth sustainable? *Journal of Development Economics*, 47(1), pp. 155-178.
27) Pattillo, C., Poirson, H. and Ricci, L. A. (2011). External debt and growth. *Review of Economics and Institutions*, 2(3).
28) Pesaran, M. H., Shin, Y. and Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American statistical Association*, 94(446), pp. 621-634.
29) Pesaran, M. H. and Smith, R. (1995). Estimating long-run relationships from dynamic heterogeneous panels. *Journal of Econometrics*, 68(1), pp. 79-113.
30) Reinhart, C. M. and Rogoff, K. S. (2010). Growth in a time of debt. *American Economic Review,* 100(2), pp. 573-78.
31) Serven, L. (1996). Uncertainty, instability, and irreversible investment: Theory, evidence, and lessons for Africa. *Policy Research Working Paper Series 1722*.
32) Warner, A. M. (1992). Did the debt crisis cause the investment crisis? *The Quarterly Journal of Economics*, 107(40), pp. 1161-1186.

THE INFLUENCE OF THE COURT OF JUSTICE OF THE EUROPEAN UNION RULING ON THE MONETARY POLICY. RECENT CASE LAW ANALISYS

MIHAELA TOFAN
Alexandru Ioan Cuza University of Iași
Iași, Romania
mtofan@uaic.ro

Abstract
In the context of the European integration, the monetary project is considered both a success and a vulnerability action of cooperation among the Member States, its legal framework feature designing one of the most innovative area of the European law. The balance between the independence of the monetary institutions and the supremacy of the regulation included in the European Union treaties requires legitimate and specialized intervention.
The paper presents the competence of the Court of Justice of the European Union (CJEU) to verify the conformity of the European monetary policy with the European primary sources of law, analyzing recent jurisprudence (case Dietrich C-422/19, case Weiss C-493/17 and case Gauweiler (C-62/14). The research focuses on the arguments used by the CJEU when presenting its rulings, investigating its influence on the monetary policy within the European Union (EU), both in the case of the European Central Bank and for national central banks.
It is the relation between the legislatives institutions and monetary actors that is analyzed and detailed, assessing the role of the jurisprudence in extending the effect of the European monetary policy outside the limits for the euro-area, for all the EU territory.
Keywords: *monetary policy; European regulations; relevant case law.*
JEL Classification: E42, E58, K40

1. INTRODUCTION

In its most concise expression, the European Monetary Union involves the issuance and use of a single currency in a cross-border area, which replaces national currencies. This successful project is supported by a broad set of measures (Tofan, 2019, p. 35), such as promoting a single monetary policy, the pursuit by the participating countries of common economic policy guidelines, based on the recommendations of the Council of the European Union (Lazăr, 2016, p. 306) and the management, in each member country, of public finances in a manner compatible with ensuring macroeconomic stability.

The cooperation among the actors involved in the legislative process at European and national level with the authorities transposing the adopted regulations emphasize the role of the judiciary in the implementation of directions specific to monetary policy, which is less analyzed in the literature. Yet, the control of legality cannot be lacking in this complex area of economic life, with multiple effects at macro and microsocial level, but also with reflection on dynamics of the process of European integration. The recent case law of the Court of Justice of the European Union (CJEU) confirms the jurisdiction of the court in the areas of implementation monetary policy at EU level as well as the influence of Member States' legislation.

Our analysis focuses on the way in which, through the jurisprudence of the CJEU, the power to settle disputes over monetary policy in the euro area is exercised, in accordance with the provisions of the Treaty on the Functioning of the European Union (TFEU), and with the relevant provisions of the Protocol on the Statute of the European System of Central Bank (ESCB) and the European Central Bank (ECB).

2. CONCEPTUAL CLARIFICATIONS

Within the European integration project, the achievement of Monetary Union was not a target, but the mean to generating economic benefits and the effect of extended cooperation at Member State, including at institutional level. The legal framework adopted to achieve this objective aimed at creating the ECB, the institution entitled to coordinate the implementation of monetary policy, in accordance with the objectives pursued and in compliance with the legislation in force (Tofan, 2008, p. 83). A common currency removes the national segmentation of capital markets, encouraging the development of a single, large market in which the freedom of action of monetary regulators is on the one hand guaranteed by the principle of independence of action and on the other hand subject to control of legality achieved both in the non-contentious phase and through the courts (Costaș, 2019, p. 98). At present, at the level of the euro area, there is some uncertainty as to the scope of the legal tender status and the consequences thereof (Andries, Cocriş and Pleşcău, 2015). These theoretical concerns are addressed in Dietrich case-law, when explaining the status of the legal tender for euro banknotes, as set out in Art. 128 TFEU, together with other specific previsions on monetary policy.

Art. 3 (1) (c) TFEU states that the Union has exclusive competence for monetary policy for Member States whose currency is euro. According to Art. 11 of Regulation no. 974/98, euro coins are the only coins with the status of legal tender in all participating Member States.

Art. 16 (1) of the Protocol on ESCB and ECB provides that the only body authorized to allow the issue of euro banknotes within the Union is the Governing Council; the ECB and national central banks may issue such banknotes within the Union (Șaguna and Tofan, 2010, p. 76). Pursuant to Art. 10 of that Regulation, from 1 January 2002, the ECB and the central banks of the participating Member States have put into circulation banknotes with a face value denominated in euro.

Without prejudice to Art. 15, these euro banknotes shall be only banknotes that have the status of legal tender in all Member States.
According to Art. 11 of that Regulation, from 1 January 2002, participating Member States shall issue coins with a face value expressed in euros or cents and in accordance with the face values and technical specifications established. These currencies must be the only coins with the status of legal tender in all Member States. Except for the issuing authority and those persons specifically designated by the national law of the issuing Member State, no party shall be obliged to accept more than 50 coins in any single payment.

In line with Recommendation no. 2010/191/EU of the expert group composed of representatives of the ministries of finance and of the national central banks of the euro area, the definition of the legal tender means the cumulative fulfillment of the following conditions:

- Obligation to accept: The creditor of a payment obligation may refuse euro banknotes and coins only if the parties have agreed to use other means of payment;
- Acceptance at total face value: The monetary value of euro banknotes and coins is equal to the value indicated on banknotes and coins;
- Ability to pay the payment obligation:

A debtor can settle a payment obligation by offering the creditor euro banknotes and coins. Acceptance of euro banknotes and coins in retail transactions must be the rule (Bercea, 2014, p. 112). Therefore, a refusal can only be accepted if it is based on reasons related to the "principle of good faith" (for example, if a trader does not have cash available to give the rest). High-value banknotes in retail transactions can only be refused for reasons related to the "principle of good faith" (for example, the face value of the banknote is disproportionate to the amount owed to the creditor).

In the Weiss case, the factual situation regards the Governing Council of the ECB decision on 4 September 2014 to initiate a third covered bond purchase program and an asset-backed securities purchase program. In addition to the longer-term refinancing operations, these programs were intended to contribute to the transmission of monetary policy, facilitated the provision of credit to the euro area economy, relax lending conditions to households and firms, and contributed when inflation rates return to levels closer to 2%, in line with the ECB's main objective of maintaining price stability.

On 22 January 2015, the Governing Council decided that the acquisitions of assets should be extended to include a public sector asset purchase program (hereinafter referred to as the PSPP). Under the PSPP, national central banks (in proportions that reflect their corresponding shares in the distribution grid for the capital of the ECB), and the ECB may directly purchase eligible marketable debt securities from eligible counterparties in secondary markets. This decision was taken as part of the single monetary policy, considering several factors which significantly increased the downside risks to the medium-term outlook for price developments, thus jeopardizing the achievement of the ECB's main objective of maintaining price stability (Tsibanoulis and Kounadis, 2015).

This measure seeks to mitigate proportionately the risks to price developments by easing monetary and financial conditions, including those relevant to lending conditions for non-financial corporations and households in the euro area, thus supporting aggregate consumption and investment expenditure in the euro area and ultimately contributing to a return in the medium term of inflation rates to values lower than 2% (Andries, Mutu and Ursu, 2014). In the context of the ECB's reference interest rates being at the lower end and procurement programs focusing on private sector assets have provided significant but insufficient opportunities to combat the prevailing downside risks to price stability, Eurosystem monetary policy have been extended with this instrument, with high potential for transmission into the real economy (Bilan, 2016). It is estimated that due to its portfolio rebalancing effect, the substantial volume of acquisitions of the PSPP will contribute to the fundamental monetary policy objective of causing financial intermediaries to increase the provision of liquidity in the interbank market and loans to the euro area economy.

3. PENDING DISPUTES AND QUESTIONS REFERRED TO THE CJEU

The pending dispute in case Dietrich, involves natural persons living in the State of Hesse, Germany, who proposed to pay in cash the audiovisual contribution due to the public service broadcaster in that State, a proposal rejected on the ground that this contribution could not be paid in cash it must be paid by direct debit, single bank transfer or permanent bank transfer. The creditor sent the applicants payment decisions establishing arrears of the audiovisual contribution, as well as penalties for delay.

The claimants in the main proceedings brought actions for annulment against those payment decisions and in October 2016 the competent German courts (Verwaltungsgericht Frankfurt am Main - Administrative Court, Frankfurt am Main, Germany) dismissed their actions. Subsequently, the competent court (Hessischer Verwaltungsgerichtshof - High Administrative Court of the Province of Hesse, Germany) dismissed their appeals against those judgments (judgments of 13 February 2018).

Art. 14 (1) of the Law on the Federal Bank of Germany provides that "without prejudice to Article 128 (1) TFEU, the Deutsche Bundesbank (Federal Bank of Germany) has the exclusive right to issue banknotes in application of this Regulation. Euro-denominated banknotes are the only legal unrestricted means of payment." The disagreements in the outstanding dispute arose in connection with the acceptance of the payment of the euro banknotes, for the settlement of the obligation to pay the audiovisual contribution, due monthly for any dwelling, by their holder. "The person obliged to pay the contribution for the public service broadcaster may not pay this contribution in cash, but only through the following methods of payment:

- SEPA direct debit mandate;
- single bank transfer;
- permanent bank transfer."

In other words, German law includes a provision which limits the acceptance of payment of cash for a legally established obligation for each homeowner.

The claimants in the main proceedings appealed against these previsions to the referring court, the Bundesverwaltungsgericht (Federal Administrative Court, Germany), claiming that the third sentence of Article 128 (1) TFEU provided for an absolute and unlimited obligation to accept euro banknotes, as means of payment for the payment of monetary debts. According to the claimants in the main proceedings, that obligation could be limited only by virtue of a contract between the parties involved, a specific prevision in federal law or European Union law. Yet, no practical reason, such as the significant number of taxpayers in this case, would justify its effect.

The referring court emphasizes, in the introductory statement, that appeals should be allowed under national law, and it makes a comprehensive analysis of the unreserved acceptance of euro banknotes as mean of payment. However, the CJEU is committed to answering three issues on a preliminary basis.

3.1 The issue of compliance with EU law with the rules of German law on the limitation of the means of payment

TFEU does not contain any definition of the concept of 'monetary policy', as is clear from the case law of the Court and adds that it is not able to decide whether the Union's exclusive competence in monetary policy lies in regulating the legal consequences of legal tender for euro banknotes, on the obligation of public entities to accept such banknotes (Gortsos, 2020).

The referring court observes that the obligation of public entities to accept euro banknotes does not concern the objective of monetary policy, which is to maintain price stability, and it does not have a direct link with the procedures listed in primary law for achieving that objective.

It is important to establish if the power conferred by Art. 128 (1) TFEU to the ECB and the national central banks to issue banknotes denominated in euro would not be limited or modified by the limitation to use banknotes in the German law, with regards to the payment of the household fiscal liability. However, the referring court notes, in accordance with the relevant literature, that regulations on the effects of the legal tender status of euro banknotes and on the functioning of monetary circulation are the subject of the monetary policy (Nistor and Ongena, 2021).

Furthermore, it would not be out of the question that such regulation, as a measure necessary for the use of the euro as a single currency, could be based on Art. 133 TFEU and could therefore be regarded as falling within the exclusive competence of the Union, in accordance with Art. 2 (1) and (6) TFEU.

3.2. The question whether a national legislature is allowed to adopt a provision restricting legal means of payment.

In view of the Union's exclusive competence in the field of euro monetary policy, public entities of a Member State are prohibited from refusing to fulfill, in euro banknotes, payment obligations imposed by public prerogatives. In this context, the regulation of German law is contrary to EU law.

The referring court notes that euro banknotes have the status of legal tender within the Union and that the obligation to accept banknotes denominated in euro does not clearly follow the concept of 'legal tender status', which is not defined either in the TFEU, in the Protocol on the ESCB and the ECB, or in Regulation no. 974/98. Furthermore, the referring court retains the definition of the legal tender in Recommendation 2010/191, according to which banknotes and coins denominated in euro are legal tender when the creditor is required to accept those instruments, subject to certain exceptions. The referring court points out, however, that, in accordance with the fifth paragraph of Art. 288 TFEU, the recommendations of the institutions are not binding, so that the importance to be attached to that recommendation is uncertain.

3.3 Whether the German legislature was allowed to adopt rules which limit the scope of accepted legal tender

To resolve disputes in the main proceedings, it is necessary to determine whether a national rule which provides for the obligation to accept euro banknotes in the performance of payment obligations imposed by public prerogatives may be applied where the Union has not exercised its exclusive competence. The referring court (Bundesverwaltungsgericht - Federal Administrative Court of Germany) considers that the Court's existing case-law does not answer those questions and, in those circumstances, decided to stay the proceedings and to refer the questions to the CJEU for a preliminary ruling.

The Court's statement of reasons in Dietrich case, arguing the possibility of adopting rules aimed at nuanced or even amending monetary policy rules by a national body such as the authority setting the audiovisual contribution regime at the level of a German state, leads to pending dispute in the Weiss case (C-493/17), which is more technical and has an impact on the regulations that implement the monetary policy adopted by the ECB.

In the Weiss case, several groups of individuals have lodged various actions with the Bundesverfassungsgericht (Federal Constitutional Court, Germany) concerning ECB monetary policy decisions for price stability measures, with the participation of the Federal Bank of Germany in their implementation. In support of those actions, the applicants in the main proceedings submit, in essence, that the ECB decisions in question constitute an ultra vires act, as they disregard the division of powers between the European Union and the Member States under Art. 119 TFEU, since they are not expressly covered by the ECB's mandate, as defined in Art. 127 (1) and (2) TFEU, and in Art. 17 to 24 of Protocol No 4 on the Statute of the European System of Central Banks and of the European Central Bank and it infringes Art. 123 TFEU.

The Bundesverfassungsgericht (Federal Constitutional Court) states that, if the ECB decisions in question exceed the express mandate given to the ECB or infringe Art. 123 TFEU, the CJEU should give the official interpretation in a preliminary ruling.

It is established that Art. 123 (1) TFEU is infringed if, in the context of the program for the acquisition of public sector assets on secondary markets, one of the following procedures is carried out:

- the details of purchases are communicated in such a way as to certify that the Euro system will partially purchase the bonds issued by the Member States;
- no details are published on the observance of minimum deadlines between the issuance of an instrument of a debt nature on the primary market and its acquisition on the secondary market, so that in this respect it is not possible to exercise judicial control;
- all the bonds purchased are not resold but preserved until maturity and are thus stolen from the market;
- the Euro system purchase instruments with the nature of nominal marketable debt with a negative maturity yield.

Art. 123 TFEU is infringed where the implementation of the decisions in question requires, due to the changing conditions on the capital markets as a result of the reduction of the bonds which may be acquired, a continuous relaxation of the initial procurement rules and the restrictions. The infringement of Art. 119 and 127 (1) and (2) TFEU, as well as Art. 17 to 24 of the Protocol on the ESCB and the ECB, goes beyond the ECB's mandate on monetary policy, which is governed by these rules and overlaps the competence of the Member State when the following conditions are met:

- the refinancing conditions of the Member States are significantly affected because of the volume of the PSPP;
- the improved refinancing conditions of those Member States and their effects on commercial banks, together with the ECB decisions in question have indirect economic consequences and their objectively quantified effects suggest that the economic policy objective of the program is a monetary policy objective;

- the decisions in question, because of the effects on economic policy, infringe the principle of proportionality;
- the lack of specific motivation in the decisions concerned blocking the control regarding the need to continue its application after the two-year term and its proportionality.

The possible provision for the unlimited distribution of risks between the national central banks of the Euro system in the event of non-payment of bonds by central governments and other similar issuers provided for in that Decision, in the first question, pointed out the infringement of Art. 123 and 125 TFEU, and Art. 4 (2) TEU, as this may require a recapitalization of national central banks from budgetary funds.

4. THE ARGUMENTS OF THE CJEU AND THE EFFECTS OF THE JUDGMENT

In a concise approach, the acceptance of payments in euro banknotes and coins in euro area transactions should not be unilaterally censored by any of the Member States and the existence of disputes over this rule of principle seems unlikely. However, in relation to the pending dispute in the Dietrich case, the CJEU was asked to assess whether Member States could unilaterally order measures on the discipline of receipts and payments in their territory and to verify the compliance of these measures with primary and secondary law.

The CJEU had to determine whether Art. 2 (1) TFEU in conjunction with Art. 3 (1) (c) TFEU must be interpreted as meaning that, independently of any exercise by the Union of its exclusive policy for Member States whose currency is the euro, it opposes a regulation of a Member State which obliges public entities to accept banknotes denominated in euro, in the context of payment obligations imposed by public prerogatives.

In their written observations, the European Commission, the public service broadcaster of the Land of Hesse and the ECB expressed reservations about the interpretation of the rule of German law adopted by the referring court. It must be borne in mind that, as regards the interpretation of the provisions of national law, the Court is in principle required to rely on the qualifications resulting from the order for reference, adopting the views of the national court on the interpretation of the rule of national law. According to its settled case-law, the Court has no jurisdiction to interpret the national law of a Member State. The Court must therefore answer the first question based on the premises that the article relied on requires public entities to accept banknotes denominated in euro in connection with payment obligations imposed by public prerogatives.

In the Weiss case, the CJEU used arguments highlighted in the Gauweiler case law on the scope of monetary policy measures, noting that in order to determine whether a measure relates to monetary policy, it is necessary to relate mainly to the objectives of this measure and the means by which it implements them. The express medium-term objective set out in the text of the ECB decision challenged in the outstanding dispute is to return inflation rates to values below 2%, but close to that percentage. The EU treaties define as the main objective of monetary policy the maintenance of price stability, in general and in the abstract, without determining precisely how that objective was to be achieved in quantitative terms.

It is not apparent from the arguments put forward that that objective is affected by the way the ECB decision was adopted, nor does it go beyond the framework established by the TFEU. As the ECB contends and as the referring court points out, the specific objective set out in the ECB decision in question may be linked to the main objective of the monetary policy of the Union, as set out in Art. 127 (1) and Art. 282 (2). TFEU.

Art. 127 (1) TFEU provides that, without prejudice to its main objective of maintaining price stability, the ESCB shall support the general economic policies in the Union and shall act in accordance with the principles set out in Art. 119 TFEU. The principle of institutional balance and the independence of the ESCB guaranteed by Art. 130 and 282 (3) TFEU do not make a complete separation between economic and monetary policy. A monetary policy measure cannot be equal with an economic policy measure, merely because it can produce indirect effects which can also be pursued in the context of economic policy (Case C-62/14 Gauweiler, paragraph 52).

The referring court erred that any effect of a money market operations program should be regarded as an 'indirect effect' of it. In the Gauweiler case (C-62/14), the Court considered as indirect effects, without consequences for the classification of the measures in question, effects which, since their adoption, constituted the foreseeable consequences of those measures and which had to be accepted knowingly. Moreover, the conduct of monetary policy by the ECB involves permanent action on interest rates and bank refinancing conditions, with consequences for the financing conditions of Member States' government deficits (Case C-62/14 Gauweiler, paragraph 110). As the ECB has pointed out before the Court, the influence of the ESCB's monetary policy measures on price developments is achieved by facilitating lending to the economy and by changing the behavior of economic operators and individuals in terms of investment, consumption, and savings.

To influence the inflation rate, the ESCB is obliged to adopt measures that have certain effects on the real economy, which could also be pursued for other purposes in the framework of economic policy. Maintaining price stability requires the ESCB to try to increase inflation, so the measures that the ESCB needs to take in order to relax monetary and financial conditions in the euro area to this end may involve action on government bond interest rates, in particular in view of the crucial role of these interest rates in determining the interest rates applicable to different economic actors (Gauweiler, C-62/14, paragraphs 78 and 108).

In these circumstances, to exclude any possibility for the ESCB to adopt such measures if their effects are predictable and knowingly prohibited would in practice prohibit it from using the means made available to it by the Treaties. This could, in the context of an economic crisis involving a risk of deflation, constitute a disruptive obstacle to the fulfillment of its primary monetary objectives.

It is clear from primary law and from Art. 18.1 of Chapter IV of the Protocol on the ESCB and the ECB that, to achieve the objectives of the ESCB and to carry out its tasks, the ECB and the central banks of the Member States may, in in principle, intervene in the financial markets through simple transactions of sale and purchase of marketable instruments denominated in euro. Consequently, the measures addressed in the contested decision use one of the instruments of monetary policy provided for by primary law (Case C-62/14 Gauweiler, paragraph 54). Therefore, the decision under review belongs to monetary policy.

Also in the Weiss case, the CJEU carried out an extensive analysis of the proportionality of the measures ordered with the objectives of monetary policy. It follows from Art. 119 (2) and Art. 127 (1) TFEU in conjunction with Art. 5 (4) TEU that a monetary policy bond purchase program may be validly adopted and implemented only in so far as the measures which it entails are proportionate to the objectives of that policy, as set out in Case C-62/14 Gauweiler, paragraph 66. The actions of the EU institutions are such as to ensure that the legitimate objectives pursued by the rules in question are attained and do not go beyond what is necessary to attain those objectives (paragraph 67 of the case-law cited). Regarding the judicial review of compliance with these conditions, the CJEU recognizes a wide discretion of the ESCB, because when designing and implementing a money market operations program such as that provided for in Decision 2015/774, the ESCB chooses techniques and complex forecasts and assessments (Case C-62/14 Gauweiler, paragraph 68). The wording in the preamble to ECB Decision 2015/774 shows that to have inflation rates below 2%, but close to that percentage, monetary and financial conditions will be relaxed, including those of non-financial corporations, and of households, to support aggregate consumption and investment spending in the euro area and to ultimately contribute to a medium-term return of inflation rates to those values. Therefore, in view of the evidence in the possession of the CJEU, it does not appear that the economic analysis carried out by the ESCB when adopting the economic policy measure in question is affected by an error of assessment.

In order to establish the proportionality of the measures taken, the CJEU notes that the measures were adopted in a context described by the ECB as marked, on the one hand, by a low level of long-term inflation, which could generate the risk of triggering a cycle of deflation and, on the other hand, the inability to counteract this risk by using other instruments available to the ESCB to ensure an increase in inflation rates. About the latter, it appears, inter alia, that the reference interest rates have been set at a level close to the expected thresholds and that the ESCB has already implemented a private sector asset purchase program for several months. In view of the foreseeable effects and the objective pursued by the ESCB, the CJEU considers that the measures do not clearly go beyond what is necessary to achieve that objective.

As for the modalities to implement these measures, the architecture of the program helps to ensure that its effects are limited to what is necessary to achieve that objective. In so far as, inter alia, the lack of the selectivity of that program guarantees that the action of the ESCB will influence the financial conditions throughout the euro area and will not meet the specific funding needs of certain Member States.

Also, the choice set out in Art. 3 of Decision 2015/774, to make the purchase of bonds conditional on compliance with strict eligibility criteria has the consequence of restricting the effects of this program on the balance sheet of commercial banks, without its implementation having any effect. Moreover, the measures are temporary, and their initial duration or successive extensions do not clearly exceed what was necessary to achieve the objective pursued, since they have always covered relatively short periods and were established taking into account the evolution of inflation rates.

Finally, the CJEU emphasized that, given the elements of situation and the wide discretion available to the ESCB, it is not clear that a more limited volume or duration of a government bond purchase program could have ensured, as efficiently and rapidly as the PSPP, an evolution of inflation similar to that pursued by the ESCB, in order to meet the main objective of monetary policy set by the treaty authors. The ESCB weighed the various interests at issue in such a way as to effectively avoid the possibility of manifestly disproportionate inconvenience in the implementation of the objectives pursued by it.

If, as the Court of Gauweiler has already held (Case C-62/14, p. 125), money market operations authorized by the authors of the Treaties inevitably involve a risk of loss, it is no less true that ESCB has taken various measures to frame and take this risk into account. Since those rules have the effect of limiting the ESCB's exposure in the event of the issuer's default on a part of the bonds purchased and of ensuring that the bonds with a significant risk of default cannot be acquired, it follows that the ECB ensures constant monitoring of compliance rules by the central banks of the Member States.

In order to avoid the possibility of the situation of a central bank of one Member State being weakened in the event of redemption incidents involving an issuer in another Member State, Art. 6 (3) of Decision 2015/774 provides that each national central bank acquires the eligible securities of issuers in their own jurisdiction. The ESCB duly considered the risks to which the significant volume of asset acquisitions might possibly expose the Member States' central banks and that, in view of the interests at stake, it considered that it should not introduce the general rule of losses.

About possible ECB losses related to these acquisitions, the ESCB has not adopted any rules derogating from the ECB's general allocation of losses regime; such losses shall be covered by the general reserve fund of the ECB and, if necessary, by decision of the Governing Council of the ECB, by monetary income for that financial year in proportion to and within the limits of the amounts allocated to the national central banks. shares paid into the capital of the ECB. It follows from those considerations that the monetary policy measures taken by the ECB by Decision 2015/774 do not infringe the principle of proportionality.

Returning to the Dietrich case, the CJEU noted that Art.119 par. 1 TFEU states that action by the Member States and the Union requires, under the conditions laid down in the Treaties, the establishment of an economic policy based on the close coordination of the economic policies of the Member States, the internal market and the definition of common objectives. open market, in which competition is free. The same article states (paragraph 2) that this action involves a single currency (euro), as well as the definition and application of a single monetary policy and a single exchange rate policy, in order to maintain price stability and without prejudice to this objective. Supporting general economic policies in the Union, in accordance with the principle of an open market economy, in which competition is free.

It is therefore clear from Article 119 (2) TFEU that the action of the Member States and the Union consists of three elements, namely:

- a single currency, the euro;
- defining and organizing a single monetary policy; and
- defining and organizing a single exchange policy.

Therefore, the notion of 'monetary policy' is not limited to its operational implementation, which is, under Art. 127 (2) TFEU, one of the fundamental tasks of the ESCB, but also implies a regulatory dimension that seeks to the status of the euro as the single currency. This interpretation of the concept of 'monetary policy' is supported by the main objective of that policy, as set out in Art. 127 (1) and Art. 282 (2) TFEU, namely, to maintain price stability. If the status of the euro as a single currency could be understood differently and governed by different rules in Member States whose currency is the euro, the uniqueness of the single currency would be called into question and thereby seriously undermine the objective of maintaining price stability. Moreover, Art. 128 and 133 TFEU reaffirm this view of the status of the euro as the single currency.

Art. 128 TFEU states (paragraph 1) that the ECB is the only one authorized to authorize the issuance of euro banknotes denominated in euro in the Union, that the ECB and national central banks may issue such banknotes and that the banknotes thus issued are the only legal tender. payment within the Union. The rules of primary law, together with the third sentence of the first paragraph of

Article 16 of the Protocol on the ESCB and the ECB, state the legal tender status of these banknotes. In addition, since para. Article 2 stipulates that Member States may issue euro coins, subject to the approval of the ECB of the volume of the issue, the issuance of euro coins denominated in euro is implicitly regulated.

Art. 133 TFEU empowers the Union legislator to establish the secondary measures necessary for the use of the euro as the single currency. Therefore, Art. 128 (1) and Art. 133 TFEU are the legal basis for the uniqueness of the euro and a precondition for the effective organization of the EU monetary policy.

In relation to the situation raised in the pending proceedings in Dietrich, the allocation of euro banknotes issued by the ECB and the national central banks to 'legal tender status', Art. 128 (1) TFEU and the third subparagraph of Art. 16 sentence of the Protocol on the ESCB and the ECB enshrines the official status of these banknotes exclusively in the euro area, to the exclusion that other banknotes may also benefit from this status. Since Art. 128 (1) TFEU does not refer to the law of the Member States to determine the meaning and scope of the concept of 'legal tender status' which it refers to, it is a concept of European Union law which it must be given a uniform interpretation at EU level, which must be determined in the light of the regulations in which it is laid down but also of the context of those regulations and the objective pursued by them.

The notion of "legal tender status" for certain means of payment expressed in a monetary unit usually means that this it cannot generally be refused on payment of a debt expressed in the same monetary unit, at its nominal value, with the effect of extinguishing the obligation to pay. This interpretation is supported by Recommendation 2010/191, which specifically concerns the extent and effects of the legal tender status of banknotes and coins denominated in euro, in accordance with Art. 11 of Regulation No 40/94. 974/98. Even if, under Art. 288 (5) TFEU, the recommendations are not intended to have binding effect and are not capable of creating rights which individuals can invoke before a national court, they are part of the legal acts of the Union, thus that the Court may take them into account when providing useful information for the interpretation of the relevant provisions of European Union law. Recommendation 2010/191 contains the common definition of the concept of 'legal tender status', stating that it contains an obligation in principle to accept banknotes and coins denominated in euro for payment purposes.

Allowing the Union legislator to establish the necessary measures for the use of the euro as a single currency, Art. 133 TFEU, the successor to Art. 123 para. 4 EC, which succeeded art. 109 L para. 4 of the EC Treaty, primary law enshrines the need for uniform principles for all Member States whose currency is the euro, to protect the overall interest of the Economic and Monetary Union and the euro as a single currency and, consequently, to maintain price stability. This normative text only empowers the Union legislator to specify the legal regime of the status of legal tender granted to euro banknotes and such exclusive competence excludes any competence of the Member States in this matter unless they are empowered by the Union. Where a competence is conferred on the Union exclusively, the loss of competence of the Member States occurs directly and, unlike areas covered by a shared competence, whether the Union has exercised its competence is not relevant for the purposes of that loss.

The exclusive competence of the Union in the field of monetary policy is without prejudice to the competence of the Member States whose currency is the euro to regulate the arrangements for the fulfillment of payment obligations, both public and private, provided that, among other things, otherwise, such regulation should not affect the principle that, as a rule, it must be possible to settle an obligation to pay in such currencies. This exclusive competence does not prevent a Member State, in the exercise of its powers, from adopting a measure requiring administration to accept cash payments from those administered or, as envisaged in the two questions, introducing, for reasons of public interest, a derogation from this obligation for payments imposed by public prerogatives.

The CJEU answers the first and third questions referred in Dietrich that, regardless of any exercise by the Union of its exclusive competence in the field of monetary policy for Member States whose currency is the euro, European law precludes a Member State adopts a provision aimed at regulating the legal regime of the legal tender status of euro banknotes. However, a Member State may adopt, for its own activity such as the organization of general government, a provision which compels administration to accept the payment in cash of pecuniary obligations which it collects.

Regarding the second question, it is for the national court to interpret the national legislation, the CJEU can only guide the national court in its decision. As regards the reasons in the public interest relied on to justify the exclusion in the main proceedings in question of the payment of the audiovisual contribution in cash, the public service broadcaster of the Province of Hesse pointed out that, taking into account the approximately 46 million taxpayers in Germany, the obligation to pay the audiovisual contribution by scriptural means of payment is intended to ensure that this contribution is actually collected and to avoid significant additional costs. It is in the public interest that debts to public authorities can be honored in a way that does not involve an unreasonable cost, which would prevent them from providing the services provided at minimal cost. Therefore, the reason of public interest is likely to justify a restriction of cash payments, especially when the number of taxpayers from whom the claim is to be collected is very high. As regards the condition that the measures in question must not go beyond what is necessary to attain the objectives pursued, it is apparent from the order for reference that the legislation at issue in the main proceedings provides for legal aid other than cash (direct debit, single bank transfer or permanent bank transfer).

The restriction at issue in the main proceedings appears to be both appropriate and necessary for the attainment of the objective of the effective recovery of the audiovisual contribution since it avoids exposing the administration to an unreasonable financial burden in relation to the cost which it would incur. However, it is for the national court to determine whether such a restriction is proportionate to that objective, given that alternative legal means of payment of the audiovisual contribution may not be easily accessible to all persons, which would involve for people who do not have access to these means an opportunity to pay in cash.

The CJEU states that the rules of European law relied on do not preclude national rules which exclude the possibility of extinguishing a payment obligation imposed by public prerogatives by means of euro banknotes, effect of disrupting the legal regime of the status of legal tender for these banknotes, and not to lead, in law or in fact, to a abolition of the use of those banknotes.

Finally, the limitation of cash payments must have taken into account public interest reasons, be capable of achieving the objective of public interest pursued and not exceed the limits of what is necessary in order to achieve it, in the sense that other legal means are available to settle the payment obligation.

5. CONCLUSIONS

It is the result of our research that, on one hand, irrespective of the exercise by the European Union of its exclusive competence in the field of monetary policy for Member States whose currency is the euro, European primary law prohibits a Member State from adopting a provision which, having regard to its purpose and content, modifies the legal regime of the euro, with regards to the legal tender status of euro banknotes. On the other hand, EU law does not preclude a Member State from adopting, in the exercise of its own competence, such as the organization of public administration, a provision restricting the use of cash to settle pecuniary obligations towards that public authority, if the reasons are in the public interest and do not go beyond what is necessary. At the same time, in exercising its powers in the field of monetary policy, while respecting the principles of institutional balance and independence, the ECB is empowered to take the necessary measures to achieve the objectives of the European Monetary Union (e.g., price stability).

The jurisprudential analysis of the relevant regulations in the field of monetary policy regulation at EU level reveals the competence of the CJEU to verify, including in the monetary field, both the conformity of national law with the rules adopted at EU level and the compliance of rules adopted by the EU. European institutions with responsibilities in the field of European primary law, with the rules adopted by the ECB and the ESCB being incidental in this situation.

Although the rules of European law aimed at the implementation of monetary policy have as their area of application the euro area countries, the judgment of the CJEU in cases where its monetary jurisdiction is exercised attributes to the pronounced solutions the effect enjoyed by the CJEU jurisprudence in all territories of the EU countries

ACKNOWLEDGEMENTS

This research was performed with the support of the ERASMUS+ Program of the European Union (Jean Monnet Module "Towards New Paradigms of EU Economics: Financial and Monetary Milestones", EUCONOMICS, grant decision number 620297 / 17.09.2020). This work reflects only the views of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

References

1) Andries, A. M., Cocriş, V. and Pleşcău, I. (2015). Low interest rates and bank risk-taking: Has the crisis changed anything? Evidence from the Eurozone. *Review of Economic and Business Studies*, 8(1), pp. 125-148.
2) Andries, A. M., Mutu, S. and Ursu, G. S. (2014). Impact of Institutions, Financial Reform and Economic Governance on Bank Performance. *Transformations in Business & Economics*, 13(3C), pp. 410-429.
3) Bercea, L. (2014). *Banking law. Studies*. Bucharest: Universul Juridic Publishing House.
4) Bilan, I. (2016). Overview of the main theories on the economic effects of public indebtedness. *European Integration-Realities and Perspectives Proceedings 2016* Galati: Editura Universitară Danubius, pp. 356-362.
5) Commission Recommendation 2010/191/EU of 22 March 2010 on the scope and effects of the legal tender status of euro banknotes and coins. [online] Available at: https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?Uri=CELEX:32010H0191 &from=EN [Accessed 23.04.2021].
6) Costaș, C. F. (2019). *Financial Law,* 2nd ed. Bucharest: Universul Juridic Publishing House.
7) Decision (EU) 2015/774 of the European Central Bank of 4 March 2015 on a program for the acquisition of public sector assets by secondary markets (ECB / 2015/10), published in OJ L 121, 14.5.2015, p 20–24. [online] Available at: https://eur-lex.europa.eu/legal-content/RO/TXT/?uri=CELEX:32015D0010 [Accessed 23.04.2021].
8) Gortsos, C. V. V. (2020). *European Central Banking Law. The Role of the European Central Bank and National Central Banks under European Law*. London: Palgrave Macmillan.
9) Judgment of 5 May 1981, Commission v United Kingdom, 804/79. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX: 61979CJ0804&from=EN [Accessed 12.04.2021].
10) Judgment of 16 June 2015, Case Gauweiler, C-62/14. [online] Available at: https://curia.europa.eu/juris/document/document.jsf;jsessionid=3AC4C3CF11F19D 725CE9689BA9D4ECE6?text=&docid=206471&pageIndex=&mage&occ=first&p art=1&cid=269537 [Accessed 12.04.2021].

11) Judgment of the Court of 11 December 2018 in Case Weiss, C - 493/2017. [online] Available at: https://curia.europa.eu/juris/document/document.jsf?text=&docid=208741&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=6025951 [Accessed 23.04.2021].
12) Judgment of 2 May 2019, in the case of the Mesogo Cheese Protected Designation of Origin Regulatory Council Foundation, C-614/17. [online] Available at: https://curia.europa.eu/juris/document/document.jsf?text=&docid=213589&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=6050209 [Accessed 12.04.2021].
13) Judgment of 16 July 2020 in Case C-610/18 AFMB Ltd. [online] Available at: https://curia.europa.eu/juris/document/document.jsf?text=&docid=228669&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=6045869 [Accessed 23.04.2021].
14) Judgment of 17 December 2020, Generalstaatsanwaltschaft Berlin, C-398/19. [online] Available at: https://curia.europa.eu/juris/document/document.jsf?text=&docid=235710&pageIndex=0&doclang=en&mode=req&dir=&occ=first&1 [Accessed 10.04.2021].
15) Judgment of the CJEU of 26 January 2021, Joined Cases C422/19 and C423/19. [online] Available at: https://curia.europa.eu/juris/document/document.jsf;jsessionid=95D9AE65B6C900CBF0EF2C442CC4E435?text=&exoc=&doc&Id=lst&dir=&occ=first&part=1&cid=6014348 [Accessed 10.04.2021].
16) Lazăr, I. (2016). *Public Finance Law, vol. I - Budget Law*. Bucharest: Universul Juridic Publishing House.
17) Law of the Federal Bank of Germany - Gesetz über die Deutsche Bundesbank. [online] Available at: https://www.bundesbank.de/dynamic/action/en/homepage/search/723378/general-search?query=regulation [Accessed 23.04.2021].
18) Nistor, S., Ongena, S. (2021). The Impact of Policy Interventions on Systemic Risk across Banks. *Swiss Finance Institute Research Paper*, No. 20-101, last revised 2021. [online] Available at: https://papers.ssrn.com/sol3/papers. cfm?abstract_id=2580791 [Accessed 12.04.2021].
19) Regulation (EC) No. Council Regulation (EEC) No 974/98 of 3 May 1998 on the introduction of the euro. [online] Available at: https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:01998R0974-20090101&from=HR [Accessed 12.04.2021].
20) Șaguna, D. D., Tofan, M. (2010). *European financial and fiscal law*. Bucharest: CH Beck Publishing House.
21) Tofan, M. (2008). *Romania's integration in the structures of the European Monetary Union.* Bucharest: CH Beck Publishing House.
22) Tofan, M. (2019). *European financial law*. Iasi: Alexandru Ioan Cuza University of Iași Publishing House.
23) Treaty on the Functioning of the European Union –TFUE (2009). [online] Available at: https://eur-lex.europa.eu/legal-content/ro/TXT/?uri=CELEX: 12012E/TXT [Accessed 12.04.2021].
24) Tsibanoulis, D., Kounadis, G. (2015). European Banking Union as a response to the fragmentation of the internal market resulting from the financial and sovereign debt crisis. *Managing Risks in the European Periphery Debt Crisis*. London: Palgrave Macmillan, pp. 237-272.

Section II

EU INTEGRATED ADMINISTRATIVE AREA

UNPACKING THE CONCEPT OF SOCIETAL RESILIENCE IN THE EU'S POLICY TOWARDS ITS EASTERN NEIGHBOURHOOD

ANATOLIE CARBUNE
Alexandru Ioan Cuza University of Iași
Iași, Romania
anatoliecarbune@yahoo.com

ROXANA-MIHAELA CHIRIAC
Alexandru Ioan Cuza University of Iași
Iași, Romania
roxana.doctorat@yahoo.com

Abstract
The main aim of this paper is to analyse the conceptualisation of 'societal resilience' within European Neighbourhood Policy (ENP) since its review in 2015. In particular, the paper seeks to identify the main components which underpin the concept of societal resilience. The research is based on content analysis of the main EU official documents, since the publication of the ENP review (2015) and until the publication of the Joint Communication on Eastern Partnership Policy on Reinforcing Resilience (2020). The research shows that the need for dialogue and cooperation appear as the most dominant ideas as part of the broader objective of building societal resilience. As such, it is argued that – at least conceptually – societal resilience clearly acts as a bridge between international dimension (EU, Union, Member States) and the societal one (local actors, citizens). The concept of societal resilience is based on a multitude of components, including resilience drivers, risks, opportunities and actors involved; however, dialogue seems to be the most common component.
Keywords: *societal resilience; Eastern Neighbourhood; local ownership.*
JEL Classification: F5, F63, O19

1. INTRODUCTION

Since the European Neighbourhood Policy review (ENP) in 2015 and the publication of the European Union Global Strategy (EUGS) in 2016, resilience became a central concept within EU foreign policy. The paradigm shift, which occurred in the 2015-2016 period, reflects the EU preoccupation of developing and rethinking its own role and identity in the world, while at the same time highlighted a growing international uncertainty, generated by shifts among states and economies.

Resilience became a shaper of EU policies and a source of creativity for building consistency across different policies. At the same time, it attracted the attention of academic field, therefore, as a result, a large body of literature has been provided since then. Since, the EUGS resilience has been over-researched and under-researched. It has been over-researched in the sense that a significant body of literature focused on conceptualisation and its implications for EU as an actor. Scholars have been interested, in particular, on how resilience contributes towards the formulation of EU policies and what its added value is. However, it has been under-researched particularly regarding its implications in practice, which can be found less in the literature. One of the most important features of resilience is its link with promoting bottom-up policies. Therefore, the EUGS clearly formulates building `societal resilience in the eastern and southern neighbourhood` as one of the EU strategic priorities.

This article seeks to provide a conceptual map of societal resilience as a key component within EU's policies towards its Eastern Neighbourhood. In particular, the analysis aims at deconstructing the concept, in order to identify the different elements that underpin the concept of societal resilience.

As a result, many questions require an answer. How societal resilience is conceptualised within the ENP? What are the most dominant themes that revolve around the concept of societal resilience? What are the main resilience drivers?

This paper has five sections. The first one revisits the literature. The second section is focused on analysing the concept of societal resilience within the official EU documents published since 2015 until 2020. Based on the findings of the previous section, the third one provides a conceptual map based on content analysis. Thus, it is intended to provide a visual understanding of how societal resilience is defined, as well as how it is operationalised. Finally, the last section will bring conclusions and future research avenues.

2. RESILIENCE – AN EVOLVING CONCEPT. PERSPECTIVES FROM THE LITERATURE

This section presents the main approaches found in the literature with regard to the conceptualisation of societal resilience. On the one hand, the intention is to show scholars' perspective on societal resilience and its implications for EU external policies, while on the other hand, it aims at highlighting how resilience is conceptualised in other fields of science, in order to display its malleability and flexibility, and as a result its transition to international relations and development.

The European Commission published its first communication on resilience in 2012: `The EU approach to Resilience: Learning from Food Security and Crises` (European Commission, 2012). In this case, resilience has been applied in the humanitarian realm, highlighting the EU role as a civilian power. One year later, the Council published Conclusions on the EU Approach to Resilience, which recognises the relevance of building resilience in fragile countries. Resilience is approached as a facilitator of building connexions between different dimensions of cooperation - political dialogue, humanitarian and development - in a coherent and effective manner`. A specific focus is placed on anticipatory capacity, prevention and recovery. In the same year, the European Commission published the „Action Plan for Resilience in Crisis prone Countries", advancing resilience applicability in the field of humanitarian-development nexus.

But it was only with the publication of the European Union Global Strategy in 2016 that resilience became a prominent concept for practitioners and for the academic field. According to Natalie Tocci, who was Special Advisor for the High Representative of the EU for External Affairs in 2016, resilience has been chosen for three reasons: (i) it provided a common lexicon across different fields and policies, (ii) principled pragmatism and (iii) the complexity of change. The EUGS was based on five principles: (i) security of the Union, (ii) state and societal resilience in the East and the South of the EU, (iii) an integrated approach towards conflicts, (iv) regional order based on cooperation, (v) Global Governance for the XXIs century (Tocci, 2020).

Many authors analysed the implications of resilience within the EU external policies, from both, conceptual and practical point of view (Wagner and Anholt, 2016; Juncos, 2016; Tocci, 2016; Koenig, 2016; Ülgen, 2016). The concept of societal resilience attracted scholars, in particular, since its use within the EUGS. The EU Global Strategy published in 2016 refers to the `capacity of the states and societies to reform, resist and recover after internal and external crisis` (EEAS, 2016). In research, there is no generally agreed definition of resilience. As such, it has metamorphosed between and within disciplines, as a result, each discipline formulated its own definition; thus, there is no agreement on what resilience means (Brassett, Croft and Vaughan-Williams, 2013).

The concept of resilience has been imported in the vocabulary of political science, international relations and economy from the literature of the adaptability of ecological systems (Joseph, 2013). In political science and international relations, the concept of resilience has been closely associated with shaping a new form of governance, especially focused on anticipation (Cooper and Walker, 2011). Resilience has been linked with the concept of Foucault, *governmentality* meaning that resilience is facilitating a way of `governing from distance`.

Resilience involves developing anticipatory skills to boost preparedness in front of possible risks and shocks. When applied to studying societies, resilience is focused, in particular on internal capabilities when dealing with vulnerabilities and risks. According to Chandler, resilience can be defined as the capacity of societies to withstand crisis, with increased focus on development, self-organisation and internal capacities, which excludes external interventions (Chandler, 2015). In environmental studies, resilience shows the extent to which communities are capable to resist natural disasters, such as floods, earthquakes, landslides, etc. (Parsons, 2010; Martin and Sunley, 2015).

Especially in the 2010s, the concept of resilience has been used in analysing institutions' and states' capabilities to deal with risks (Lavrelashvili, 2018). The concept of resilience promotes the idea of change, which implies a transition of responsibility towards individuals and communities, shaping a self-reflective form of governance, through strategies of self-awareness, risk management and adaptation, which constructs a self-responsible governance (Humbert and Joseph, 2019). Thus, the concept of *societal resilience* became used as well among scholars and practitioners, in order to highlight the societal dimension and related elements and processes. According to Joseph, the link between resilience and the focus on individuals is strongly associated with the neoliberal type of governance, through shifting policies towards increased focus on individuals and promoting a thinking of adaptation and risk management (Joseph, 2018).

According to Chandler, the risks and shocks towards a response is framed are constructed as `inevitable`, therefore, building societal resilience becomes a process which requires adaptation towards external shocks, strengthening capacity for self-organisation, promotion of technologies to allow change and adaptation (Chandler, 2020).

In the process of formulating external policies, the concept of resilience proved to be malleable, a feature which facilitated its applicability. According to Juncos resilience contributed towards a better adaptation to local conditions and needs, ownership, as well as on capacity building (Juncos, 2017). Wagner and Anholt highlighted the advantage of being a flexible concept, which allows to apply resilience in various contexts; as a result, it translates in formulating diverse policies and strategies (Wagner and Anholt, 2016). In this regard, Grevi highlights that resilience enhances pragmatism and flexibility, which should translate in designing more adequate avenues to deliver solutions (Grevi, 2016).

In the context of risks, towards societies and individuals are exposed, resilience thinking provides, maybe not a paradigm shift, but rather, a change of societies from the perspective of structural-organisational point of view (Zebrowski, 2009).

Resilience thinking shaped EU external policies, in particular, during 2012-2016. Through strengthening societal resilience, EU policies are shifting – or at least are attempting – towards more focus on partners and increasing local ownership. In relation with this feature, Chandler is mentioning that resilience should not act as a justification of international interventions limits, therefore blaming the local actors for policies' limited effectiveness (Chandler, 2014).

3. CONCEPTUALISING SOCIETAL RESILIENCE IN EU APPROACH TOWARDS ITS EASTERN NEIGHBOURHOOD

This section gives an overview of societal resilience conceptualisation within the EU external policies. The focus is on EU approach towards its Eastern Neighbourhood. The aim is to show, in particular, how the definition of societal resilience has evolved since 2015 and what are the main elements underpinning its conceptualisation. The section looks at three aspects: societal resilience conceptualisation on the one hand, and citizens and civil society organisations (CSOs), as the local actors, on the other hand.

3.1 Societal resilience within the European Neighbourhood Policy Review-2015

After a year of consultations with a wide range of actors, from Member States to business, think tanks or CSOs, the EU launched the ENP review in 2015, confirming the need for change regarding its approach towards its immediate neighbourhood.

The concept of resilience has been a major shaper of the ENP review. It provided a new way of approaching and conceptualising stability in the eastern neighbourhood, but also, it provided new avenues on how to boost promotion of EU norms and values through bottom-up policies. `Resilience` and `resilient`, both have 9 references within the ENP review. However, the implications of resilience within the ENP review are much deeper. For example, the way `civil society` and `citizens` are contextualised within the ENP, as local actors, shows that resilience logic underpins the substance of policy design. It is important to point out that, in addition to the basic elements of resilience – mitigation, adaptation or transformation – resilience is associated with EU strategic priorities: security, stability, energy security, climate change, reforms, sustainable development and cybersecurity. Attaching this priority to resilience highlights a continuity of the previous established framework, which aims at exporting the EU model in its immediate vicinity. However, this is seen as opportunity by some scholars, as security approaches embedded within societal resilience could maintain the promotion of normative goals, in order to allow progress towards developing sustainability and adaptation (Beck and Socha, 2015; Chandler, 2020). According to Judith Rodin, the President of the Rockefeller Foundation, the impact of societal resilience on policy practices, in particular, through developing self-management and `bouncing-forwards` abilities is seen as the resilience `dividend` (Chandler, 2020).

Precisely, energy is mentioned as a key element for development and resilience of the partners themselves (European Commission, 2015). Overall, resilience promotes the need for adaptation and mitigation. Furthermore, resilience is subtly associated with political aspects, as is the case for supporting partners when facing external pressures and to boost their autonomy in making `sovereign choices` (European Commission, 2015). In general, resilience seems to be strongly associated with (in)security issues, an aspect underlined by all the actors who participated during the consultations.

Societal resilience – citizens. Citizens are one of the main actors towards which societal resilience, as an objective, is referring to. When it comes to supporting citizens, resilience is contextualised based on a mix of external and local elements. Firstly, it is mentioned the need to cooperate with the government on human rights and democracy related issues (European Commission, 2015). The heavy emphasis on human rights and democratisation shows the EU commitment as a normative actor. Secondly, the EU support towards citizens implies to boost their ability to hold governments accountable. Therefore, citizens should be encouraged to promote public debate, as a catalyst for dialogue and cooperation, aiming at supporting societal change. As such, citizens are seen as `watchdogs`, as well as drivers for bottom democratisation. Thirdly, the need to improve living conditions for citizens is mentioned. This objective is associated with multilateral cooperation – in particular international financial institutions (IFIs), such as the World Bank, European Investment Bank and the International Monetary Fund are mentioned – related to private sector development, in order to promote inclusive growth and employment and improve citizens living conditions (European Commission, 2015).

Societal resilience - Civil Society. CSOs is another key actor when it comes to the objective of building societal resilience in the eastern neighbourhood. Within the ENP review, CSOs is mentioned 15 times, an aspect which confirms the importance of CSOs for the EU approach, in particular, when it comes to promote normative and legal approximation of the Eastern Partnership (EaP) countries to the EU's legislation.

The EU approach towards the activity of CSOs is quite broad, ranging from promoting reforms, to tackling corruption. From a resilient perspective, CSOs is supported, on the one hand, against threats, risks and vulnerabilities, while on the other hand, CSOs supports takes the form of building resilience from within, precisely, through managing opportunities, capacity building and developing in its widest sense.

The ENP review mentions that 'the EU should support capacity building of CSOs and leadership through Civil Society fellowships, by involving young people' (European Commission, 2015). Radicalisation is seen as a risk for young people, therefore, in this case, EU support takes the form of *prevention*. According to the ENP review, CSOs should be supported at all levels, sub-national, national and intra-regional. In addition, ENP review recognises the important role ethnic and religious play, therefore, expanding outreach to relevant members of CSOs in its broadest sense is framed as a key task for the EU (European Commission, 2015).

Furthermore, CSOs is seen as a key actor to ensure coherence and flexibility when designing policies. Overall, the role of CSOs is framed as a `watchdog`, being an important actor for promoting reforms, as well as monitoring the government. In the case of supporting CSOs, resilience shapes a multidimensional approach, emphasising the need to tackle risks and vulnerabilities, but also to support transformation.

3.2 European Union Global Strategy – elevating societal resilience as a key strategic priority

The European Union Global Strategy launched in 2016 has been heavily shaped by resilience thinking. The ENP review from 2015 and the EUGS have been designed in close cooperation, however, it is with the launch of the later that resilience was elevated as a key priority for the EU external action and consequently became a shaper of EU policies.

\`Resilience\` and \`resilient\` are mentioned 41 times within the EUGS. Societal resilience, in particular, can be found with 11 entries. Furthermore, \`societies\` and \`society\` are mentioned 27 times and 12 times respectively, which highlights that the EUGS heavily focused on societal resilience and promotion of bottom-up policies. However, references towards \`society\` and \`citizens\` are contextualised within the EU, highlighting the EU concern for its own citizens, while the focus on third countries can be found less.

The EUGS defines resilience as *the ability of states and societies to reform, thus withstanding and recovering from internal and external crises* (EEAS, 2016, p. 23). The objective of building state and societal resilience is formulated as a strategic priority in the neighbourhood.

Overall, resilience takes a broader approach, ranging from risks associated with environmental degradation, migration or conflict, to adaptation and transformation, in particular when it comes to sustainable development goals or green economy. Within the EUGS, state's resilience ensures its security, while security is a precondition for prosperity and democracy (EEAS, 2016, p. 23). However, the EUGS shows that the EU promotes different paths to resilience, which shows how resilience malleability provides space for operational manoeuvre.

An example of the advantages that resilience flexibility provides is about its implications for EU dialogue with the third countries, in particular, when it comes to deciding what is best for their mutual interests. Precisely, conditionality is contextualised as a key element for enhancing third countries resilience, which highlights EU unilateral approach to cooperation. However, resilience takes a different stance, as EU upholds third countries' right to determine their approach towards the EU (EEAS, 2016, p. 33).

Societal resilience – Citizens. Within the EUGS, promotion of sustainable development goals is strongly associated with building resilience. Societal resilience, in particular, is \`encompassing all individuals and the whole society\` (EEAS, 2016, p. 24). Furthermore, democracy and trust in institutions is linked with sustainable development goals, and is seen as a crucial condition for a resilient society.

Strengthening citizens\` resilience takes a systemic approach, as citizens\` wellbeing is linked with security, migration, infrastructure, energy and climate, as well as deepening people-to-people contacts. Education, culture and engaging with youth are seen as drivers for nurturing societal resilience. Emphasising the implications of various processes with citizens living conditions shows how resilience approach contributed towards balancing the bottom-up policies with the top-down ones. In this regard, Korosteleva is exploring how resilience challenges top-down driven policies, while shifting to the role of `the local`, to shape policies to be more responsive to the needs (Korosteleva and Flockhart, 2020; Korosteleva, 2020).

Societal resilience – Civil Society. As a key actor for the EU, CSOs is approached in a comprehensive way within the EUGS. The key elements which revolves around strengthening the resilience of CSOs are, in particular, linked with EU objective in promoting reforms in the partner countries. It is an argument widely debated in the academic literature that CSOs are seen by the EU as `watchdogs` for monitoring reforms implementation, promotion of the rule of law and fostering economic cooperation (Colombo and Shapovalova, 2017).

Societal links will also be strengthened through enhanced mobility, investing in cultural and educational exchanges, facilitated travel for students, CSOs and business, research cooperation and CSOs platforms, as a way for the EU to boost social capital (EEAS, 2016, p. 25). The EUGS provided an answer to the issue of developing CSOs in its widest sense, an aspect widely approached during the consultations for the ENP review and EUGS in 2014-2015 period. The EUGS referred to this issue, by mentioning that the EU:

> *will reach out more to cultural organisations, religious communities, social partners and human rights defenders, and speak out against the shrinking space for civil society including through violations of the freedoms of speech and association*.

Resilience logic signalled a paradigm shift in within the EU approach towards its neighbours, as the EU is increasingly recognising that growth and positive change `can only be home-grown`. According to Wagner and Anholt, resilience triggers a shift towards local actors, which implies risks for EU engagement, however, by redirecting the focus to local conditions and practices, while it detaches from `ready-made blueprints` (Wagner and Anholt, 2016). As a result, this might create more opportunities for creative engagement between external and local actors.

3.3. A strategic approach towards societal resilience

After the publication of the EUGS in 2016, a period of monitoring its implementation followed. This has been an opportunity for the EU to reflect more on how to shape the concept of societal resilience towards a more operational approach. One of the main implications for resilience in shaping the EUGS was that it provided strategic salience for EU foreign instruments. In addition, resilience contributed towards framing the EU sui-generis character, in particular, as the literature points out to the hybridity feature of the EU in international relations and its search for authenticity (Nitoiu and Sus, 2018).

After the publication of the EUGS, the EU advanced its conceptualisation of societal resilience in a more strategic manner. In particular, this fact can be noticed within the EU approach towards its immediate vicinity. A concrete step towards materialising this approach has been done with the publication of the Joint Communication from 2017 – A Strategic Approach to resilience in the EU's external action. The paper points to the increasingly connected and complex word, which highlighted the challenge for the EU to sustain its transformational agenda (European Commission, 2017a, p. 2). The aim of shaping a strategic approach to resilience is directly linked with the objective of increasing the EU impact as an actor. Furthermore, this communication a important shift, as it points to the need to `move away from a crisis containment approach, to a more structural, long-term, non-linear approach to vulnerabilities, with an emphasis on anticipation, prevention and preparedness`.

The strategic approach towards resilience is underpinned by a multidimensional framework. Societal resilience doesn't appear as a final goal, rather, it seen as a means for the EU in achieving its ambitious set of objectives.

According to the paper, the EU objectives can be achieved by strengthening (i) the adaptability of societies, communities and individuals to various pressures, such as economic issues, environmental, demographic or societal; (ii) the capacity of states to ensure its continuity in context of pressures, so it can respect democracy, human rights, rule of law and to boost its security; and (iii) the capacity of societies and communities to manage opportunities in order to resist on front of major pressures.

The EU approach towards resilience is framed in a multidimensional manner, referring to a wide range of risks, such as conflict, climate change or migration.

The new approach to societal resilience strongly put emphasis on participatory societies. It shows, in particular, the link between inclusive and participatory societies, with `accountable, transparenat and democratic institutions`. Moreover, it is mentioned that societal resilience is driven by a `sustainable and balanced socioeconomic development` (European Commission, 2017a). A key to ensure that is to boost capabilities towards anticipation and identifying possible root causes of vulnerabilities.

The paper gives a particular importance to the EU's neighbouring countries. It is clearly referring towards the need to build institutional capacities, but especially, it is pointing out towards `working a different level of civil society`. According to Kostanyan, the lack of ownership as well as limited adaptation of the EU instruments to the local needs is seen to be one of the main causes which can explain the limited effectiveness of the ENP, an argument with regard to there is a consensus across the academic literature (Kostanyan, 2017). It is of a key important to develop a more salient understanding of risks; some of them, such as conflict, cyber-security or hybrid threats are seen the most prominent.

CSOs and citizens are widely included within the EU approach towards a more strategic approach to resilience. Developing people-to-people exchanges and engaging with CSOs are framed as key ways to shape a strategic approach towards resilience for longer term. CSOs, local communities and individuals are part of a multitude of elements that, according to the EU communication, constructs complex interdependencies. The key to make sense of this complexity is to analyse power relations at regional, state, organisational, community and individual level.

3.4 Reinforcing resilience – Eastern Partnership beyond 2020

Unlike its predecessors, the Joint Communication of the European Commission with regard to the EaP provided a more balanced and nuanced approach to societal resilience. The documents heavily focused on the societal dimension, as it often referred to \`people\`, \`citizens\` and \`civil society\`. For example, the Communication from March 2020 encompasses a broad set of objectives aiming \`to strengthen resilience, foster sustainable development and deliver results for society\` (European Commision, 2020b).

The terms \`resilience\` and \`resilient\` have 33 entries. Moreover, the societal dimension is heavily approached as well: *society(ies)*-41 times, *social*-11 times, *societal*-2 times. In this context, resilience seemed to be a facilitator for a paradigm shift in terms of how the EU provides support, precisely, ‘the EU support shifted away from a project-based financial assistance towards support for genuinely transformational reform policies’ (European Commission, 2020a).

Societal resilience – Citizens. \`Citizens\` are mentioned 16 times within the European Commission’ Communication towards the EaP. Compared with previous strategies (ENP review, 20 Deliverables), the new EU approach towards citizens appeared to be more nuanced. The fact that a heavy emphasis is placed on citizens’ expectations and their perception towards the EU and their expectations is a thought-provoking aspect. In general, at least three main ideas are formulated in relation to citizens: (i) strengthening economies, promoting rule of law, human rights, (ii) the need to increase citizens’ participation in the public life, (iii) the need to improve citizens perception towards the EU. Taking everything into consideration, the EU objective highlights the shift towards placing more emphasis on the local dimension, through dialogue in order to get a better understanding of citizens’ expectations.

Societal resilience – Civil Society. The role of CSOs is strongly related with the EU objectives related to citizens. As such, CSOs are framed as a means to promote the EU actions at societal level. Furthermore, as previous research has shown (Boiten, 2015), CSOs are seen as key actors in promoting reforms implementation:

Engaging with civil society has been critical in ensuring effective reforms, as it has increased public accountability, advanced human rights and local development, and ensured service delivery to the whole population, including vulnerable groups (European Commission, 2020b).

With regard to the role of CSOs, the idea of societal resilience underpins a wide range of elements encompassing resilience drivers, but also risks and vulnerabilities. However, it is debatable to what extent resilience can be seen as a radical shift towards the role of CSOs. Still, it provides a different angle towards the societal dimension and provides a more comprehensive mapping exercise regarding the various elements that are important for their activity.

4. CONTENT ANALYSIS

In order to consolidate the analysis provided in the previous section, a content analysis of the main EU official documents has been performed. The sample consists of six documents, published by the EU during 2015-2020. Only the strategic documents were selected, which are a distinct type of legal documents. In this way, it is ensured a clear outlook with regard to the narrative that revolves around the concept of societal resilience.

Table 1. The list of EU official documents consisting the sample for analysis

- European Commission (2012). The EU approach to Resilience: Learning from Food Security and Crises.
- European Commission (2015). European Neighbourhood Policy Review, 18 November 2015.
- European Commission (2017a). A strategic approach to resilience in the EU's external action.
- European Commission (2017b). Eastern Partnership - 20 Deliverables for 2020. Focusing on key priorities and tangible results.
- European Commission (2020a). 2020 Strategic Foresight Report, European Union Official Journal.
- European Commission (2020b). Eastern Partnership policy beyond 2020. Reinforcing Resilience – an Eastern Partnership that delivers for all.
- European External Action Service (2016). Shared vision, common action: A stronger Europe. A global strategy for the EU's foreign and security policy.

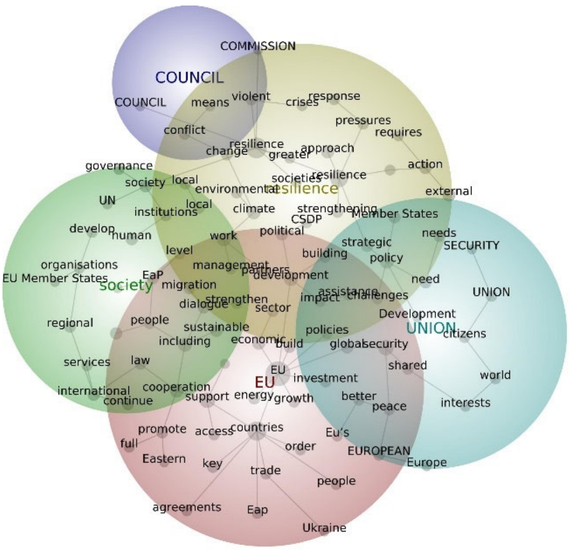
The content analysis was performed using Leximancer that a software designed particularly for processing textual content. The analysis is performed automatically, which reduced the risk of bias. The software provides a visual map of the main Themes and related Concept, which help towards identifying possible correlations between various ideas.

Findings

The analysis shows the main themes and concepts related to the concept of societal resilience. As heat-map shows, (Figure 1) the main themes identified are:

EU, *Union*, *Society*, *Resilience* and *Council*. This clearly highlights the coexistence of two dimensions: international (EU) and local/societal (society, citizens). The overlapping region between all the main themes highlights the \`conceptual mechanisms\` related to societal resilience which links the international dimension with the local one. As such, exploring the overlapping region, various elements that underpin the concept of societal resilience can be identified.

Figure 1. The Heat-map of the main Themes and Concepts related with the concept of \`societal resilience\`



Source: authors' own elaboration

For a more comprehensive outlook, all the relations between themes which concern the international-local interactions are examined:

I. EU-Society – the main concepts identified are: *law*, *cooperation*, *people*, *sustainable*, *dialogue*. This highlights the idea of dialogue and cooperation with local actors, including citizens, while the promoting rule of law is seen as the key objective. Thus, a mix between the economic and normative elements can be noticed.

II. EU-Resilience – the main concepts identified are: *sector*, *development*, *partners*, *political*. This combination of concepts highlights the political and strategic dimension of resilience, while *partners* emphasis, again, the idea of dialogue. In addition, the presence of \`development\` and \`sector\` shows that the transformative feature of societal resilience, as it associated with contributing with sector tailored policies.

III. Resilience-Society – the main concepts identified are: *local*, *work*, *management*, *dialogue*, *strengthen*. The concepts underpinning the relation between Resilience and Society highlight the idea of dialogue. Thus, it is argued that in this context the main means for building resilience are displayed.

IV. Union-Resilience – the main concepts identified: *Member States*, *needs*, *policy*, *assistance*, *challenges*, *impact*, *strategic*. The relation between Union and resilience appears as an interesting feature, as it is one of the main ideas behind the logic of societal resilience, precisely, `governance from distance`. Thus, a clear narrative can be noticed, revolving around how Member States can provide support for building societal resilience, through assistance.

5. CONCLUSIONS

The aim of this paper was to identify the main elements that underpin the narrative of societal resilience in the EU's approach towards its eastern neighbourhood. The research was based on a content analysis of the main EU official documents published in 2015-2020 period. The main finding is that the idea of *dialogue* appears as a dominant theme in relation with the objective of building societal resilience. This is an important aspect, as it shows how the concept of societal resilience provides a bridge between international and domestic actors.

Thus, it is concluded that the dialogue appears as an important cross-cutting process, while at the same time it can be seen as key driver for building societal resilience. Having said that, this paper encourages looking more closely to dialogue and communication in relation with the objective of societal resilience.

References

1) Beck, G. A. and Socha, T. J. (2015). *Communicating hope and resilience across the lifespan.* New York: Peter Lang.
2) Brassett, J., Croft, S. and Vaughan-Williams, N. (2013). Introduction: an agenda for resilience research in politics and international relations. *Politics*, 33(4), pp. 221–228.
3) Boiten, V. J. (2015). The semantics of 'Civil': The EU, civil society and the building of democracy in Tunisia. *European Foreign Affairs Review*, 20(3), pp. 357-377.
4) Chandler, D. (2014). Beyond neoliberalism: Resilience, the new art of governing complexity. *Resilience*, 2(1), pp. 47–63.
5) Chandler, D. (2015). Rethinking the conflict-poverty nexus: from securitising intervention to resilience. *Stability: international journal of security & development*, 4(1), pp. 1–14.
6) Chandler, D. (2020). Security through societal resilience: Contemporary challenges in the Anthropocene. *Contemporary Security Policy*, 41(2), pp. 195–214.

7) Colombo, S. and Shapovalova, N. (2017). The European Neighbourhood Policy promotion of civil society. In: *The Routledge Handbook on the European Neighbourhood Policy*. London: Routledge.
8) Cooper, M. and Walker, J. (2011). Genealogies of resilience: from systems ecology to the political economy of crisis adaptation. *Security dialogue*, 14(2), pp. 143–160.
9) European Commission, (2012). *The EU approach to Resilience: Learning from Food Security and Crises*. [online] Available at: https://ec.europa.eu/ echo/ files/policies/resilience/com_2012_586_resilience_en.pdf [Accessed 05.04.2021].
10) European Commission, (2015). *European Neighbourhood Policy Review, 18 November 2015*. [online] Available at: https://eeas.europa.eu/archives/docs/ enp/documents/2015/151118_joint-communication_review-of-the-enp_en.pdf [Accessed 05.04.2021].
11) European Commission, (2017a). *A strategic approach to resilience in the EU's external action.* [online] Available at: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52017JC0021 [Accessed 05.04.2021].
12) European Commission, (2017b). *Eastern Partnership - 20 Deliverables for 2020. Focusing on key priorities and tangible results*. [online] Available at: https://www.consilium.europa.eu/media/44362/20-deliverables-for-2020.pdf [Accessed 05.04.2021].
13) European Commission, (2020a). *2020 Strategic Foresight Report, European Union Official Journal.* [online] Available at: https://ec.europa.eu/info/sites/ default/files/strategic_foresight_report_2020_1_0.pdf [Accessed 05.04.2021].
14) European Commission, (2020b). *Eastern Partnership policy beyond 2020. Reinforcing Resilience – an Eastern Partnership that delivers for all*. [online] Available at: https://eeas.europa.eu/headquarters/headquarters-homepage/76166/ joint-communication-eastern-partnership-policy-beyond-2020-reinforcing-resilience-%E2%80%93-eastern_en [Accessed 05.04.2021].
15) EEAS - European External Action Service, (2016). *Shared vision, common action: A stronger Europe. A global strategy for the EU's foreign and security policy*, 25 June 2016. [online] Available at: https://eeas.europa.eu/headquarters/headquarters-homepage/7337 [Accessed 05.04.2021].
16) Grevi, G. (2016). *A global strategy for a soul-searching European Union, EPC discussion paper, 13 July*. Brussels: European Policy Centre.
17) Humbert, C. and Joseph, J. (2019). Introduction: the politics of resilience: problematising current approaches. *Resilience,* 7(3), pp. 215-223.
18) Joseph, J. (2013). Resilience as embedded neoliberalism: a governmentality approach, *Resilience*, 1(1), pp. 38-52.
19) Joseph, J. (2018). *Varieties of resilience: Studies in governmentality*. Cambridge: Cambridge University Press.
20) Juncos, A. (2017). Resilience as the new EU foreign policy paradigm: a pragmatist turn? *European Security*, 26(1), pp. 1-18.
21) Koenig, N. (2016). *Taking the ENP beyond the conception-performance gap*. Berlin: Jacques Delors Institut Policy.
22) Korosteleva, E. (2017). Eastern Partnership: Bringing 'the political' back in. *East European Politics*, 33(3), pp. 321–337.

23) Korosteleva, E. (2020). Reclaiming resilience back: A local turn in EU external governance. *Contemporary security policy*, 41(2), 241-262.
24) Korosteleva, E. and Flockhart, T. (2020). Resilience in EU and international institutions: Redefining local ownership in a new global governance agenda. *Contemporary Security Policy*, 41(2), pp. 153-175.
25) Kostanyan, H. (2017). *Assessing the European neighbourhood policy: perspectives from the literature.* London: Rowman & Littlefield.
26) Lavrelashvili, T. (2018). Resilience-building in Georgia, Moldova and Ukraine: Towards a tailored regional approach from the EU. *European View*, 17(2), pp. 189-196.
27) Martin, R. L. and Sunley, P. J. (2015). On the notion of regional economic resilience: conceptualization and explanation. *Journal of Economic Geography*, 15(1), pp. 1–42.
28) Nitoiu, C. and Sus, M. (2019). Introduction: the rise of geopolitics in the EU's approach in its Eastern neighbourhood. *Geopolitics*, 24(1), pp. 1-19.
29) Parsons, D. (2010). Organisational resilience. *Australian Journal of Emergency Management*, 25(2), pp. 18-20.
30) Tocci, N. (2016). The making of the EU Global Strategy Contemporary. *Security Policy*, 37(3), pp. 461-472.
31) Tocci, N. (2020). Resilience and the role of the European Union in the world. *Contemporary Security Policy*, 41(2), pp. 176-194.
32) Ülgen, S. (2016). *Resilience as the Guiding Principle of EU External Action. Strategic Europe.* Brussels: Carnegie Europe. [online] Available at: http://carnegieeurope.eu/strategiceurope/?fa=64007 [Accessed 05.04.2021].
33) Wagner, W. and Anholt, R. (2016). Resilience as the EU Global Strategy's new leitmotif: pragmatic, problematic or promising? *Contemporary Security Policy*, 37(3), pp. 414-430.
34) Zebrowski, C. (2009). Governing the network society: a biopolitical critique of resilience. *Political Perspectives*, 3(1), pp. 1-38.

LOCAL FISCAL SYSTEMS AND SOCIAL JUSTICE ACROSS EUROPEAN UNION COUNTRIES

LENUȚA COJOCARIU (PĂUC)
Alexandru Ioan Cuza University of Iaşi
Iași, România
lenuta.pauc@yahoo.com

ARINA-EMILIA GOGU
Bucharest University of Economic Studies
Bucureşti, România
arina_emilia@yahoo.com

FLORIN OPREA
Alexandru Ioan Cuza University of Iaşi
Iași, România
foprea@uaic.ro

Abstract
In the context of fiscal federalism, local authorities have expanded their administrative powers, being nowadays involved in the efforts of macroeconomic stabilisation or ensuring a better income distribution within society. Local budgets have become in this context important tools of influencing progress in a society at both the microeconomic and macroeconomic levels. In this paper, we analyse particularly the potential connection between local fiscal systems and social equity, measured by income distribution and Social Justice Index, on a comparative approach between two groups of countries in Europe: North-West as developed countries and South-East as developing countries. As expected, strong local fiscal systems are associated with low level of social inequity in North-West countries, while weak local fiscal systems are associated with high levels of social inequity in South-East countries, showing that significant increases of the share of indirect taxes promote equity imbalances between various social categories within a society. Based on these findings, we formulated some concluding remarks as useful recommendations for improving the structure of local fiscal systems and thus, enhancing the role of local budgets in stimulating the progress of a society.
Keywords: *direct taxation; indirect taxation; local budgets; social justice; income distribution.*
JEL Classification: H21, H79, D6

1. INTRODUCTION

Social equity is a subject of general interest, the term being adopted from philosophical discourse. Jost and Kay (2010) formulated three different meanings of the term social justice: the distribution of benefits and burdens in a society must be done according to a principle or set of principles; public policies must guarantee the fundamental rights and freedoms of both individuals and groups; people must be treated with dignity and respect not only by public authorities but also by other actors in society.

The first definition is of interest for this study, having a connotation oriented towards the economic area, it aims at the manner of redistributing resources within a society. In this sense, a special role belongs to the state, through the management of fiscal policies and we believe that the entire fiscal architecture must also align with economic and social policies, aiming at meeting the objectives related to reducing social inequalities and stimulating intergenerational equity, respectively promoting inclusion and equality chances.

Related to the above, the aim of our analyses is to identify some traces and implications of local direct and indirect taxation and social justice, in order to emphasize the importance and contribution of local budgets to promote sustainable development policies. We chose local budgets due to their extended tasks and responsibilities, which legitimate their role of actors of regional development.

The paper is structured as follows. In the first section we provide a brief literature review in the field, in the second section we present a comparative analyse between the evolution of direct and indirect taxation in two group of countries, in the third section we analysed the social equity on a comparative approach across Europe and identified possible connection between local taxation and social justice. Finally, we formulated some conclusions and some useful policy recommendations.

2. LITERATURE REVIEW

Social justice is a term used in philosophical discourse, but it is also accepted and used in the social sciences, with a broad reference to the equitable distribution / allocation of resources within a society. Important papers in the field are Rawls (2020), Jost and Kay (2010), Miller (1999) etc. Social justice represents a subject of large debate worldwide with high importance for public social policies.

A common measure representing important determinant of social equity and which is widely used in empirical studies is income (in)equality. Hence, Heimberger (2020) conducting a research for 17 OECD for a long period of time (1978-2013) show that most often fiscal consolidation episodes lead to an increase in income inequality, so the impact of an episode marks a 0.4% increase in the GINI coefficient in the short term and a 0.6% increase in the medium term. Avram *et al*. (2013) conducted a study on the countries with the largest deficit after the crisis in the late 2000s and the results reveal that in Greece, Spain, Italy, Latvia, Romania and in the United Kingdom the richest lost a higher proportion of their income than the poor, in Estonia the effects of distribution were reversed and the poor lost a higher proportion of their income than the rich and in Lithuania and Portugal the negative effects of fiscal consolidation were felt more on those with medium incomes.

Related to specific instruments of fiscal consolidation and their impact on social equity, Rawdanowicz, Wurzel and Christensen (2013) show that a reduction in direct taxes on households can reduce income inequality and confirm that the increase in progressive taxes on income of labor force can affect long-term economic growth. In line with this, (Iosifidi and Mylonidis, 2017) also confirm that an increase in labor and consumption taxes, compared to capital taxes, deepens more the income inequality, pointing out that in relation to the redistributive effects, the mix of fiscal instruments matters more than the individual effects of each instrument, as is natural.

From the different perspective, Ciminelli *et al.* (2019), conducting a study for 16 OECD countries (1978-2012), showed that income-based fiscal consolidation leads to a decrease in income inequality, emphasizing the fact that indirect taxes lead to a greater decrease in income inequality compared to direct taxes. Also, between general taxes (e.g., value added tax and sales tax) and personal taxes, the second category is more suitable for reducing inequalities, while the first category has a positive impact on short-term labor force participation. However, the author emphasizes that the consolidation on the income side also has the cost of a weaker economic activity. In line with this, Cournède, Goujard and Pina (2014) also emphasized that in general, many fiscal adjustment instruments rather lead to an increase in income inequality. Although, they identified some instruments that reduce inequality, namely, increased taxes on inheritance and capital gains (included in the category of property taxes) and income from corporate earnings. But, regarding the consumption taxes, the authors found that being regressive, these affect social equity, so low-income groups will save less compared to higher-income groups. Other papers analysing the effects of fiscal consolidation on income redistribution are: Ganghof, 2006; Ball *et al.*, 2013; Bargain *et al.*, 2015; Schneider, Kinsella and Godin, 2016; Kyriacou, Muinelo-Gallo and Roca-Sagalés, 2018.

In social policies, the topic of redistributive welfare within a society is often oriented towards substitutes or determinants of social justice, such as economic growth, productivity and others. In this respect, Gemmell, Kneller and Sanz, (2011) reveal that changes in the fiscal structure can cause changes in the GDP growth rate on long-term. Other study (Ormaechea and Yoo, 2012) based on a sample of 69 countries (of which, 21 high-income countries, 23 with medium-income and 25 low-income countries) for the period 1970-2009 show that the increase in income taxes combined with a reduction in consumption and property taxes leads to a slower growth of the economy. Similarly, another wide research discloses that high marginal rates on taxation of high-productivity workers as well as capital providers negatively impact prosperity and reduce welfare (Diamond and Mirrlees, 1971). In line with these, Johansson (2016) stresses that income taxes affect growth more than consumption taxes and property taxes. Related to the impact on productivity, Akgun, Cournède and Fournier (2017) conducted a study on sample of 34 countries from OECD, on a timescale from 1980-2014 and revealed that decrease of the labor tax, profit tax and/ or increases of the tax on real estate (property) represent favourable mix of fiscal instruments on the revenues side leading to the increase of production per capita in the long run, provided a constant dimension of the public sector is maintained.

Also, there are studies ranking the main types of taxes in order of intensity of their impact on economic growth, from low to high as follows: corporate income taxes; personal income taxes; consumption taxes; recurrent taxes on immovable property (Arnold *et al.*, 2011). The specific results of this study show that the shift to consumption taxation and to real estate taxation (especially residential properties) better enhance economic growth. Similarly, better individual tax design can support economic growth. At the same time, the authors believe that the reduction of profit and income taxes represents fiscal changes with low potential on stimulating economic growth or recovering from an economic crisis, contradicting many results of the studies already presented.

Overall, it is found that direct taxes affect more income inequality and economic growth, which may be a reason why in the years after the economic crisis of 2008, there could be noticed a shift from direct to indirect taxation (Cojocariu and Oprea, 2020). However, it should be stressed that the redistributive effects of indirect taxation also affect social equity. Due to their veiled nature, the tax subject cannot accurately estimate the tax burden, and especially low-income people are affected, being another way of negatively impact the social justice. So, it is required broad fiscal consolidation processes, the main challenge being to optimally set the dimension of direct and indirect taxation in order to cover public expenditures and to enhance social equity and economic growth.

3. LOCAL TAXATION ACROSS EUROPE – RECENT EVOLUTIONS

Local taxation presents a different design for the countries of the European Union, this being influenced by a variety of factors such as: the intensity of fiscal decentralization, the number of administrative levels in a state, the level of development, etc. Optimizing local tax revenues is a challenge for local public authorities because they must, in principle, meet the public needs to be managed, but also some criteria of social and economic equity among communities.

In this regard, we argue that the entire fiscal architecture must also align with economic and social policies, aiming at objectives related to stimulating production and jobs, as well as objectives related to reducing social inequity and stimulating intergenerational equity, respectively promoting inclusion and equality chances. The most representative examples of taxes are income tax, as direct tax and value added tax (VAT, as indirect tax). Possible increases in income tax may lead in the first phase to increase local financial resources, but an increase in the tax rate above an optimally accepted threshold, may lead to discouragement of work, production and on long-term to the increase of tax evasion. On the other hand, the increase in indirect taxes is a factor that leads to an increase (directly proportional) of social inequity, those with low incomes being much more affected by those with high and very high incomes. Thus, public authorities must set a level of taxation, respecting the general criteria of taxation - fiscal equity, financial policy, economic and social policy, with adequate tax bases and optimal tax rates, so that the resulting fiscal architecture is stable, flexible, with beneficial effects on fiscal and budgetary sustainability, but also on economic and social life.

Further, we exposed on a comparative approach the evolution of direct and indirect taxation in the last decade across Europe (Tables 1 and 2).

Table 1. Direct taxation in European South-East and North-West groups of countries, for 2009-2019 (percentages in total local revenues)

Current taxes on income, wealth etc.	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019 vs. 2009
European countries of South-East												
Bulgaria	1.03	1.31	1.96	1.94	1.86	1.79	1.67	2.66	2.54	2.58	2.43	+
Croatia	29.08	27.26	27.62	28.94	31.20	29.26	26.02	27.69	26.40	26.60	26.92	-
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Czechia	19.88	18.91	19.99	21.35	22.17	22.42	21.99	24.61	23.83	23.53	22.97	+
Greece	10.24	12.39	14.23	14.74	14.03	14.95	14.92	15.55	15.57	14.91	17.56	+
Hungary	1.35	1.39	1.35	1.65	1.15	1.18	1.36	1.76	1.73	1.57	1.46	+
Poland	21.21	19.36	20.20	21.51	21.51	21.81	22.85	23.20	23.17	23.74	23.53	+
Romania	3.24	3.74	3.83	3.83	4.00	3.88	3.49	3.97	4.04	4.09	3.84	+
Slovakia	2.32	2.24	2.08	2.25	2.27	0.78	0.65	0.70	0.69	0.62	0.60	-
Slovenia	31.40	33.90	33.96	34.28	33.70	31.97	29.33	32.18	31.93	31.64	30.65	-
European countries of North-West												
Austria	0.24	0.24	0.23	0.25	0.26	0.25	0.24	0.25	0.27	1.10	1.11	+
Belgium	13.88	12.57	12.73	11.23	11.17	10.14	11.58	12.19	11.87	11.41	11.93	-
Denmark	29.07	29.90	29.87	29.89	30.33	30.45	30.97	31.53	32.04	32.08	32.29	+
Finland	45.67	45.66	45.05	44.20	44.99	45.52	46.24	45.88	46.85	45.90	46.57	+
France	6.55	6.82	6.90	7.11	7.31	7.29	7.49	7.60	7.68	6.57	5.26	-
Germany	29.67	29.44	30.43	31.72	31.40	31.10	31.01	31.23	31.40	31.13	31.10	+
Ireland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Italy	6.21	6.60	7.16	8.40	8.53	8.99	9.03	9.33	9.31	9.28	9.33	+
Netherlands	3.65	3.83	3.92	4.05	4.31	4.47	4.24	4.25	4.32	4.28	4.18	+
Sweden	55.97	53.54	53.31	53.42	53.39	52.75	52.87	53.67	53.00	52.70	52.13	-

Source: (European Commission, 2021)

First of all, there is an important difference between the direct local public revenues of the two groups of countries. The highest relative values of direct tax resources for the South-East group of countries are 30.65% and 26.92% for Slovenia and Croatia, and for the North-West countries they are 52.13% and 46.57% for Sweden and Denmark. Anyway, in both groups there are countries with a low level of local tax revenues: Slovakia, Hungary, Bulgaria and Romania in the South-East group and Austria, the Netherlands, France and Italy in the North-

West group. For the South-East states, the low level of local tax revenues is generally explained by the rather fragile local tax base (e.g. Romania). But for the states of the North-West the main explanation would be that in fact, in some of them the form of government it is organized on three administrative levels (for example, Italy is strongly regionalized, Austria, the Netherlands, Belgium are federal states), but also that some are highly centralized (e.g., France, the Netherlands).

In the last column of the table, we reflected with the signs "+", "-" the difference between 2009 and 2019. In both groups, we identify a number of six countries where the relative level of direct taxation has increased. From the South-East, in Greece case is identified that, over a period of 10 years, an increase of 7.31 percentage points in direct taxation, the highest compared to the rest of the countries in the group. It is known, that Greece was one of the most affected countries by the economic crisis started in 2008 and that its recover plans included several fiscal reforms.

Regarding the indirect taxation, in Table 2 we reflected its relative evolution for the two groups of countries in the period 2009-2019.

Table 2. Indirect taxation in European South-East and North-West groups of countries, for 2009-2019 (percentages in total local revenues)

Taxes on production and imports	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2019 vs. 2009
European countries of South-East												
Bulgaria	5.67	5.89	6.02	6.15	5.31	5.05	4.66	6.75	6.28	6.02	5.91	+
Croatia	8.66	8.38	8.97	8.51	8.96	8.52	9.22	9.55	9.71	9.98	9.82	+
Cyprus	24.03	23.07	22.15	22.62	33.62	30.73	30.13	21.22	23.15	14.73	24.71	+
Czechia	17.86	18.30	19.27	20.78	21.11	20.81	20.23	22.63	22.93	22.47	22.07	+
Greece	5.99	7.70	8.23	8.49	8.46	8.82	8.19	8.67	8.77	8.22	9.89	+
Hungary	21.16	19.16	18.50	22.94	21.14	22.13	26.44	33.84	32.75	31.19	30.27	+
Poland	9.62	9.20	9.11	9.23	9.23	9.37	9.44	9.20	8.84	8.23	7.73	-
Romania	6.93	7.32	7.12	7.15	6.76	6.40	5.64	6.11	5.99	6.32	6.03	-
Slovakia	8.44	8.06	7.73	8.06	8.29	10.05	6.30	6.54	6.68	6.36	5.86	-
Slovenia	7.48	7.57	7.62	7.85	7.80	7.62	8.18	8.92	9.14	8.66	8.70	+
European countries of North-West												
Austria	14.41	14.64	14.73	14.78	14.64	14.54	14.11	14.35	14.38	14.29	14.47	+
Belgium	17.73	18.22	18.09	17.90	18.44	19.22	19.09	18.87	18.45	17.93	18.75	+
Denmark	3.72	3.74	3.80	3.64	3.82	3.86	3.94	3.91	3.85	3.97	3.99	+
Finland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
France	37.77	29.74	39.81	40.63	40.48	41.10	42.29	43.96	44.96	46.75	46.86	+
Germany	7.04	7.00	7.04	7.15	7.09	7.03	7.17	6.96	7.22	7.36	7.55	+
Ireland	12.72	14.68	16.69	19.96	21.69	24.01	21.10	20.03	19.06	17.00	15.53	+
Italy	21.41	22.33	23.53	24.56	23.95	24.85	23.43	19.31	20.39	20.90	20.87	-
Netherlands	4.84	5.02	5.20	5.48	5.90	6.06	5.91	5.95	6.12	6.15	6.05	+
Sweden	0	0	0	0	0	0	0	0	0	0	0	

Source: (European Commission, 2021)

And in this case, we identify significant differences for the relative level of indirect taxation for the two groups of countries. In the South-East we find seven out of ten countries with the level of indirect taxation less than 10% of total local revenues, while for the North-East we find five out of ten countries with the level of indirect tax less than 10%. Also, for 2019, the maximum level in the South-East group is 30.27% in Hungary, but for the North-East group it is 46.86% in France.

For ten years, the most significant increases in indirect taxation are found in the case of Hungary and France, in addition to 9.11% and 9.09% in 2019 compared to 2009. Greece and the Czech Republic also see significant increases in indirect taxation for this period.

Overall, the fiscal adjustments were more consistent for the South-East group compared to the North-West group. By comparing the evolution of the two categories of taxes, we notice a certain preference for higher adjustment (increase) for indirect taxes, almost to the same extent for both groups of countries).

4. LOCAL TAXATION AND SOCIAL JUSTICE ACROSS EUROPE – A COMPARATIVE APPROACH

In this section we provide a comparative analysis regarding social justice/ equity using the indicator of income distribution and the Social Justice Index of Bertelsmann Stifstung. According to Eurostat, income distribution represents *"the ratio of total income received by the 20 % of the population with the highest income (top quintile) to that received by the 20 % of the population with the lowest income (lowest quintile)* and this "*must be understood as equivalised disposable income",* and a measure of inequality of disposable income, too.

In Table 3 it is reflected the evolution of income distribution for the two selected groups of countries in our study.

Table 3. Income distribution in European South-East and North-West groups of countries (2009-2019)

Income distribution	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
European countries of South-East											
Bulgaria	5.91	5.86	6.46	6.12	6.59	6.81	7.11	7.69	8.23	7.66	8.1
Croatia	:	5.54	5.58	5.36	5.34	5.12	5.16	5	5.03	5	4.76
Cyprus	4.37	4.54	4.34	4.67	4.91	5.37	5.2	4.88	4.56	4.29	4.58
Czechia	3.47	3.47	3.54	3.49	3.4	3.5	3.51	3.5	3.4	3.32	3.34
Greece	5.76	5.61	5.96	6.63	6.6	6.46	6.51	6.55	6.11	5.51	5.11
Hungary	3.51	3.41	3.94	4	4.29	4.33	4.3	4.26	4.27	4.35	4.23
Poland	4.97	4.98	4.95	4.92	4.88	4.91	4.92	4.76	4.56	4.25	4.37
Romania	6.53	6.11	6.24	6.6	6.83	7.24	8.32	7.2	6.45	7.21	7.08
Slovakia	3.56	3.8	3.81	3.73	3.58	3.93	3.54	3.63	3.49	3.03	3.34
Slovenia	3.24	3.42	3.46	3.44	3.6	3.7	3.6	3.56	3.42	3.38	3.39
European countries of North-West											
Austria	4.15	4.34	4.12	4.2	4.11	4.13	4.05	4.09	4.29	4.04	4.17
Belgium	3.91	3.92	3.86	3.95	3.81	3.81	3.83	3.85	3.84	3.79	3.61
Denmark	4.61	4.41	3.98	3.94	4.01	4.12	4.08	4.06	4.08	4.11	4.09
Finland	3.71	3.61	3.69	3.69	3.59	3.62	3.56	3.58	3.54	3.65	3.69

Income distribution	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
France	4.42	4.43	4.61	4.54	4.48	4.27	4.29	4.32	4.31	4.23	4.27
Germany	4.48	4.49	4.46	4.3	4.6	5.12	4.8	4.62	4.49	5.07	4.89
Ireland	4.24	4.7	4.63	4.82	4.73	4.9	4.5	4.45	4.63	4.23	4.03
Italy	5.31	5.38	5.73	5.64	5.85	5.78	5.84	6.27	5.92	6.09	6.01
Netherlands	3.97	3.65	3.75	3.61	3.58	3.83	3.82	3.93	3.99	4.05	3.94
Sweden	3.96	3.85	3.95	3.98	3.97	4.15	4.06	4.25	4.27	4.13	4.33

Source: (European Commission, 2021)

In general, European countries of the South-East have a higher inequality of disposable income than the countries of the North-West, but the differences are not significant in terms of group average. Thus, in 2019, for example, in the South-East, the lowest inequality report of disposable incomes was 3.34 for the Czech Republic and Slovakia, and the highest was 8.1 and 7.08 for Bulgaria and Romania. On the other hand, for the North-West countries, the lowest values were 3.61 and 3.69 for Belgium and Finland and the highest was 6.01 for Italy. It is important to mention that for the rest of the countries in this group the income inequality ratio is less than 4.9.

Overall, the values increase or decrease relatively little from one year to another, but for the countries Romania and Bulgaria there is a continuous trend of increasing inequality for the analyzed period, so that in 2019 the inequality ratio is higher than in 2009, the difference being notable especially in the case of Bulgaria (5.91 in 2009 compared to 8.1 in 2019). A similar evolution can be seen in the case of Italy.

The fact that local fiscal adjustments have been more consistent in South-East Europe, marking significant increases in local taxation, especially indirect taxation, may be evidence of the negative implications of indirect taxation on development. In terms of income distribution, the highest inequality is registered in Bulgaria and Romania, these being also some of the least developed countries, with the lowest per capita incomes, which confirms that indirect taxation affects the most the regions with low income. This theory is also supported by other examples.

In other countries, indirect taxation has similar levels to Bulgaria and Romania, but the level of inequality is lower, for example, Denmark, Germany, the Netherlands. In particular, for the Netherlands and Denmark the level of inequality is decreasing during the analysed period. Moreover, other countries, for example Belgium and the Czech Republic, have a much higher level of local indirect taxation than Bulgaria and Romania, but they have the lowest levels of inequality in 2019, compared to the rest of the countries included in analysis, decreasing compared to 2009. Also, and France, although is highly centralised, it has the higher level of local indirect taxation, but the inequality level is quite low.

Among the North-West countries, Italy is the country with the highest level of income inequality, which has a level of indirect taxation (second in the group for 2019) higher than direct taxation, which is relatively low.

Regarding direct taxes, in general the countries from both groups that have a high level of direct local taxation (Sweden, Finland, Denmark, Slovenia, Croatia, Poland) do not register a high level of inequality.

A more complex measure of equity and also representative, is reflected by the Social Justice Index calculated by the German media trust Bertelsmann Stifstung. It includes six dimensions: poverty prevention, equitable education, labor access, social inclusion and non-discrimination, intergenerational justice and health. The index is quite little used in empirical researches in the extant literature. Kauder and Potrafke (2015) studied the relationship between this and globalization for a group of 31 OECD countries, bringing evidence that countries that have experienced faster globalization have a higher level of social equity. The sub-dimensions of the Social Justice Index that are positively associated with decentralization are: poverty prevention, intergenerational justice and social cohesion and equality. In contrast, globalization is not associated with the sub-dimensions of labor market inclusiveness and equitable access to education.

In Table 4 we reflected the evolution of the Social Justice Index for the years 2009, 2011 and 2014-2019 according to the available data.

Table 4. The evolution of the Social Justice Index in European South-East and North-West groups of countries (2009, 2011, 2014-2019)

Social Justice Index	2009	2011	2014	2015	2016	2017	2018	2019
European countries of South-East								
Bulgaria	-	-	4.4	4.47	4.51	4.78	4.73	4.91
Croatia	-	-	5.1	5.16	5.1	5.15	5.2	5.29
Cyprus	-	-	5.79	5.77	5.85	5.96	6.14	6.1
Czechia	6.75	6.61	6.77	6.67	6.7	6.58	6.78	6.8
Greece	5.12	5.09	4.57	4.74	4.79	4.78	4.95	5.1
Hungary	6.12	5.89	5.67	5.65	5.83	6.01	6.21	6.09
Poland	5.79	5.82	5.98	6.06	6.13	6.09	6.33	6.42
Romania	-	-	4.86	4.54	4.41	4.55	4.74	4.86
Slovakia	5.91	5.64	5.54	5.59	5.64	5.87	5.99	6.07
Slovenia	-	-	6.28	6.3	6.44	6.59	6.82	6.88
European countries of North-West								
Austria	6.23	6.05	6.27	6.34	6.32	6.41	6.37	6.33
Belgium	6.3	6.18	6.25	6.15	6.3	6.24	6.36	6.31
Denmark	7.47	7.14	7.35	7.46	7.38	7.61	7.61	7.67
Finland	7.25	7.33	7.33	7.38	7.35	7.35	7.31	7.24
France	6.65	6.34	6.34	6.34	6.35	6.32	6.48	6.53
Germany	6.18	6.22	6.54	6.44	6.51	6.55	6.65	6.64
Ireland	6.44	6.14	6.06	6.03	6.22	6.27	6.49	6.56
Italy	5.68	5.62	5.44	5.42	5.43	5.4	5.52	5.48
Netherlands	7.21	7.2	7.13	7.06	7.03	6.94	6.95	6.97
Sweden	7.33	7.16	7.02	7.06	7.01	6.96	7.03	6.98

Source: (Hellmann, Schmidt and Heller, 2019)

According to Table 4, in general, European countries of the North-West have a higher level of the Social Justice Index than European countries of the South-East. Thus, for 2019, for example, in the South-East, the lowest level of the index is 4.86 and 4.91 in Romania and Bulgaria, and the highest values are 6.88 and 6.8 for Slovenia and the Czech Republic. On the other hand, for the North-West countries, the lowest values are 5.48 for Italy, and the highest are 7.67 and 7.24 for Denmark and Finland.

According to the report by Hellmann, Schmidt and Heller (2019) Denmark and Finland have the most favourable contexts for achieving the best possible policy objectives related to poverty reduction, providing equitable access to education, equal opportunities and non-discrimination and intergenerational equity. As for Sweden, the risk of poverty has increased since 2008 and there have been poor performances on the access to the labour market, but this is very well positioned in terms of intergenerational equity.

Among the countries of the South-East, unfortunately they are highlighted by lower performances for many of the dimensions of the Social Justice Index. For example, in the Czech Republic it has lower rates in terms of providing an equitable education, with a high degree of social selectivity in the education system. Slovakia, Hungary and Romania are also ranked among the countries with the most unequal opportunities in terms of education, and Romania is also at high risk of child poverty. At the same time, South-East countries are making significant efforts to combat discrimination against ethnic minorities.

Although it is difficult to establish a causal relationship between the level of the two categories of local taxation analysed in this study, and in this case, the countries of South-East of Europe have the lowest performances of equality measured by the Social Justice Index, which recorded the lowest values in this region compared to the region of Nord-West.

Giving the complexity of the index, this requires a much broad approach of research and the identification and hierarchy of explanatory factors closer to its six dimensions. From our perspective, some explanatory factors could refer to the dimensions of good governance (for example, rule of law, regulatory quality, government effectiveness, control of corruption, the functionality of the institutions), as alternatives for fiscal consolidation in a broad sense.

5. CONCLUSIONS

In this paper we analysed on a comparative approach the implications of direct and indirect taxation on social justice. We used two group of countries: ten from Nord-West of Europe and ten from South-East, on a period during the last decade of years.

By the indicators analysed, we found that there are major differences between the local fiscal revenues between countries from Nord-West (higher local fiscal revenues) and countries from South-East (having a lower level of fiscal revenues).

For the South-East states, the low level of local tax revenues is generally explained by the rather fragile local tax base (eg Romania). But for the states of the North-West the main explanation would be that in fact, in some of them the form of government it is organized on three administrative levels (for example, Italy is strongly regionalized, Austria, the Netherlands, Belgium are federal states), but also that some are highly centralized (e.g., France, the Netherlands).

Overall, the fiscal adjustments were more consistent for the South-East group compared to the North-West group. By comparing the evolution of the two categories of taxes, we notice a certain preference for higher adjustment (increase) for indirect taxes, almost to the same extent for both groups of countries).

Whitin our analysis, it is confirmed that the poor are the most affected by indirect taxation. We found that Bulgaria and Romania have the highest income inequality. By comparison, in Denmark, Germany, the Netherlands having similar relative level of indirect taxation, the income inequality is much lower. Moreover, other countries, for example Belgium and the Czech Republic, have a much higher level of local indirect taxation than Bulgaria and Romania, but they have the lowest levels of inequality in 2019, compared to the rest of the countries included in analysis, decreasing compared to 2009. Also, and France, although is highly centralised, it has the higher level of local indirect taxation, but the inequality level is quite low.

We couldn’t see a similar evolution regarding the direct taxation. In general, the countries from both groups that have a high level of direct local taxation (Sweden, Finland, Denmark, Slovenia, Croatia, Poland) do not register a high level of inequality. Among the North-West countries, Italy is the country with the highest level of income inequality, but it has a level of indirect taxation (second in the group for 2019) higher than direct taxation, which is relatively low.

Regarding the Social Justice Index, this represents a relevant and more complex measure of inequality. In this case, we also identified that many of the countries of the South-East, unfortunately are highlighted by lower performances for many of the dimensions of the Social Justice Index. However, its complexity does not allow a causal link to be established between the level of local taxes and its size.

Our recommendations relate to establishing an optimal level of local taxes and fees. The legislator must opt for a lower level of indirect taxation than direct taxation. Fiscal measures must protect people with medium and low incomes (the largest mass of the population) and be oriented towards a progressive taxation in terms of income and wealth taxes. Although the increase in direct taxation may discourage labour, production and intensify the phenomenon of tax evasion (this is already a big problem at the global level, especially among holders of securities on the capital market), this option remains preferable. It would be healthier for public authorities to set optimal maximum thresholds for direct progressive taxation, and in parallel, to use other instruments to influence labour and production and, through international collaboration, to establish new measures to combat the underground economy and money laundering.

ACKNOWLEDGEMENTS

For Florin OPREA (Faculty of Economics and Business Administration and Centre for European Studies —"Alexandru Ioan Cuza" University of Iasi, Romania), this work was supported by a grant of Ministry of Research and Innovation, CNCS—UEFISCDI, project number PN-III-P4-ID-PCCF-2016- 166, within PNCDI III, project ReGrowEU—Advancing ground-breaking research in regional growth and development theories, through a resilience approach towards a convergent, balanced and sustainable European Union.)

References

1) Akgun, O., Cournède, B. and Fournier, J. M. (2017). The effects of the tax mix on inequality and growth. *OECD iLibrary*. [online] Available at: https://doi.org/10.1787/18151973 [Accessed 05.03.2021].
2) Arnold, J. M., Brys, B., Heady, C., Johansson, Å., Schwellnus, C. and Vartia, L. (2011). Tax policy for economic recovery and growth. *The Economic Journal*, 121(550), pp. F59-F80.
3) Avram, S., Figari, F., Leventi, C., Levy, H., Navicke, J., Matsaganis, M. and Sutherland, H. (2013). The distributional effects of fiscal consolidation in nine EU. *EUROMOD Working Paper, No. EM2/13*. [online] Available at: http://hdl.handle.net/10419/91653 [Accessed 02.03.2021].
4) Ball, L. M., Furceri, D., Leigh, M. D. and Loungani, M. P. (2013). The distributional effects of fiscal consolidation. *Working paper nr. WP/13/151*. [online] Available at: http://ecoonline.s3.amazonaws.com/uploads/2016/ 10/wp13151.pdf. [Accessed 02.03.2021].
5) Bargain, O., Dolls, M., Immervoll, H., Neumann, D., Peichl, A., Pestel, N. and Siegloch, S. (2015). Tax policy and income inequality in the United States, 1979–2007. *Economic Inquiry*, 53(2), pp. 1061-1085.
6) Ciminelli, G., Ernst, E., Merola, R. and Giuliodori, M. (2019). The composition effects of tax-based consolidation on income inequality. *European Journal of Political Economy*, 57(25), pp. 107-124.
7) Cojocariu, L. and Oprea, F. (2020). Fiscal Consolidation and Economic Crisis - Ten Years After. *Ovidius University Annals, Economic Sciences Series*, 20(1), pp. 866-882.
8) Cournède, B., Goujard, A. and Pina, Á. (2014). Reconciling fiscal consolidation with growth and equity. *Economic Studie*s, 2013(1), pp. 7-89.
9) Diamond, P. A. and Mirrlees, J. A. (1971). Optimal taxation and public production I: Production efficiency. *The American Economic Review*, 61(1), pp. 8-27.
10) European Commission, (2021). *Eurostat Database*. [online] Available at: https://ec.europa.eu/eurostat/data/database [Accessed 05.03.2021].
11) Ganghof, S. (2006). Tax mixes and the size of the welfare state: causal mechanisms and policy implications. *Journal of European Social Policy*, 16(4), pp. 360–373.

12) Gemmell, N., Kneller, R. and Sanz, I. (2011). The timing and persistence of fiscal policy impacts on growth: evidence from OECD countries. *The Economic Journal*, 121(550), pp. F33-F58.
13) Heimberger, P. (2020). The dynamic effects of fiscal consolidation episodes on income inequality: evidence for 17 OECD countries over 1978–2013. *Empirica*, 47(1), pp. 53-81.
14) Hellmann, T., Schmidt, P. and Heller, M. (2019). *Social Justice in the EU and OECD. Index Report 2019*, Bertelsmann Stiftung. [online] Available at: https://www.politico.eu/wp-content/uploads/2019/12/Social-Justice-Index-2019.pdf [Accessed 08.03.2021].
15) Iosifidi, M. and Mylonidis, N. (2017). Relative effective taxation and income inequality: Evidence from OECD countries. *Journal of European Social Policy*, 27(1), pp. 57-76.
16) Johansson, Å. (2016), Public Finance, Economic Growth and Inequality: A Survey of the Evidence. *OECD Economics Department Working Papers*, No. 1346. [online] Available at: https://doi.org/10.1787/094bdaa5-en [Accessed 01.03.2021].
17) Jost, J. T. and Kay, A. C. (2010). *Social justice: History, theory, and research*. In S. T. Fiske, D. T. Gilbert and G. Lindzey, eds., *Handbook of social psychology* (p. 1122–1165), Washington, John Wiley & Sons, Inc.
18) Kauder, B. and Potrafke, N. (2015). Globalization and social justice in OECD countries. *Review of World Economics*, 151(2), pp. 353-376.
19) Kyriacou, A. P., Muinelo-Gallo, L. and Roca-Sagalés, O. (2018). Redistributive efficiency in 28 developed economies. *Journal of European Social Policy*, 28(4), pp. 370–385.
20) Miller, D. (1999). *Principles of social justice*. Cambridge: Harvard University Press.
21) Ormaechea, M. S. A. and Yoo, M. J. (2012). Tax composition and growth: A broad cross-country perspective. *International Monetary Fund, Working Paper no. WP/12/257*. [online] Available at: https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.360.7692&rep=rep1&type=pdf [Accessed 12.03.2021].
22) Rawdanowicz, Ł., Wurzel, E. and Christensen, A. K. (2013). The equity implications of fiscal consolidation. *OECD iLibrary*. DOI:10.1787/5K4DLVX2WJQ0-EN.
23) Rawls, J. (2020). *A theory of justice*. Cambridge: Harvard University Press.
24) Schneider, M. P., Kinsella, S. and Godin, A. (2016). Changes in the profile of inequality across Europe since 2005: austerity and redistribution. *European Journal of Economics and Economic Policies: Intervention*, 13(3), pp. 354-374.

PROTECTION OF CONSUMERS' INTERESTS IN THE CONTEXT OF UNFAIR COMPETITION

VIOLETA COJOCARU
Moldova State University
Chișinău, Moldova
violetacojocaru@yahoo.fr

IULIAN MORARU
Moldova State University
Chișinău, Moldova
iulian.moraru94@gmail.com

Abstract
Consumer protection is one of the fundamental aims and objectives of competition law. Moreover, according to the provisions of art. 1 para. (2) of the Law no. 183 of 11.07.2012 on competition, the purpose of the normative act in question consists in regulating the relations related to the protection, maintenance and stimulation of competition in order to promote the legitimate interests of consumers. Contextually, it is worth mentioning the fact that in the definition of the term "competition" in the text of art. 4 in the Law on competition, there also prefigures the term "consumer", or competition is defined as an economic rivalry, existing or potential, between two or more independent undertakings on a relevant market, when their actions effectively limit the possibilities of each of them to unilaterally influence the general conditions of circulation of the products on the respective market, stimulates the technical-scientific progress and the increase of the well-being of the consumers. At the same time, in accordance with the provisions of art. 3 para. (2) of the same normative act, "It is forbidden for companies to exercise their rights in order to restrict competition and harm the legitimate interests of the consumer". One of the competition forms is unfair competition, which involves any action taken by companies in the competition process, which is contrary to honest practices in economic activity. In that regard, the question that arises is whether the protection of consumers in unfair competition is a direct objective or whether that protection is subsequently achieved as a result of the protection of undertakings whose legitimate interests are harmed by unfair competitors in the course of their economic activity. At the same time, regardless of the identified answer, it is also interesting how the rights of consumers affected by unfair competition actions can be protected.
Keywords: *competition; unfair competition; objective; consumer; consumer protection.*
JEL Classification: K29

1. THE NEED TO APPROACH THE SUBJECT

Relating the communitarian way of regulating unfair competition to the national way of regulating the respective institution, a fundamental problem emerges: the way in which the interests of consumers are protected in the context of unfair competition, or analyzing the related communitarian legislation, there can be inffered the fact that the protection of the interests of competing undertakings is realised by protecting the interests of consumers against unfair commercial practices, while at national level the protection of consumers' interests is realised separately from the protection of the rights of competing undertakings. Thus, there is a need to clarify the issues given through a complex analysis.

2. COMMUNITARIAN LEGISLATIVE ASPECTS

At European Union level, Directive 2005/29/EC of the European Parliament and of the Council ("Unfair Commercial Practices Directive") is currently in force.

The Directive states that its purpose is to approximate the laws of the Member States relating to unfair commercial practices, including unfair advertising, which directly harm the economic interests of consumers and therefore indirectly harm the economic interests of legitimate competitors.

In accordance with the principle of proportionality, this Directive protects consumers from the consequences of such unfair commercial practices where they are significant, but recognizes that in some cases the impact on consumers may be negligible. This legislation does not regulate and does not affect national laws on unfair commercial practices which harm only the economic interests of competitors or which are linked to a transaction between traders; in order to take full account of the principle of subsidiarity, Member States will retain, if they so wish, the possibility of regulating such practices, in accordance with the provisions of Communitarian law.

The Directive also does not affect permitted advertising and commercial practices, such as the lawful placing on the market of the product, brand differentiation or incentives for consumers, which may significantly affect consumers' perceptions of a particular product and influence their behavior., without affecting their ability to make an informed decision. Therefore, this Directive directly protects the economic interests of consumers against unfair business-to-consumer commercial practices.

Apart from that, the Directive also indirectly protects legitimate undertakings against competitors who do not comply with the rules laid down by it, thus guaranteeing fair competition in the areas it coordinates. It goes without saying that there are other commercial practices which, although not harmful to consumers, may affect competitors and customers of companies.

In the same sense, it is reiterated that the Commission has carefully examined the need for Community action in the field of unfair competition beyond the scope of this Directive and, if necessary, to make a legislative proposal to regulate other forms of unfair competition.

In other words, even the European legislator does not deny the existence of certain points of interference between the protection of consumers against unfair commercial practices and unfair competition, although the primary purpose of these areas is distinct. In the case of unfair commercial practices, the primary purpose is to protect the interests of consumers, and in the case of unfair competition the primary purpose is to protect competitors.

At the same time, it should be noted that business-to-business ('B2B') practices do not fall within the scope of the Directive. They are partly covered by the Misleading and Comparative Advertising Directive. However, Member States may also extend in their national law the protection granted under this Directive between undertakings. At present, seven EU Member States apply this Directive to business relations: Austria, Germany, France, Sweden, Belgium, Denmark and Italy.

Measures which exclusively protect the interests of competitors do not fall within the scope of the Unfair Commercial Practices Directive. Where national measures govern a practice with a dual purpose of protecting consumers and competitors, such national measures fall within the scope of the DPCN.

In that context, the relevant case-law of the CJEU established that: 39. […] As is evident from recital 6 in the preamble to [the UCPD], only national legislation relating to unfair commercial practices which harm 'only' competitors' economic interests or which relate to a transaction between traders is thus excluded from that scope. 40. […] that is quite clearly not the case with the national provisions [that] refer expressly to the protection of consumers and not only to that of competitors and other market participants.' (CJEU, C-304/08).

3. NATIONAL CONTEXT

At national level, unfair competition implies a distinct regulation from the norms related to consumer protection from Law no. 105 of 13.03.2003 on consumer protection. However, according to the provisions of art. 14 par. (4) of the nominated normative act, "Competitive traders may inform the Competition Council about incorrect commercial practices or may initiate lawsuits against traders who have committed or are likely to engage in unfair commercial practices". Therefore, the legislation in question provides for the protection of competitors against unfair commercial practices in an inclusive manner. The existence of the respective norm at the current stage, however, is useless on the grounds that the Law no. 183 of 11.07.2012 on competition, to the text of art. 15-19, expressly and limitingly provides for unfair competition actions that can be notified to the national competition authority (Gorincioi, 2019). However, through the same rule in the Law no. 105 of 13.03.2003 on consumer protection is provided the possibility for the competitors of the author of the incorrect commercial practices of addressing in court in the sense of protecting their interests/rights. In the same context, in the text of art. 14 para. (6) of the Law no.

183 of 11.07.2012 on competition, it is ordered that “The expiration of the term of 6 months provided in par. (5) constitutes the ground for refusal by the Competition Council to examine the complaint, but does not constitute an impediment for addressing it in court within the general limitation period”. Therefore, both competition and consumer protection law give competitors the right to go to court in order to protect their rights and interests.

4. ALTERNATIVES OF PROTECTION

The competing undertakings of the unfair competition authors have a dual protection alternative: the administrative alternative (before the national competition authority) and the judicial alternative (before the courts). This fact results from the provisions of art. 14 para. (6) of the Law no. 183 of 11.07.2012 on competition corroborated with the provisions of art. 80 para. (5) of the same normative act. At the same time, according to the provisions of art. 2019 para. (1) of the Civil Code of the Republic of Moldova, "Whoever illegally prevents or disturbs the activity of the professional is obliged to repair the damage caused in this way." The primary distinction between the provisions of Law on competition and those nominated in the Civil Code lies in the fact that Law on competition grants the benefit of judicial protection to the competitor injured in rights or interests regardless of the existence of economic or non-economic damage caused by unfair competition, while the Civil Code grants the right respectively only in the conditions of the existence of a damge, or the damage constitutes one of the 4 conditions of the tortious civil liability in terms of unfair competition as a whole with the damaging action, the causal link between the damaging action and the actual damage suffered and the guilt of the author of unfair competition action.

Consumers, however, as subjects harmed or likely to be harmed through unfair competition actions, although explicitly protected through the provisions of Law no. 183 of 11.07.2012 on competition, can effectively benefit from protection only through the addressing in the courts and only in the hypothesis of the existence of a damage caused to them as a result of unfair competition actions, or according to the provisions of art. 2019 paragraph (2) of the Civil Code of the Republic of Moldova, "The consumer has the right to compensation for damage caused as a result of unfair competition in cases provided by law on competition." Thus, civil law establishes tortious civil liability for unfair competition actions when harmed by such actions consumers address for repairing the damages in the cases provided for by Law on competition. However, the Law on competition does not contain provisions relevant to the reparation of the damage caused by unfair competition actions by the undertakings concerned. In this sense, it would be welcome to include a normative provision in the Law no. 183 of 11.07.2012 on competition which would indicate on the situations and conditions in which consumers can claim compensation for the damage caused by unfair competition actions. At the current stage, in accordance with the provisions of art. 14 para. (2)

of the Law on competition, “Unfair competition actions prohibited by the provisions of art. 15–19 is examined by the Competition Council, at the complaint regarding the alleged unfair competition actions filed by the undertaking whose legitimate interests have been harmed”. At the same time, according to the provisions of art. 80 para. (5) of the same normative act, “The right to action in unfair competition belongs to natural and legal persons who practice entrepreneurial activity, provided that there is a competitive relationship between them and the author of unfair competition actions, by exercising an identical type of activity or similar one”. Therefore, the Law on competition establishes administrative and civil liability only as a result of affecting the rights and interests of competing undertakings, not those of consumers.

5. WAYS TO AFFECT RIGHTS/INTERESTS OF CONSUMERS

In the spirit of unfair competition law at national level, the ways in which consumers' interests may be affected differ according to the degree of consumer involvement in unfair competition relations. Thus, corresponding to the normative provisions from art. 15-19 of the Law no. 183 of 11.07.2012 on competition, the interests/rights of consumers may be directly or subsequently affected.

5.1. Direct harm to consumers' rights/interests

The respective way of affecting the consumer rights / interests is specific first of all to the unfair competition action of misappropriation of the competitor's clientele, provided in the text of art. 18 of the Law no. 183 of 11.07.2012 on competition. Thus, according to the provisions in question, 'It is prohibited to divert the competitors’ customers by misleading the consumer as to the nature, manner and place of manufacture, the main characteristics, including use, quantity of products, price or price calculation of the product”.

The way in which that rule is worded clearly shows that the interests of consumers are directly affected in the context of the named act of unfair competition, or that its primary purpose is to protect the competitor's customers and, consequently, the competitor. A relevant contextual case in which the misappropriation of the competitor's clientele was found, including the one concluded through the Decision no. CN-40/19-65 of 03.12.2020 of the Competition Council Plenum ("Vinăria Purcari" S.R.L. against "Timbrus Purcari Estate" S.R.L.). Thus, the Competition Council noted the following:

„There is therefore a clear difference in approach between the respondent undertaking and other undertakings on the same market as regards the manner in which the information relating to the identification of the wine producer and trader is disclosed, or the claimed undertaking fails to indicate the place of production of the wines bottled, indicating only the legal address of the producer, bottler and packer of wines marked with the sign "Timbrus Purcari Estate", which indicates a certain degree of bad faith on the part of the respondent and generates the risk of misleading consumers…The information presented shows that as the costs of promoting the products in question decreased, the applicant's sales were constantly positive, which would indicate the effect of the defendant's actions of misleading consumers as to the place of manufacture of its products, in the consumer's perception being generated an erroneous association of the respective bottled wines with the products of the undertaking “Vinăria Purcari” SRL, the clientele considering the identical commercial origin of the given products… So, the qualifying elements of art. 18 of the Law on competition at all levels of the probation standard for such an infringement: the initial existence of the risk of misleading consumers; the actual diversion of the competitor's client by associating by consumers the products of the complained company with the products of the plaintiff company, in the context in which the latter produces, manufactures and bottles wines in the same place (Purcari village, Ștefan-Vodă district), and the former has a different industrial location (Sălcuța village, Căușeni district) from the place of cultivation and growth of vine plantations; the obvious effect of the bad faith actions of the company “Timbrus Purcari Estate” S.R.L. lies in the gradual positive evolution of the sales of bottled wines of the respondent ”.

Another act of unfair competition in which the primary affected party is the consumer is the confusion. Thus, according to the provisions of art. 19 para. (1) of the Law no. 183 of 11.07.2012 on competition, “Any actions or facts that are likely to create, by any means, a confusion with the undertaking, products or economic activity of a competitor, manifested by:

a) illegal, full or partial use of a trademark, service emblems, company names, an industrial design or other objects of industrial property likely to create confusion with those legally used by another undertaking;

b) illegal copying of the shape, packaging and / or external appearance of an undertaking's product and placing the product on the market, illegal copying of an undertaking's advertising, if it has harmed or may harm the legitimate interests of the competitor.

Specific to this rule is the fact that the effect of confusion is generally specific to consumer perception. In this respect, it is the consumer who is primarily affected and, consequently, the undertaking which is the victim of the unfair competition is also affected. In the given circumstances, the findings of the Competition Council made by the same Decision no. CN-40/19-65 of 03.12.2020 of the Competition Council Plenum, which also established the unfair competition action of confusion creation. Thus, the national competition authority noted the following:

„Regarding the existence of signs of violation of the provisions of art. 19 para. (1) lit. a) of the Law on competition, we mention the following: (i) the use of the individual verbal element “Purcari”, which coincides with the toponym that constitutes the name of the respective locality on the product label of the company

"Timbrus Purcari Estate" S.R.L. constitutes in itself a risk of creating confusion among consumers in the conditions in which the undertaking "Vinăria Purcari" S.R.L. is the first producer of bottled wines in the respective wine region with related marketing activity dating from 2007, and the company "Timbrus Purcari Estate" S.R.L. is a vine grower in the same wine region, with related marketing activity dating back to 2016…the general results of the opinion polls carried out at the request of both the applicant and the applicant show that there is a certain degree of association by the consumers concerned of the applicant's economic activity with the applicant undertaking and, accordingly, the latter's economic activity. , about 58% of respondents consider that the name "Purcari Estate" is associated with the wine producer "Purcari Winery" SRL, and about 55% - believe that "Purcari Estate" translates / means "Purcari Winery" - according to the first survey and 27.7% of those surveyed in the second survey claimed that the wines were produced by a single producer and 8.4% could not answer, which indicates a degree of confusion among consumers regarding the commercial affiliation of the wine. those productsâ…Thus, the considerable financial effort regarding the promotion of its products by the applicant in relation to the sales made may constitute an effect of the actions of the company "Timbrus Purcari Estate" S.R.L. Therefore, the use of the name 'Purcari' on the label of the products marketed by the defendant is a sufficient precondition for creating a likelihood of confusion among consumers as to the origin of the products in question. A market launch difference of 9 years is a sufficient period of time for the average consumer to adapt to the commercial activity of the applicant company, and following the launch of the respondent with the respective products, rooting the concept of considering the company "Vinăria Purcari" S.R.L., as the only large producer of bottled wines in the given area, does not allow the average consumer to react promptly and make an appropriate distinction between the products marketed by the two undertakings…At the same time, the results of the opinion poll suggest a certain degree of actual confusion among consumers".

In the same context, the findings of the Plenum of the Competition Council made through Decision no. CN-20/20-69 of 17.12.2020 of the Competition Council Plenum (case of "Orhei-Vit" S.R.L. against "Natur Bravo" S.A.). Thus, the following were retained:

„…Based on the materials of the case, the fact of production and placing on the market of juices in similar packaging by Î.C.S. "Natur-Bravo" SA, constitutes a risk of creating confusion among consumers, due to the similarity of the concept of the respective packaging, or the use of the same distinctive elements, regardless of the approach, may create a false impression in the consumer's perception of the commercial origin of the products. data".

5.2. Subsequent damage of consumers' rights/interests

The respective way of affecting the rights interests of consumers is specific to the other 3 actions of unfair competition.

In this sense, according to the provisions of art. 15 of the Law no. 183 of 11.07.2012 on competition, “It is forbidden to discredit competitors, ie to defame or endanger their reputation or credibility by:

a) the dissemination by an undertaking of false information about its activity, about its products, meant to create a favorable situation in relation to some competitors;

b) the dissemination by an enterprise of false statements about the activity of a competitor or about its products, statements that harm the activity of the competitor.”

In the spirit of the cited norm, competing undertakings are affected primarily and consumers secondarily. A hypothetical example in this regard would be the following:

Undertaking X disseminates false information about the competing product of undertaking Y, thus causing the latter's customers to migrate to undertaking X. Thus, consumers are subsequently affected by undertaking Y in the context in which they are misled as to the product of the undertaking whose customers they are (undertaking Y).

According to the provisions of art. 16 of the Law no. 183 of 11.07.2012 on competition, “It is forbidden to instigate, in interest or in the interest of third parties, the unfounded termination of the contract with the competitor of another undertaking, the non-fulfillment or improper fulfillment of the contractual obligations towards the respective competitor by granting or offering, mediated or directly, material rewards, compensations or other benefits to the undertaking party to the contract”.

Therefore, the purpose of the instigating subject lies in causing the loss of the clientele of the victim company of the action of unfair competition of instigation to termination of the contract with the competitor. A hypothetical example in this sense could be the following:

Undertaking X encourages consumers (customers) of undertaking Y to terminate the contract with the latter by offering certain additional benefits to them in relation to the services provided by the latter. Thus, the consumers (customers) of undertaking Y are likely to be affected by the fact that undertaking X, for example, subsequently waives the benefits offered at the stage of instigating to the termination of the contract with undertaking Y or provides services of a lower quality than those provided by the undertaking Y.

According to the provisions of art. 17 of the Law no. 183 of 11.07.2012 on competition, "It is prohibited to obtain and/or use by an enterprise the information that constitutes a trade secret of the competitor, without his consent, if they have brought or may harm the legitimate interests of the competitor."

Therefore, the competitor of the undertaking which has obtained and/or used the trade secret of the latter is primarily affected by the fact that another undertaking secures certain advantages over consumers which it could have obtained only by obtaining that trade secret, and the consumer is subsequently affected by the fact that it may be misled as to the lawfulness of obtaining and/or using the trade secret by the unfair competitor. A hypothetical example in this regard could be the following:

Undertaking X obtains and uses the trade secret of undertaking Y, at the same time diverting the latter's customers and causing it to migrate and subsequently providing certain inappropriate services by using the obtained trade secret. Thus, subsequently, the consumer is affected.

In practical terms, there may exist different situations in which consumers are affected either primarily or subsequently. However, by relating these situations to the unfair competition actions regulated in the Law no. 183 of 11.07.2012 on competition, the consequence should always remain the same.

6. CONCLUSIONS

In conclusion, it is worth mentioning the following ideas: (i) the European Union concept on unfair competition is different from the one in Republic of Moldova; (ii) the consumers' interests in the context of unfair competition may be affected primarily or subsequently; (iii) the way in which the consumers' interests are affected depends on the type of unfair competition actions realized by the competitors.

References

1) Civil Code no. 1107 of 06.06.2002 of Republic of Moldova.
2) CJEU, C-304/08 of 14.01.2010, Plus Warenhandelsgesellschaft.
3) Decision no. CN-40/19-65 of 03.12.2020 of the Competition Council Plenum.
4) Decision no. CN-20/20-69 of 17.12.2020 of the Competition Council Plenum.
5) Directive 2005/29/EC of the European Parliament and of the Council on unfair commercial practices.
6) Gorincioi, C. (2019). *Cercetarea instrumentelor juridice de contracarare a actelor de concurență neloială [Research of legal instruments to counteract acts of unfair competition]. Doctoral Thesis*. Chișinău: State University of Moldova.
7) Guidance on the implementation/application of Directive 2005/29/EC on unfair commercial practices.
8) Law no. 183 of 11.07.2012 on competition.
9) Law no. 105 of 12.03.2003 on consumer protection.

EUROPEAN POLICY
ON ENERGY DEVELOPMENT ASSISTANCE PROJECTS

MIHAELA IARMENCO
University of European Political and Economic Studies "Constantin Stere"
Chisinau, Republic of Moldova
cheptenimihaela@yahoo.com

OLESEA PLOTNIC
Academy of Economic Studies of Moldova
Chisinau, Republic of Moldova
plotnicolesea.aum@gmail.com

EVLAMPIE DONOS
Academy of Economic Studies of Moldova
Chisinau, Republic of Moldova
edonos@mail.ru

Abstract
In the context of the development of the energy sector, the prioritization of energy efficiency has become a basic principle in the context of the future evolution of the Energy Union. This principle aims to bring Europe to the forefront of climate policy and to meeting the goals of the transition to clean energy, set out in the Paris Agreement. In this context, the European Union supports energy development assistance projects in all its Member States, including projects implemented in the Eastern Partnership countries. The overall objective is to support sectorial policies to reform energy sector by ensuring the supply of electricity, streamlining the energy sector, and reducing the effects of carbon dioxide by harnessing renewable energy sources. To achieve these goals, the European Commission supports local, European, and global initiatives that provide viable solutions to protect the environment. Offering new opportunities to finance energy projects and responding to the needs of private investors to unlock their investments in support of green energy, the success of European energy efficiency policy remains to be guaranteed.
Keywords: *energy; capitalization; promotion; project; assistance.*
JEL Classification: P 37, P 48, L 84

1. INTRODUCTION

Energy has always been a component of the European development process. For this reason, the development of the energy sector has been one of the priority directions in the process of reconstruction and revaluation of the European space.

The importance of energy has been recognized since the beginning of the creation of the European Community by the Treaty on the European Coal and

Steel Community (1951) and the Euratom Treaty on the Establishment of a European Atomic Energy Community (1957). These two founding treaties laid the foundations for energy policies because they focused on two of the most important energy sources: coal and nuclear energy (Pop *et al.,* 2013).

To create a single energy market, the regulatory activity of the energy sector at European level has so far intensified. This has led the European Union to provide a legal basis for the development of the energy sector through the Lisbon Treaty (2007). The implementation of these actions was necessary in the context in which the topical environmental issues, globally, have become a priority and energy security affected.

In view of these issues, European leaders have decided that energy development policy should become binding on the states of the European Union with the entry into force of the Treaty of Lisbon (Volintiru, Stoian and Diaconu-Pințea, 2019).

The strategic nature of the energy sector at European level also required a delimitation of competences. Thus, the Treaty of Lisbon delimits the competences of the Union from those of the Member States relating to the functioning of the European energy market. Competences related to the energy supply of the Member States, the provision of energy resources and the development of renewable energy sources have been delimited. The attribution of new Community powers to the European Union does not indicate that the rights of states to take their own decisions on the management of the energy sector are being violated. In this regard, States have the right to continue to decide on the measures that will be taken to secure their country with electricity, including to take decisions that will guarantee the sustainability and sustainability of assistance projects.

It is important to note that the Treaty of Lisbon, in the context of the development of the energy sector, also establishes the solidarity clause between Member States and promotes the following objectives:

- Functioning of the energy market at European level;
- Ensuring energy security with energy within the European Union;
- Energy efficiency and reduction of energy consumption, including the development of new energy sources and renewable energy.

The Member States of the European Union and its partner countries are largely dependent on imported energy. These countries are closely monitoring the entire process of achieving energy targets because they are in a position where ensuring affordable, secure, sustainable and sustainable energy is currently difficult to achieve. The difficulty is also determined by the fact that safe and cheap energy resources are increasingly scarce in the context in which countries face multiple problems because of climate change. Consequently, the existence of energy policies at EU level is vital as it ensures completeness, sustainability, and energy security.

To ensure a fully functioning energy policy, the European Union has taken multiple actions and implemented various measures (Donos and Iarmenco, 2019). For example, in 2015, the European Commission launched an attempt to recover the European energy system. In the Communication on the Energy Union, this institution outlined the steps needed to create a resilient energy union based on an ambitious climate change policy (Piccolo and Zamburlini, 2020).

The Clean Energy for All Europeans package has also led to a review of energy policies. Launched in 2016, this package continues to promote measures aimed at reforming the energy market. The new initiative has put forward practical solutions to stimulate the release of private funding, promote investment in the field and actively capitalize on renewable energy sources. The importance of the measures put forward has taken on a special connotation as the emphasis has been on achieving affordable energy for all European consumers (Plotnic, Donos and Iarmenco, 2020).

The new measures proposed by the Clean Energy Package have contributed to the relaunch of the energy market and the reassessment of the necessary investment in the field.

The successful implementation of the measures put forward has led Member States to recognize the economic potential of energy at EU level. This has also prompted governments to review their internal energy efficiency policies and get more people to access European private investment funds to support and develop the energy sector. These funds are provided in the framework of assistance projects provided by the European institutions.

Increasing public / private funding for assistance in developing projects on the development of the energy sector is recognized by the European Union as necessary and indispensable. In this respect, the Union is the one that guarantees funds and allocates financial resources to support investment in this sector. Financial resources are allocated to those areas where local resources are limited, and local authorities do not have sufficient knowledge of the assistance they could receive to relaunch their investment projects (Boll *et al.,* 2020).

However, little is known and understood about the financial assistance that the European Union can provide to the authorities to rectify the local energy situation. On the one hand, there is a major gap between the European Commission's offer of "available" financial instruments, such as urban development funds, and the degree of knowledge of these instruments by local authorities. On the other hand, there are many interpretations at national level on the aims and accessibility of European funds, which prevent the maximum use of European Union resources at local level (Piccolo and Zamburlini, 2020).

To overcome these obstacles and to constantly support the projects initiated in this sector, the European Union and its Member States continue to allocate substantial funds. These funds can be a valuable support for local authorities that initiate projects to promote energy efficiency. Thus, the European Commission, through the Capacity Building Program, informed local authorities in key European Union countries, such as Hungary, Italy, France, and others, about the possibilities offered by European funds in the context of sustainable energy development. Respectively, by accessing European funds, these states have become leaders in promoting energy efficiency.

2. OPPORTUNITIES OF EUROPEAN COMMISSION

The European Commission offers various opportunities to access European funds in the context of energy efficiency. To this end, the "Smart Energy for Smart Buildings" initiative has been launched under the Clean Energy for All Europeans package. This initiative aims to apply innovative schemes for building renovation works to promote energy efficiency.

This initiative has a great impact because it comes to teach local authorities how to:

1. Use public funds more efficiently. The European Union encourages the efficient use of public funds by developing flexible platforms for financing energy efficiency and renewable energy projects. These actions aim to attract investment from the European Fund for Strategic Investments and other public funds, including the European Structural and Investment Funds;
2. Benefit from project development assistance as the European Commission provides assistance to project developers so that they can implement their interesting ideas through several aggregation mechanisms and project development assistance;
3. Reduce risks. The European Commission comes to inform through various information programs about the importance of investments in the energy sector, the need to reduce energy consumption and the promotion of alternative energy, minimizing the risks for project promoters, financiers, and investors.

The implementation of the energy efficiency initiative for buildings was an important step towards ensuring the transition to clean energy. This step led Member States to launch multiple projects in the field which were subsequently carried out with the support and financial support of the European Union and the European Investment Bank.

The European Commission comes to support such projects and continues to provide more funding flows and guarantees from the European Union budget. These flows are granted in order to support the objectives of the Energy Union and those of the Clean Energy Package and may come from:

1. EU Structural and Investment Funds (ESIF). Five European Structural and Investment Funds (ESIFs) that support European countries in financing sustainable development and the transition to a healthy, low-carbon economy.

2. The European Fund for Strategic Investments (EFSI) - the Juncker Plan - which is a joint initiative of the European Commission and the European Investment Bank (EIB) to mobilize private financing for strategic investments.
3. The European Energy Efficiency Fund (EAFRD) is another financing option in the form of a public-private partnership offered by the European Commission to ensure the implementation of the Energy Union.
4. The European Investment Bank, which provides framework loans to cities and municipalities to finance specific large-scale projects more than EUR 25 million.
5. European Bank for Reconstruction and Development (EBRD). The EBRD's sustainable energy financing facilities support local banks, leasing companies and microfinance institutions to increase their financing activities in the field of energy efficiency. SEFFs provide long-term funding and integrated assistance for the development of municipal projects, especially in Eastern Europe (European Investment Bank, 2018).

As we can see from the projects promoted, the European Union provides assistance not only to its member states, but also to the countries that are part of the Eastern Partnership, such as: Ukraine, the Republic of Moldova, Belarus, Georgia and others.

The Eastern Partnership countries, like the Member States, set ambitious targets for energy security, energy efficiency and the use of renewable energy. The European Commission supports these plans and contributes through various measures and actions to achieving them, actively involving partner states in various programs. The involvement of partner countries has become much more accessible in the process of developing the energy sector, as the European Commission has adopted special support initiatives, which are manifested by:

- Facilities to support municipal projects that provide technical assistance for sustainable projects aimed at energy efficiency, energy from renewable sources, urban transport, water and wastewater, central heating and solid waste;
- Strengthen the partnership for the promotion of energy efficiency and environmental protection in Eastern Europe which aims to support energy efficiency and environment projects in the Eastern Partnership countries;
- Facilitated access to the Eastern Partnership Technical Assistance Trust Fund, which provides funding for project preparation and evaluation;
- Access to the Neighbourhood Policy Investment Platform which supports infrastructure projects in the transport, energy, social and environmental sectors by combining resources from EU grants with loans from European financial institutions;
- Access to the new EU4Energy program. This is a new initiative for the Eastern Partnership countries, namely Armenia, Azerbaijan, Belarus,

Georgia, Moldova and Ukraine, as well as five Central Asian countries - Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan in order to reduce energy dependence, increase resilience and create opportunities for low carbon economies.

Through its projects, the European Union intends to help Member States, including partner ones, to develop their internal energy resources, while developing access to safer and more accessible energy. The projects already implemented help countries to reduce energy dependence and energy consumption at the national level, they contribute to a more transparent and efficient energy supply, thus reducing energy poverty and energy bills for the country's citizens.

3. CONCLUSIONS

Offering a wide range of options on access to energy and lower prices for European consumers and businesses, the European Union's energy market is fully operational as it contributes to the economic stimulus of Member States, including third countries. This indicates that the strategies initiated by the European Commission for the integration of energy systems, for hydrogen, for the reduction of methane emissions, for harnessing the potential of offshore renewable energy, as well as for the renovation of buildings in Europe in 2020, contributes significantly to achieving the objectives set out in the European Green Pact. The adoption of the five strategies conditioned the acceleration of the process towards a global energy transition.

To achieve the expected results, European Energy Ministers ordered the adoption of three sets of Conclusions in the areas of the European Hydrogen Market, European cooperation on offshore renewable energy and the impact of the COVID-19 pandemic on the energy sector in Europe.

In 2021, the European Council began a European effort to strengthen the European Union's energy security and resilience. This approach also targeted European partners as it emphasizes the importance of deepening cooperation in relevant international funds in the field of energy diplomacy and climate change.

ACKNOWLEDGEMENTS

This article was developed within the project Jean Monnet Chair in EU policies for protection of the consumer economic interests/EU4CONS ref. no. 599823-EPP-1-2018-1-MD-EPPJMO-CHAIR is part of the Erasmus + program funded by the European Union, implemented with the financial support of the Erasmus + program of the European Union. "The support provided by the European Commission for the development of this publication does not constitute an endorsement of the content, which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."

References

1) Boll, J., Steuwer, S., Rata, C. and Tzanev, D. (2020). *Financing for an efficient energy renovation - Availability and accessibility of financial schemes*. [online] Available at: file:///C:/Users/user/Desktop/Iasi%202021/Bun%20exemple.pdf [Accessed 15.05.2021].
2) Donos, E. and Iarmenco, M. (2019). European policies in the field of energy and renewable energy sources. In: *European Union Financial Regulation and Administrative Area. EUFIRE.* Iasi: Alexandru Ioan Cuza University Publishing House. [online] Available at: http://eufire.uaic.ro/wp-content/uploads/2019/08/EUFIRE_Conference_Proceeding2019.pdf [Accessed 28.04.2021].
3) European Investment Bank, (2018). *Improving energy efficiency in the Eastern Partnership countries.* [online] Available at: https://www.eib.org/attachments/country/energy_efficiency_eastern_partnership_countries_ro.pdf [Accessed 15.05.2021].
4) Piccolo, G. and Zamburlini, M. G. (2020). *5 essential recommendations for a financial framework in the field of energy efficiency oriented to the local level*. [online] Available at: http://citynvest.eu/sites/default/files/library-documents/CEM%20001-17_21x21-RO.pdf [Accessed 28.04.2021].
5) Plotnic, O., Donos, E. and Iarmenco M. (2020). Promotion of renewable energy in the European Union. In*: International Scientific Conference European Financial Regulation –EUFIRE 2020*, pp. 709-717. Iasi: Alexandru Ioan Cuza University Publishing House. [online] Available at: http://eufire.uaic.ro/wp-content/uploads/2020/10/EUFIRE_2020.pdf [Accessed 28.04.2021].
6) Pop, A-L., Jașcau, D-V., Pică, E. M. and Soporan, V. F. (2013). An energy policy for Europe in the context of sustainable development. In: *The X-III Multidisciplinary National Conference - with international participation "Professor Dorin Pavel - the founder of Romanian hydropower",* pp 231-240. [online] Available at: http://stiintasiinginerie.ro/wp-content/uploads/2013/12/23-35-O-POLITIC%C4%82-ENERGETIC%C4%82-PENTRU-EUROPA-%C3%8EN-CONTEXTUL-DEZVOLT%C4%82RII-DURABILE.pdf [Accessed 28.04.2021].
7) Volintiru, C., Stoian, M. and Diaconu-Pințea, L. (2019). *Energy. Operational concepts and tools. Second edition. Revised and added.* Bucharest: Club Romania.

THE ACCESS OF THIRD COUNTRY BIDDERS IN THE EUROPEAN UNION PROCUREMENT MARKET

ANDRA CĂTĂLINA IFTEMIE
University of Bucharest
Bucharest, Romania
andra-catalina.iftemie@drept.unibuc.ro

Abstract
The new Emergence ordinance no. 25/2021 amending and supplementing normative acts in the field of public procurement brings to our discussion the access of third country bidders in the European Union procurement market. Stating article 25 of Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement, the national legislator redefines the notion of „economic operator" in a manner that shall ensure equal treatment between third country bidders and European Union bidders.
The national legislator approach is not new in the European Union. The European Commission previously offered guidance on the matter, presenting the instruments a contracting authority can use to avoid distortion created by third country bidders on the EU procurement market. Further, the European Commission emphasises a regulatory gap on the foreign subsidies granted to participants in a procurement procedure, by White Paper COM(2020) 253 - final on levelling the playing field as regards foreign subsidies. Although the vision of the European Commission appears to be a case by case analysis, the national legislation provides the solution of excluding de plano certain categories of economic operators.
The scope of this article is to present the European regulation on the access of the third country bidders in the EU public procurement market and to analyse the new national legal provision with respect to this matter.
Keywords: *Third country bidders; EU procurement market.*
JEL Classification: K39, K33, H57

1. GENERAL CONSIDERATIONS

The Emergency ordinance no. 25/2021 (Romanian Govern, 2021) amending and supplementing normative acts in the field of public procurement is being seen as a bold initiative of the Romanian legislator to exclude third country bidders from the Romanian public procurement procedures.

The access of third country bidders to the European Union market was recurrently brought to discussion by the European Commission, generally in the context of lack of reciprocal treatment for the European companies to the third countries market.

By the Proposal for a Regulation of the European Parliament and of the Council on the access of third-country goods and services to the Union's internal market in public procurement and procedures supporting negotiations on access of Union goods and services to the public procurement markets of third countries (EU Commission, 2012) issued in the context of the negotiation on the revised Government Procurement Agreement, the European Commission emphasized that EU should regulate the access of foreign goods, services and companies to the EU's public procurement market and not to keep it largely open. While consulting with the interested parties there were underline a few relevant aspects to be considered both positive and negative: the best value for money perspective, keeping the competitiveness and productivity, a potential retaliation for the third countries partners and the "*administrative burden that could be attached to such an initiative*".

Being in a period in which the effects of the financial crisis were present, and the administrative costs were kept as low as possible, it is understandable why the proposal was received with animosity by the contracting authorities, while the European economic operators were open to it.

The European Commission's proposal was focused on the the goods and services country of origin, and not on the economic operator's origin. This proposal was amended (EU Commission, 2016), to avoid potentially negative effects of an automatic exclusion and a market closure.

Further, by the Guidance on the participation of third country bidders and goods in the EU procurement market (EU Commission, 2019), the European Commission emphasises the unfair practices of third countries. In this context, it is underlined the need to verify abnormally low tenders and the compliance with the European standards in respect to security, labour and environment.

Continuing to impose its vision about the access to third country bidders on the European market, by the White Paper on levelling the playing field as regards foreign subsidies (EU Commission, 2020) the European Commission highlights that the European market can be distorted by third country economic operators which usually operate in a non-competitive market. The advantages obtained in such market might impact its position in the European market.

Also, while in the European Union the state aids are temporary, limited to a scope and transparent, foreign state aids are not bound of such obligations.

Therefore, it cannot be verified any unfair advantage arising from a state aid received in the origin state.

Consequently, the access of third country bidders in the European Union procurement market is a problem amply analysed by the European Commission. While proposing *de lege ferenda* solutions, the European Commission offered guidance to the contracting authorities on how to verify a third country bidder when participating in a public procurement procedure.

2. THE EXISTING EU LEGAL FRAMEWORK

According to article 18 of the Directive 2014/24/EU on public procurement, the economic operators shall be treated by the contracting authorities respecting the principle of equal treatment, proportionality and transparency.

The principle of equal treatment or non-discrimination is defined by the Court of Justice of the European Union - CJEU in Case C-304/01, par. 34 of the judgment, as that compatible situation must not be treated differently and different situation must not be treated in the same way unless such treatment is objectively justified (CJEU, 2004). When mentioning the CJEU case law, it shall be cleared that the Court of Justice amply analysed the principle of equal treatment in cases where the discriminatory measures were applied between national economic operators and other economic operator from the Member States, i.e. Case C-412/04, paragraph 106 (CJEU, 2008), Case C-95/10, paragraphs 40-44 (CJEU, 2011). In this context, the European Court of Justice case law has not stated that there is a requirement for principle of equal treatment in all situations, as opposed to in situations covered by specific EU provisions on the grounds referred to in those specific provisions (Arrowsmith, 2014, p. 263). Therefore, while it cannot always be discussed the applicability of principle of equal treatment between Member stated economic operators, all the more the principle of equal treatment should not pe generally applied to third countries bidders.

The principle of proportionality requires that the measures adopted by a contracting authority be appropriate to the objectives pursued (Rațiu, 2018, p. 285). The limits of principle of proportionality are regularly caused by a clash with the other principles, generally by a clash with the principle of equal treatment (Steinicke and Vesterdorf, 2018, p. 327).

The principle of transparency was stated in case Unitron Scandinavia by the European Court of Justice as follows: the principle of non-discrimination implies an obligation of transparency to enable the contracting authority to satisfy itself that it has been complied with the principle of non-discrimination, such as in Case C- 275/98, paragraph 31 (CJEU, 1999).

Relevant to our analysis are the principles of transparency, equal treatment, and non-discrimination. On a case by case analysis it can be brought to discussion also the principle of proportionality, mentioning that it is applicable while the principle of equal treatment is not violated.

Based on these principals as explain in the revenant ECJ caselaw, the European Commission stated that in all public procurements where third country tenders participate the contracting authorities are required to take a number of measures to verify the compliance with those principles, but also the competition rules in public procurement. In essence, the Commission Guidance (EU Commission, 2019), emphasized the following issues that need to be pursued in every public procurement procedure involving EU third-country operators.

Firstly, it shall be verified abnormally low tenders requiring the third country economic operator to demonstrate the soundness of the technical, economic or legal practices or assumptions underlying the offer.

Secondly, it shall be verified potentially unfair trade practices, such as the existence of foreign subsidies or dumping that distort the internal market.

Least, but not less important, it shall be investigated the compliance with the security, labour and environmental standards provided by the European Union law. Third country economic operators are not generally bound by equivalent standards as those applicable to EU economic operators. Moreover, those standards are usually reflected in the financial offer of those economic operators. The access to state aids is another component that shall be verified in the financial offer. Similarly, the European Union provisions impose limiting rules on the hypotheses in which a state-aid can be granted and also, a clear obligation of transparency. Similar provisions are not generally found in third countries legislations.

In these circumstances, the contracting authorities, while applying article 69 of Directive 24/2014/UE should request extended clarification with regard to the financial offer of a third country bidder.

As previously mentioned, all costs related to the compliance with similar labour, social and environmental standards shall be reflected in the financial offer.

In this extend, it shall be clarified that even a component of the price that is abnormally low shall have the effect of excluding the operator from the procedure.

The European Commission insists on the fact that each contracting authority should consider verifying the third country bidders offers carefully taking into consideration all these aspects.

The European Commission underlines that with regard to third country economic bidders it shall be asked clarification to potential unfair trade practice, including the dumping distorting the internal market.

Also, it emphasizes the fact that it remains at the discretion of the contracting authority to exclude a third country bidder from the procedure when the price it is not well justified, after requesting clarification.

In other words, the European Commission underlines that the contracting authority has the opportunity to decide when an economic operator does not prove that he has the capacity to perform the contract.

This idea is also emphasised in the White paper issued by the European Commission (EU Commission, 2020) where it is mentioned that the current public procurement legislative framework does not specifically address a sanction for distortions in EU public procurement markets caused by foreign subsidies. Nevertheless, the contracting authority has a wide margin of appreciation in the analysis of tenders submitted in the award procedures. Thus, contracting authorities can and shall analyze the existence of forms of state-backed financing or dumping distorting the internal market.

Therefore, although the public procurement legal provisions do not expressly provide a sanction, the European Commission highlights that the contracting authorities shall be diligent when analysing third country tenders.

In this context, a contracting authority conduct which allows third-country economic operators to access the EU procurement market without caring the minimum steps above mentioned, may circumvent the provisions of the previously defined principles.

Before the Emergency ordinance no. 25/2021, the Romanian contracting authorities did not extensive verify the third country bidders. Their conduct was validated by the National Council of Solving Complaints - NCSC in Decision no. 175/c5/2284/2289/2295, from 2020 (NCSC, 2021). NCSC appreciated that the principle of equal treatment requires the same verification of third country bidders and European bidders. This interpretation is against the sole definition of the principle of equal treatment. Based on this principle the contracting authority should verify the offers of third countries economic operators so as to ensure that it does not affect its own economic operators who have to comply with high social and environmental standards, as required by European Union law. By a Decision of the Bucharest Court of Appeal it was validated this interpretation, imposing to the contracting authority to make additional verifications, i.e. Decision no. 2146 of 18 November 2020.

While the juridical organisms validated their conduct, the contracting authorities were reluctant into further verifying third countries economic operators and requesting more clarifications than to a European economic operator. In this context, the Emergence Ordinance no. 25/2021 might solve the problem of the contracting authority's reluctance (Romanian Govern, 2021).

3. THE NATIONAL LEGAL FRAMEWORK

The Emergence ordinance no. 25/2021 redefines the notion of economic operator. If previously this notion was identically defined as in the Directive 24/2014/EU on public procurement, now the definition adds a condition regarding the origin of the economic operator. Therefore, an economic operator should be established in a member state of the European Union, a member state of the European Economic Area, third countries that ratified the Government Procurement Agreement of the World Trade Organization, or any other treaties offering full access to the European public procurement market, and third countries that are in the process of joining the European Union.

As defined by this Emergency ordinance, there are the bidders which have their origin in countries already emphasised by the European Commission to be verified in detail.

Further analysing the modifications imposed by the Emergence ordinance no. 25/2021 it is decided that the contracting authorities will automatically exclude from the public procurement procedures all economic operators that are not included in this legal definition.

As explained in the preamble of the Emergence ordinance no. 25/2021, this legal solution was validated taking into consideration the factual situation in which there has been an increase of the number of bidders from outside the Community. Their offers provide reduced guarantees regarding the compliance with certain requirements, such as: certified quality standards, environmental and sustainable development standards, requirements related to the labour and social protection and also concurrently policies. The participation of third country bides to the public procurement procedures was considered to endanger the public investments in Romanian.

Even if it cannot be found an European provision prohibiting such conduct, it can be deduced from the amendments made to the first proposal for a regulation on the access of third-country goods and services on the Unions internal public procurement market (EU Commission, 2016) that this solution has the risk to close the market completely to a trading partner.

Further, this solution might affect procedures in which best value for money can be obtained with third country goods.

Although the solution of the Romanian legislator is debatable, it can be understood considering the reluctance of the contracting authorities to properly check the third country bidders.

4. CONCLUSIONS

The access of third country economic operators to the European procurement market is a problem amply analysed by the European Commission. In this context, the European Commission emphasized with regard to the obligation of the contracting authorities to verify in detail the third country bidders. The scope of this verification is to ensure that the European economic operators obliged to comply with labour and social standards are not discriminated in comparison with third country bidders not obliged to respect them. The need to a clear European regulation in this matter is discussed since 2012 and continues to be brought to our attention in the context of Covid pandemic, by the White paper of the European Commission.

The solution proposed by the Emergence ordinance no. 25/2021 to automatically exclude third country bidders from the Romanian public procurement market although it does not seem to follow the European vision on the issues complies with the principle of equal treatment.

References

1) Arrowsmith, S. (2014). *The law of public and utilities procurement. Regulation in the EU and UK, Vol.1, 3rd ed*. London: Sweet&Maxwell.
2) CJEU, (1999). *Judgment of the Court (First Chamber) of 18 November 1999, Unitron Scandinavia A/S and 3-S A/S, Danske Svineproducenters Serviceselskab v Ministeriet for Fødevarer, Landbrug og Fiskeri, Reference for a preliminary ruling: Klagenævnet for Udbud – Denmark, Case C-275/98.* [online] Available at: https://curia.europa.eu/juris/liste.jsf?language=en&jur=C%2CT%2CF&num=C-%20275/98&parties=&dates=error&docnodecision=docnodecision&allcommjo=allcommjo&affint=affint&affclose=affclose&alldocrec=alldocrec&docdecision=docdecision&docor=docor&docav=docav&docsom=docsom&docinf=docinf&alldocnorec=alldocnorec&docnoor=docnoor&docppoag=docppoag&radtypeord=on&newform=newform&docj=docj&docop=docop&docnoj=docnoj&typeord=ALL&domaine=&mots=&resmax=100&Submit=Rechercher [Accessed 20.04.2021].
3) CJEU, (2004). *Judgment of the Court (Second Chamber) of 9 September 2004, Kingdom of Spain v Commission of the European Communities*. [online] Available at: https://curia.europa.eu/juris/liste.jsf?language=en&jur=C%2CT%2CF&num=C-%20304/01&parties=&dates=error&docnodecision=docnodecision&allcommjo=allcommjo&affint=affint&affclose=affclose&alldocrec=alldocrec&docdecision=docdecision&docor=docor&docav=docav&docsom=docsom&docinf=docinf&alldocnorec=alldocnorec&docnoor=docnoor&docppoag=docppoag&radtypeord=on&newform=newform&docj=docj&docop=docop&docnoj=docnoj&typeord=ALL&domaine=&mots=&resmax=100&Submit=Rechercher [Accessed 20.04.2021]
4) CJEU, (2008). *Judgment of the Court (Second Chamber) of 21 February 2008, Commission of the European Communities v Italian Republic, Case C-412/04*. [online] Available at: https://curia.europa.eu/juris/liste.jsf?language=en&jur=C%2CT%2CF&num=C-412/04&parties=&dates=error&docnodecision=docnodecision&allcommjo=allcommjo&affint=affint&affclose=affclose&alldocrec=alldocrec&docdecision=docdecision&docor=docor&docav=docav&docsom=docsom&docinf=docinf&alldocnorec=alldocnorec&docnoor=docnoor&docppoag=docppoag&radtypeord=on&newform=newform&docj=docj&docop=docop&docnoj=docnoj&typeord=ALL&domaine=&mots=&resmax=100&Submit=Rechercher [Accessed 20.04.2021].
5) CJEU, (2011). *Judgment of the Court (Third Chamber) of 17 March 2011, Strong Segurança SA v Município de Sintra and Securitas-Serviços e Tecnologia de Segurança, Reference for a preliminary ruling: Supremo Tribunal Administrativo – Portugal, Case C-95/10.* [online] Available at: https://curia.europa.eu/juris/liste.jsf?language=en&jur=C%2CT%2CF&num=%20C-95/10&parties=&dates=error&docnodecision=docnodecision&allcommjo=allcommjo&affint=affint&affclose=affclose&alldocrec=alldocrec&docdecision=docdecision&docor=docor&docav=docav&docsom=docsom&docinf=docinf&alldocnorec=alldocnorec&docnoor=docnoor&docppoag=docppoag&radtypeord=on&newform=newform&docj=docj&docop=docop&docnoj=docnoj&typeord=ALL&domaine=&mots=&resmax=100&Submit=Rechercher [Accessed 20.04.2021].

6) Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC Text with EEA relevance [online] Available at: http://data.europa.eu/eli/dir/2014/24/oj [Accessed 13.03.2021].
7) EU Commission, (2012). *Proposal for a Regulation of the European Parliament and of the Council on the access of third-country goods and services to the Union's internal market in public procurement and procedures supporting negotiations on access of Union goods and services to the public procurement markets of third countries*. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52016PC0034 [Accessed 13.03.2021].
8) EU Commission, (2016). *Amended proposal for a Regulation of the European Parliament and of the Council on the access of third-country goods and services to the Union's internal market in public procurement and procedures supporting negotiations on access of Union goods and services to the public procurement markets of third countries*. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2016%3A34%3AFIN [Accessed on 11.03.2021].
9) EU Commission, (2019). *Guidance on the participation of third country bidders and goods in the EU procurement market*. Retrieved from https://ec.europa.eu/docsroom/documents/36601 [Accessed 24.04.2021].
10) EU Commission, (2020). *White paper on levelling the playing field as regards foreign subsidies.* [online] Available at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2020:253:FIN [Accessed 24.04.2021].
11) NCSC, (2021). *Decision no. 175/c5/2284/2289/2295 of the The National Council of Solving Complaints/NCSC*. [online] Available at: http://portal.cnsc.ro/sivadoc/download.aspx?docUID=NDNmZTY3Y2UtM2IyNy00NmZjLTljZmMtZGY1ZjRjN2NiNGMw&pdfa1=ZmFsc2U=&filename=Qk8yMDIxXzE3NS5wZGY=&action=aW5saW5l [Accessed 07.04.2021].
12) Rațiu, M. (2018). *Dreptul achizițiilor publice. Contractul de achiziție publică, 2nd ed*. Bucharest: Universul Juridic.
13) Romanian Govern, (2021). *Emergency ordinance no. 25, of March 31, 2021 regarding the amendment and completion of some normative acts in the field of public procurement.* [online] Available at: http://legislatie.just.ro/Public/DetaliiDocument/240453 [Accessed 30.04.2021].
14) Steinicke, M. and Vesterdorf P. (2018). *EU Public Procurement Law. Brussels Commentary.* London: Bloomsbury Publishing.

PUBLIC CORPORATIONS IN EASTERN EUROPE

DAN LUPU
Alexandru Ioan Cuza University of Iași
Iași, Romania
dan.lupu@uaic.ro

Abstract:
The role of the state in the economy, especially after the transition to a market economy, has been reconfigured in Eastern European countries. The mass privatization of state-owned enterprises has not always led to the expected results. Many sectors considered important by the rulers (energy, transport, water, electricity) remained the property of the state. These state-owned companies, true giants in terms of the market, often do not behave according to the rules of the economy. Under these conditions, it is normal to ask ourselves whether state-owned enterprises contribute to economic growth or are real black holes for state finances. This article aims to analyse the contribution of public enterprises to the economy, for three Eastern European countries (Bulgaria, Hungary and Romania) compared to France. The results of the analysis show that the profitability and efficiency of state-owned companies in Eastern countries is much lower than in Western ones. Sometimes these state-owned companies become real cornerstones for the economies of those states, endangering the public finances and financial stability of those states. As policies to be implemented for the efficiency of these public companies, the actions should be focused on the following directions: corporate governance, professionalization of the boards, financial strictness.
Keywords: *public corporation; Eastern European countries; financial stability.*
JEL Classification: H10, K22

1. INTRODUCTION

European Union legislation does not provide any definition for public enterprises, but still provides as a fundamental feature subordination to public authorities. These public authorities are in a position of power over public enterprises by holding all or most of the share capital (Onofrei, Cărăușu and Lupu, 2019). The European Commission considers public enterprise to be one where public authority can exercise, directly or indirectly, a dominant influence over ownership, rules and financial participation (European Commission, 2016). After the fall of communism in Eastern European countries, the private sector began to emerge in the economy and continue to grow, becoming predominant after the 2000. However, in some countries (Hungary and Poland) the public sector still has a strong position (Kowalski *et al.,* 2013).

Starting from centralized economies, the former communist states switched to mass privatizations, the percentage of the state in the economy currently decreasing to less than 10%. Public enterprises have an important role in the economy of Eastern European countries, and especially in several key sectors: transport, energy, and waste management (Szarzec, Dombi and Matuszak, 2021). While private companies aim to make as much profit as possible, this requirement does not apply to public companies. Being controlled by public authorities, they impose their own policies independent of the industrial and commercial strategies of companies. The state, through public authorities, grants state companies' exclusive monopoly rights in various fields (energy, water, post, radio, telecommunications, transport) for purposes considered of public interest (satisfying as many citizens at low prices as possible) (Dimitrov, Estrin and Richet, 1998). In the structure of Eastern European economies, the share of state-owned enterprises is important for the following reasons (Böwer, 2017): they can carry out activities that the free market cannot carry out efficiently; they can attract foreign investments and contract bank loans; they can accelerate or decrease the economic growth of a country in case of obtaining profit or loss, which is covered from the general state budget. For these reasons listed above, the state and implicitly the public authorities must impose clear criteria of performance and management, which is rarely the case in Eastern European countries (Wasowska and Postula, 2018). The traditional role of public companies, to energize and cover the basic needs of citizens, is not achieved through them, but they are used to preserve and reward a political clientele.

This article aims to highlight the role of state-owned enterprises in Eastern Europe, to compare their performance in contrast to private companies, and to highlight the differences between them and companies in Western Europe. After this introductory part, the rest of the article consists of the second part (literature review), the third part (results), and the last part (conclusions).

2. LITERATURE REVIEW

State-owned enterprises (SOEs) play an important role in the economies of Eastern European countries. Poor financial management of these companies can lead to macroeconomic risks spread to financial stability, fiscal policy and finally to economic growth. Eastern European countries are especially prone to these risks due to poor privatizations and poor institutional quality.

Bilsen and Konings analyses the structural changes that have taken place in three Eastern European countries (Bulgaria, Hungary and Romania) and shows that newly established companies are the ones that create the most jobs as opposed to former state-owned companies or companies privatized (Bilsen and Konings, 1998). Dimitrov, Estrin and Richet analyse the privatization procedure in three Eastern European countries: Albania, Bulgaria and Romania (Dimitrov, Estrin and Richet, 1998). The authors conclude that the restructuring process has been extremely difficult for these eastern countries (weak macroeconomic policies, lack of coherent programs), the political factor having a decisive role in this process. Ahrend and Martins researches for Romania, comparing state and newly created enterprises (Ahrend and Martins, 2003). The authors conclude that SOEs have survived based on state subsidies, but which have had a negative effect on macroeconomic efficiency. Instead, the new companies were the main promoters of exports and employment, other (Kowalski *et al.*, 2013) analyse the activity of Eastern European SOE on foreign markets considering the form of ownership, the subsidies received and the registered economic advantages. The author concludes that the state's contribution to the shareholding of these companies is significant; this leads to a distortion on the free markets, an action that requires action by political and economic decision makers.

Szarzec and Nowara analyse the main financial performances for 69 SOEs from 13 Eastern European countries in the period 2007-2013 (Szarzec and Nowara, 2017). The characteristics of these companies assume origin from the communist period, dominant position in key sectors of the economy (energy, fuels, and transport) and an economic performance far below that of private companies. Böwer (2017) analyses SOE in Eastern Europe and finds that the privatization activity has experienced a reverse process in this region, the role of the state in the economy increasing in several states. The author analyses the performance of SOE considering indicators of profitability, indebtedness and liquidity and shows that these companies still need time to reach the level of private companies. Wasowska and Postula (2018) analyses the management board for 180 SOEs in Poland and concludes that corporate governance is applied relatively little in the management process, the political factor having a predominant position. Matuszak and Szarzec (2019) build their own index, SOE index, for 11 countries in Central and Eastern Europe, considering the percentage of shares held by the state. The authors conclude that the dominant positions for SOE are in energy supply, transportation and storage and show that these companies do not use their capital very efficiently. At the same time, SOE has much higher wage costs, depreciation, and amortization, as well as unpaid taxes to the state. Richmond *et al.* (2019) analyses state-owned enterprises (SOE) and state-owned banks (SOBs) in the Central, Eastern, and Southeastern European (EESC) region and shows that most of the time the privatization process was not fully successful. SOE and SOB instead of being a source of financial stability and contributing to economic growth have rather a role as an economic brake for Eastern countries (Richmond *et al.*, 2019). The impact of state-owned enterprises in 30 European countries on economic growth is analysed for 2010-2016 (Szarzec, Dombi and Matuszak, 2021). The authors conclude that SOE activity has a neutral effect on economic growth; instead, the role of institutions is decisive for the impact of these companies (in countries with weak institutions the results are negative, and in those with strong institutions, positive results).

3. RESULTS

In Eastern Europe, state-owned firms still play an important role in the economies of those countries, especially in key areas where they have a monopoly. Our analysis is based on data from Orbis, IMF and World Bank Indicators. The analysis targets SOEs in three eastern countries (Bulgaria, Hungary and Romania) versus one in the west, France. Looking at data at the company level, we analyse the financial performance of SOE compared to the private sector and western countries. The analysis period is 2018-2019. The results obtained are provided in the following tables. In terms of the number of enterprises, France has the largest number of state-owned enterprises, 1699. Eastern countries have fewer such firms, Bulgaria and Romania around 800, and Hungary 100. The share of SOE in GDP is different: for France it reaches the value of 7.2; for Bulgaria of 5.9, Hungary 4.1, and the lowest value is registered by Romania, 2. The share of SOE in employment also differs significantly: for France it is 8%, and for Eastern countries lower values, Bulgaria 4%, and Hungary and Romania around 2%.

Table 1. Number of SOE and Share of SOEs in Eastern Europe

	Number of SOEs	Share of SOEs in	
		GDP	Employment
France	1699	7.2	8
Bulgaria	799	5.9	4
Hungary	98	4.1	2.2
Romania	790	2	1.8

Source: Orbis database and own calculations

SOEs are concentrated in key sectors of the economy, usually monopolies, such as energy, transportation, mining, water utilities. As a share in the output of the activity sector, for energy, Bulgaria has the highest value of 79%, followed by France and Bulgaria with over 60%, and Romania with 42%. For transport, the highest value is given by Hungary with 21%, followed by Bulgaria with 12%, France and Romania with 5%. For water utilities, the values are between 1% (Hungary) and 28% (France). In addition to the contribution to GDP, SOE also has an important social component, employing many citizens: for energy (between 20-42%), transport (6.5-28%), water utilities (1-38%).

Table 2. Share of SOEs in economic sectors

	Energy		Transport		Mining		Water utilities	
	Output	Employment	Output	Employment	Output	Employment	Output	Employment
France	60	42	7	6,5	61	50	28	38
Bulgaria	65	38	12	28	31	12	26	19
Hungary	79	20	21	24	0	0	1	1
Romania	42	22	5	11	24	44	12	32

Source: Orbis database and own calculations

In terms of financial performance, Eastern SOE is below private companies. The results in Table 3 show that the biggest differences are found in the energy sector: for Bulgaria and Romania, the results are negative, while private companies get positive results. For the transport sector, the profitability of SOE is in the range (-1 to 9), while private companies obtain profit rates between 18-28%. In addition, in the water utilities sector, the differences are big: SOEs get profit rates between 1-12%, and private companies between 12-28%.

Table 3. Profitability for SOE vs private firms in Eastern Europe

	Energy		Transport		Mining		Water utilities	
	SOE	Private firms	SOE	Private firms	SOE	Private firms	SOE	Private firms
France	11	5.5	3	18	43	17	11	18
Bulgaria	-7	22	-1	23	11	17	1	28
Hungary	10.5	8.9	9	23	0	2	2	12
Romania	-4	16	6	28	10	19	12	22

Source: Orbis database and own calculations

The efficient use of labour by SOE is another area as serious shortcomings for Eastern Europeans. Compared to private companies, Eastern SOEs pay more employees: for energy by 115-190%; for transport with 120-320%, for water utilities with 130-140%. These figures show that at least for the labour factor, in Eastern Europe it is used inefficiently, with Eastern firms using far too much labour for the results they obtain.

Table 4. Labour Efficiency (Average cost of employee (SOE vs private firms)

	Energy	Transport	Mining	Water utilities
France	100	120	140	110
Bulgaria	190	320	210	130
Hungary	115	210	0	45
Romania	96	370	200	140

Source: Orbis database and own calculations

The cause of these poor financial results of the Eastern SOE is poor governance (Asandului *et al.,* 2021). Although there are laws that make corporate governance mandatory for these companies, few of them even effectively implement these principles. The public shareholders and especially its defective involvement in the economic mechanisms make the management not an independent one. The worst thing, however, is that the losses caused by these SOEs are passed to the public budget, in the end having to suffer all citizens.

4. CONCLUSIONS

Even 3 decades after the fall of communism, the involvement of the SOE in the economy of the Eastern states is substantial. In some key sectors, SOEs have a dominant position that will not change significantly in the future. Unfortunately, the involvement of politics in the economy makes these companies not get the best financial results.

Through the analysis, we showed that there are substantial differences between the economic performances of SOE versus private firms. Improving financial management for Eastern European SOEs would at least lead to avoiding losses and making profits, which could ultimately positively influence the public finances of those states.

References

1) Ahrend, R. and Martins, J. O. (2003). Creative destruction or destructive perpetuation: The role of large state-owned enterprises and SMEs in Romania during transition. *Post-Communist Economies*, 15(3), pp. 331-356. https://doi.org/10.1080/1463137032000139043.
2) Asandului, M., Lupu, D., Maha, L. G. and Viorică, D. (2021). The asymmetric effects of fiscal policy on inflation and economic activity in post-communist European countries. *Post-Communist Economies*, 33(33), pp. 899-919. https://doi.org/10.1080/14631377.2020.1867430.
3) Bilsen, V. and Konings, J. (1998). Job creation, job destruction, and growth of newly established, privatized, and state-owned enterprises in transition economies: Survey evidence from Bulgaria, Hungary, and Romania. *Journal of Comparative Economics*, 26(3), pp. 429-445. https://doi.org/10.1006/jcec.1998.1542.
4) Böwer, U. (2017). State-owned enterprises in emerging Europe: the good, the bad, and the ugly. *International Monetary Fund Working Paper,* 17(221), pp. 1-27. https://doi.org/10.5089/9781484315163.001.
5) Dimitrov, M., Estrin, S. and Richet, X. (1998). State Enterprises Restructuring in Bulgaria, Albania and Romania. *Economic Analysis*, 1(3), pp. 239-255.
6) European Commission. Directorate-General for Economic and Financial Affairs, (2016). State-owned Enterprises in the EU: Lessons Learnt and Ways Forward in a Post-crisis Context. *European Economy. Institutional Paper,* 31(1), pp. 1-116.
7) Kowalski, P., Büge, M., Sztajerowska, M. and Egeland, M. (2013). State-Owned Enterprises: Trade Effects and Policy Implications, *OECD Trade Policy Papers*, 147(1), pp. 1-92. DOI: http://dx.doi.org/10.1787/5k4869ckqk7l-en.
8) Matuszak, P. and Szarzec, K. (2019). The scale and financial performance of state-owned enterprises in the CEE region. *Acta Oeconomica,* 69(4), pp. 549-570. https://doi.org/10.1556/032.2019.69.4.4.
9) Onofrei, M., Cărăușu, D. N. and Lupu, D. (2019). The role of the macroeconomic environment in shaping capital market co-movement in CEE countries. *Economic research - Ekonomska istraživanja,* 32(1), pp. 3813-3834. https://doi.org/10.1080/1331677X.2019.1675525.

10) Richmond, C. J., Benedek, M. D., Cabezon, E., Cegar, B., Dohlman, M. P., Hassine, M. and Weber, M. S. (2019). Reassessing the role of state-owned enterprises in Central, Eastern and Southeastern Europe. *International Monetary Fund Working Paper,* pp. 1-136.
11) Szarzec, K. and Nowara, W. (2017). The economic performance of state-owned enterprises in Central and Eastern Europe. *Post-Communist Economies,* 29(3), pp. 375-391. https://doi.org/10.1080/14631377.2017.1316546.
12) Szarzec, K., Dombi, Á. and Matuszak, P. (2021). State-owned enterprises and economic growth: Evidence from the post-Lehman period. *Economic Modelling,* 99(1), pp. 1-20. https://doi.org/10.1016/j.econmod.2021.03.009.
13) Wasowska, A. and Postula, I. (2018). Formal and informal governance mechanisms in state-owned enterprises: Evidence from post-transitional Poland. *Baltic Journal of Management,* 13(40), pp. 410-432. https://doi.org/10.1108/BJM-06-2017-0172.

CRITICAL CONSIDERATIONS REGARDING THE REGULATION OF ADMINISTRATIVE-PATRIMONIAL LIABILITY

DAN CONSTANTIN MÂȚĂ
Alexandru Ioan Cuza University of Iași
Iași, Romania
danmata@uaic.ro

Abstract
Administrative-patrimonial liability is one of the forms of administrative liability, along with administrative-disciplinary liability and administrative-contraventional liability. Under the conditions of administrative-patrimonial liability, the state and the administrative-territorial units undertake to repair the damage caused to an individual by a specific wrongdoing: a judicial error, the improper provision of a public service, the issue of an illegal administrative act. It can have both a subjective character, when the fault of the responsible public authority must be proved, as well as an objective character, when the liability is committed without the condition of proving the fault. The administrative-patrimonial responsibility is characterized by a remedial sanction. The Administrative Code is the first Romanian normative act that provides a general regulation of the administrative-patrimonial responsibility. The normative text defines this form of liability and establishes the main conditions for its existence. In addition to liability for judicial errors and illegal administrative acts, which previously benefited from regulation, the Administrative Code provides for the first time expressly the liability for deficiencies in the public service. Beyond these beneficial aspects, the current regulation is very brief and contains some contradictory elements.
The article analyses the general regulation of the administrative-patrimonial responsibility in the Romanian law with the highlighting of the specific elements and of the implications of theoretical and practical nature.
Keywords: *administrative liability; patrimonial liability; administrative act; public service; fault.*
JEL Classification: K4

1. INTRODUCTION

Administrative liability is a form of legal liability that arises as a result of an action or inaction in breach of administrative law. Although it is the most frequent category of legal liability, with several forms and categories of subjects, the administrative liability did not benefit from a general legal regulation until the drafting of the Administrative Code.

Government Emergency Ordinance no. 57/2019 on the Administrative Code, published in the "Official Gazette of Romania", Part I, no. 555 of July 5, 2019, as subsequently amended and supplemented, defines administrative liability as "that form of legal liability which consists of the set of rights and obligations of an administrative nature which, according to the law, arise as a result of the commission of an unlawful act which, as a rule, infringes the rules of administrative law" [S. 5(ii)]. The same definition is repeated in S. 565 (3) of the Administrative Code, with the addition of the mention that "administrative liability does not exclude and may be supplemented by other forms of legal liability, under the conditions of the law".

The general legal system of administrative liability is regulated by the Administrative Code in Part VII under the heading "Administrative liability". In this part, the three forms of administrative liability are presented, unequally and in a general manner: administrative-disciplinary liability, administrative-patrimonial liability and administrative-contraventional liability. These categories are established according to the type of administrative offence committed: a disciplinary offence in the case of administrative-disciplinary liability; a regulatory offence in case of administrative-contraventional liability; an act causing material or moral damage in the case of administrative-patrimonial liability (Iorgovan, 2005, p. 358).

Major differences between the three categories of administrative liability can be identified from the perspective of the subjective basis and the passive subject of liability. In the case of administrative-disciplinary liability, the subjective basis is the guilt of a public official, public dignitary or assimilated thereof, who commits a disciplinary offence. Guilt is one of the features of the offence, so that the offender must always be guilty of the offence with guilt in order for the administrative-contraventional liability to be applied. However, in the case of administrative-patrimonial liability, guilt is not a general prerequisite for establishing liability, and there are also objective forms of this category of liability.

Administrative liability can be established in accordance with the following general principles laid down in S. 567 of the Administrative Code: a) the principle of legality of liability (administrative liability is established under the conditions and in the cases provided by law, according to the procedure and within the limits provided by law); b) the principle of proportionality of liability (the sanction applied must be correlated with the degree of social danger of the unlawful act committed, the extent of the damage and the form of guilt found); c) the principle of celerity (the time of application of the sanction must be as close as possible to the time of the manifestation of the unlawful act, without unnecessary postponements or delays).

For each category of administrative liability, a number of specific principles also apply. For example, the application of a sanction specific to administrative-disciplinary liability must be subject to the principle of adversarial proceedings and the principle of respect of the right of defence. In the case of administrative-contraventional liability, the application of the sanction must also respect the *non bis in idem* principle (Mâță, 2021b, p. 287).

2. GENERAL LEGAL SYSTEM OF ADMINISTRATIVE-PATRIMONIAL LIABILITY

According to S.573 of the Administrative Code, administrative-patrimonial liability is "a form of administrative liability which consists in ordering the State or, as the case may be, the administrative-territorial units to pay compensation for damage caused to a natural or legal person by any judicial error, for the limits of public service, by means of an illegal administrative act or by the unjustified refusal of the public administration to settle a claim concerning a right acknowledged by law or a legitimate interest". This definition has been criticized from several perspectives: a) from the perspective of those obliged to repair the damage caused; b) from the perspective of the unlawful acts and facts that attract administrative-patrimonial liability; c) from the perspective of the conditions for incurring administrative-patrimonial liability (Ciobanu, 2019, pp. 85-95).

Essentially, through administrative-patrimonial liability public authorities undertake to repair the material and/or moral damage they cause to private individuals through their actions or inactions (Săraru, 2016, p. 210).

The regulation of administrative and patrimonial liability has a constitutional basis. According to S. 52 (1) of the Romanian Constitution of 1991, revised in 2003, the person injured in relation to a right or a legitimate interest by a public authority, through an administrative act or by the failure to resolve a request within the legal time limit, is entitled to recover the damage. In (3) of the same article, the Constitution provides that "the State shall be financially liable for damages caused by judicial errors. The liability of the State shall be established in accordance with the law and shall not remove the liability of magistrates who have enforced their office in bad faith or gross negligence".

At infra-constitutional level, the Administrative Code provides for the first time in Romanian law a general regulation of administrative-patrimonial liability. Prior to this regulation, the analysis of the patrimonial liability of public administration staff was made on the basis of special normative acts regulating the status of each category of staff in correlation with the provisions of the Civil Code on civil tort liability (Árpád, 2017, pp. 94-96).

Although it is brief and, in certain aspects, open to criticism, the regulation in the Administrative Code is beneficial from the perspective of defining and establishing the general conditions of this form of administrative liability (Mâță, 2021b p. 322). In addition to this general regulatory framework, the Administrative Litigation Law no. 554/2004, published in the "Official Gazette of Romania", Part I, no. 1154 of December 7, 2004, as subsequently amended and supplemented, lays down a number of specific conditions for one of the forms of administrative-patrimonial liability: the liability of public authorities and institutions for the damage caused by an unlawful administrative act, by an unjustified refusal to deal with a request or by failure to settle it in time.

From the analysis of this legal framework, several situations can be identified in which the administrative-patrimonial liability can be established: (a) the administrative-patrimonial liability of the State for the damage caused by judicial errors; (b) the administrative-patrimonial liability of public authorities for the damage caused by organisational or functional shortcomings of a public service; (c) the administrative-patrimonial liability of public authorities for the damage caused by unlawful administrative acts, by the unjustified refusal to settle a claim or by the failure to settle a claim within the legal time limit; d) the administrative-patrimonial liability of public officials, civil servants or contract staff who have failed to comply with their legal or contractual duties; e) the administrative-patrimonial liability of public authorities or institutions for the damage caused by the failure to enforce administrative decisions in time.

In case of all these types of liability, the damage may be both patrimonial and moral. Damage must always be proven, together with the causal link between the situation giving rise to the damage and the result. The distinguishing element is the existence of guilt, which is not a general feature of all types of administrative-patrimonial liability. From this point of view, a distinction is made between a subjective and an objective form of administrative-patrimonial liability.

In the first category, the existence of guilt on the part of the public authority or the staff in charge must always be proven, together with the other conditions of liability (harmful act or fact, damage and causal link). The administrative-patrimonial liability for the damage caused by unlawful administrative acts, by the unjustified refusal to deal with a request, by the failure to deal with a request within the legal time limit or by the failure to comply with an administrative decision is also subjective. The administrative-patrimonial liability of public administration staff is also of a subjective nature.

In case of the objective form of administrative-patrimonial liability, the existence of guilt is not excluded but it is not a mandatory condition for liability. From this perspective, this form of administrative liability has an exceptional character, based on the idea of fairness and the principle of equality of the beneficiaries of a public service (Trăilescu, 2013, pp. 148-153). This category includes the administrative-patrimonial liability of the State for the damage caused by judicial errors and the administrative-patrimonial liability of public authorities for organisational and functional shortcomings of the public service.

3. SPECIFIC ELEMENTS RELATING TO CERTAIN CATEGORIES OF ADMINISTRATIVE-PATRIMONIAL LIABILITY

Despite its complex nature, the legal regime of administrative-patrimonial liability is not uniformly regulated. Some categories of liability, such as liability for unlawful administrative acts and deeds or liability for failure to comply with administrative litigation decisions, are traditionally regulated by special legislation on administrative disputes. As a result, several theories and harmonized solutions have been developed in administrative litigation doctrine and case law regarding the specific features of these categories of administrative-patrimonial liability. On the other hand, liability for judicial errors and liability for public service failures have an inadequate normative framework, limited to a series of general statements, even if their approach in doctrine and, in part, in case law is quite elaborate.

The administrative-patrimonial liability of public authorities for damage caused by unlawful acts or deeds does not apply in case of the damage caused by revoked administrative acts, non-existent acts or administrative acts exempted from the control of legality by the administrative litigation court (Trăilescu, 2013, pp. 51-54). The damage can be both material and moral, and must be proven to be certain, direct and current (Mâță, 2021b, p. 325). The guilt of the public authority is an essential element of this form of administrative-patrimonial liability and must be proven. We consider that the existence of guilt is presumed when the administrative court has annulled the illegal administrative act, has found an unjustified refusal to resolve a request or has not settled the request within the legal deadline (Săraru, 2016, p. 235). This situation is possible because the claim for damages can also be brought before the court after the action for annulment of the act, within a maximum of one year from the date when the injured person knew or should have known the extent of the damage.

In case of administrative-patrimonial liability of the public authority for failure to enforce a final judgment, it must be assumed that, as a rule, judgments are enforced voluntarily. It is only if the public authority continues its abusive attitude during the enforcement phase that the legislator provides for a series of measures of constraint, including an order to pay damages. The final judgment must contain obligations to do which can only be performed by the public authority, such as: the conclusion, replacement or amendment of an administrative act; the issue of a deed; the performance of a certain administrative operation. Damage compensation for failure to perform in kind is awarded by a court decision, at the request of the creditor, when the debtor's other measures of constraint (periodic penalty payments and fines) have failed. The creditor is entitled to compensation for damages both for non-performance of the public authority's obligation and for late performance (Mâță, 2020, pp. 290-305).

The administrative-patrimonial liability for organisational or functional shortcomings of the public service did not benefit from a general regulation until the adoption of the Administrative Code. The regulatory framework was limited to a series of sequential provisions in the special regulation of certain public services, such as postal services (Riedl Voroniuc, 2020, p. 135).

In the doctrine, following the French model, the dimensions of this category of administrative liability have been outlined since the inter-war period under the name of "responsibility for work error" (Tarangul, 1944, pp. 625-626). In contemporary doctrine, the administrative-patrimonial liability for the shortcomings of the public service has been deepened along with the diversification of economic public services and the increased involvement of private operators through concessions. The Administrative Code regulates for the first time in Romanian law general rules on the principles, classification, establishment, management and dissolution of public services. S. 594 of the Administrative Code regulates the principle of responsibility for the provision of the public service, consisting of "the existence of a public administration authority responsible for the provision of the public service, regardless of the way in which it is managed and provided to the beneficiary" (Mâță, 2021a, pp. 30-33).

Unfortunately, the Administrative Code does not detail the conditions and the mechanism for establishing administrative liability for organisational or functional shortcomings of the public service in the part on Administrative Liability. In addition, some aspects of the regulation are confusing, such as those relating to the existence of guilt of the public authority or joint and several liability for damage caused in connection with the provision of public services (Ciobanu, 2019, pp. 89-91). Although S.574 of the Administrative Code correctly provides for the conditions of liability (existence of a public service, existence of material or moral damage, existence of a causal link between the use of the public service and the damage), S. 577 regulates as a condition of administrative-patrimonial liability: the existence of the guilt of the public authority and/or its staff. This inconsistency in the rules may give rise to contradictory interpretations with negative effects in administrative and judicial practice.

4. IMPLICATIONS OF THE DECISION OF THE HIGH COURT OF CASSATION AND JUSTICE NO. 22/2019

As we have also pointed out in the previous paragraph, a claim for compensation for damage caused by an unlawful administrative act may be brought before the court either at the same time as the action for annulment of the administrative act or within a maximum of one year from the date on which the injured party knew or ought to have known the extent of the damage. This provision of S. 19 (1) of the Administrative Litigation Act no. 554/2004 has led to a non-uniform practice at the level of administrative litigation courts regarding the starting point of the limitation period for bringing before the court an action for damages. Some courts have held that this period starts to run from the moment when the judgment annulling the injurious administrative act becomes final. Other courts have held, in a minority opinion, that the limitation period starts to run from the moment when the administrative act was brought to their attention, since that is the moment when the injured person becomes aware of the extent of the damage. Finally, other courts have held that the moment of knowledge of the extent of the damage is a factual circumstance which is not directly linked either to the communication of the unlawful administrative act or to the moment when the judgment annulling it becomes final.

In the light of this uneven practice, given both the complexity of the legal problem and its social importance, the Public Prosecutor of the Public Prosecutor's Office attached to the High Court of Cassation and Justice referred the matter to the High Court of Cassation and Justice for a preliminary ruling on the interpretation and application of the provisions of S.19 (1) of the Administrative Litigation Law.

By Decision no. 22/2019 of the High Court of Cassation and Justice – The panel for the settlement of appeals in the interest of the law (published in the "Official Gazette of Romania", Part I, No 853 of October 22, 2019), it was established that the date from which the limitation period for bringing before the court an action for damage compensation starts to run is the moment when the person injured by an unlawful administrative act knew or should have known the extent of the damage. That moment is not directly linked either to the communication of the unlawful administrative act or to the final judgment annulling it.

Based on the grounds of this decision, the High Court of Cassation and Justice held that the moment from which the injured party knew or ought to have known the extent of the damage is a question of fact to be determined according to the circumstances of the case. The court ruling on the action for damages must take into account the nature, content and effects of the unlawful administrative conduct and determine the beginning of the limitation period on the basis of complex evidence.

5. **CONCLUSIONS**

Through its various categories, administrative liability is the most common form of legal liability. Its complex nature and relevance in terms of social relations justify a detailed and uniform regulation with the purpose to help public authorities, administrative staff and citizens to understand the specific features of this form of legal liability. The Administrative Code pursues this objective, but unfortunately some of the normative solutions adopted contradict the traditional approach in the doctrine and case law. In addition, there are a number of inadequacies and contradictions which have exposed this regulation to severe criticism from specialists. In particular, the administrative-patrimonial liability has been the subject of this criticism, as the legislator has used a number of fundamental concepts, such as that of guilt, in a non-rigorous manner. On this basis, until consistent legislative intervention, it remains for the doctrine and case law to clarify and develop the fundamental features of administrative-patrimonial liability.

References

1) Árpád, E. (2017). Considerații privind răspunderea patrimonială a aleșilor locali, a funcționarilor publici și a personalului contractual din administrația publică locală [Considerations on the patrimonial liability of locally elected officials, civil servants and contractual staff in local public administration]. *Revista de Drept Public [Public Law Review],* 2.
2) Ciobanu, Al. S. (2019). Reglementarea „răspunderii administrative" în Codul administrativ – o tentativă „improprie"? [Regulating "administrative liability" in the Administrative Code - an "improper" attempt?]. *Revista de Drept Public [Public Law Review],* 4.
3) Decision no. 22/2019 of the High Court of Cassation and Justice – The panel for the settlement of appeals in the interest of the law, published in the "Official Gazette of Romania", Part I, No 853 of October 22, 2019.
4) Government Emergency Ordinance no. 57/2019 on the Administrative Code, published in the "Official Gazette of Romania", Part I, no. 555 of July 5, 2019.
5) Iorgovan, A. (2005). *Tratat de drept administrativ [Treatise of Administrative Law]*, Vol. II. Bucharest: All Beck Publishing House.
6) Mâță, D.C. (2020). Executarea hotărârilor judecătorești pronunțate în litigii privind contractele administrative [Enforcement of judgments ruled in disputes concerning administrative contracts]. In: G. Bogasiu, coord., *Executarea hotărârilor în contenciosul administrativ [Enforcement of judgments in administrative litigation]*. Bucharest: Solomon Publishing House.
7) Mâță, D. C. (2021a)./ *Drept administrativ [Administrative Law]*, Vol. I, 3rd ed. Bucharest: Universul Juridic Publishing House.
8) Mâță, D. C. (2021b). *Drept administrativ* [*Administrative Law*], Vol. II, 3rd ed. Bucharest: Universul Juridic Publishing House.
9) Riedl Voroniuc, I.-C. (2020). *Răspunderea administrativ-patrimonială pentru actul de putere publică [Administrative-patrimonial liability for acts of public authority]*. Bucharest: Universul Juridic Publishing House.
10) Săraru, C.-S. (2016). *Drept administrativ, Probleme fundamentale ale dreptului public* [*Administrative Law, Fundamental Issues of Public Law*]. Bucharest: C.H. Beck Publishing House.
11) Tarangul, E. D. (1944). *Tratat de Drept administrativ român [Treatise of Romanian Administrative Law]*. Chernovtsy: Glasul Bucovinei Publishing House.
12) The Administrative Litigation Law no. 554/2004, published in the "Official Gazette of Romania", Part I, no. 1154 of December 7, 2004.
13) Trăilescu, A. (2013). *Răspunderea patrimonială pentru actele administrative de autoritate nelegale [Patrimonial liability for unlawful administrative acts of authority]*. Bucharest: C.H. Beck Publishing House.

EUROPEAN GUIDELINES FOR IMPROVING THE EFFICIENCY OF THE FINANCIAL SERVICES MARKET OF UKRAINE

MYKOLA MYKOLAICHUK
Odesa Regional Institute for Public Administration of National Academy for Public Administration under the President of Ukraine
Odesa, Ukraine
myk3chuk@gmail.com

TETIANA DROZDOVA
Ministry of Finance of Ukraine
Kyiv, Ukraine
mandarina5@meta.ua

Abstract
The efficiency of the country's financial services market significantly affects the development and competitiveness of its economy. This article has determined that the low level of financial markets development harms Ukraine's position in countries' overall competitiveness rating.
Ukraine has chosen integration into the European community as the primary vector of its development. For achieving this task, it is necessary to bring the achievements in socio-economic development closer to the European level and fulfil the conditions for implementing the Association Agreement with the EU, which entered into force in 2017.
For the purpose to determine the directions of improving the efficiency of the financial services market of Ukraine, a comparative description of the structure and quality characteristics of the financial services market of the most developed countries, European countries and Ukraine has made. Based on a systematic approach to assessing the attributes of socio-economic development of Ukraine, favourable conditions for the formation of various models of the financial market, the desire for European integration, the most acceptable model was selected and identified priority areas for specific financial systems.
Evaluation criteria and strategic guidelines for improving various financial services' efficiency to European countries' norms have identified. As quantitative benchmarks that will characterize the desired achievements in the medium and long term selected a score of financial markets in the overall ranking of global competitiveness. In the next five years, the benchmarks may be the neighbouring EU countries' indicators (Romania, Hungary, Slovak Republic, and Poland). In the long run, they can be a benchmark for Germany, which ranks high in the competitiveness rankings.
The necessity of strengthening state regulation in the conditions of the country's unstable economic and political situation and its directions have substantiated. Regulatory

measures should harmoniously combine strict control with the motivation for the development of local capital markets.
Keywords: *financial services; efficiency; evaluation criteria; government regulation.*
JEL Classification: D53, E44, F36, G18, G20

1. INTRODUCTION

The condition of the financial market significantly affects the development of the country's economy and its competitiveness. In 2019 Ukraine took 85th place in the overall ranking of the competitiveness of countries. This position is significantly due to the low level of development of the financial system - 136th place in the list. Simultaneously, our closest neighbours from the EU (Poland, Romania, Hungary and Slovakia) have significantly higher indicators of the overall rating and development of financial markets. Thus, in Poland, the general rating's place of competitiveness is 37, and the financial markets' rating is 57. The corresponding indicators of Romania - 51 and 86, Hungary - 47 and 66, Slovak Republic - 42 and 56 (The World Economic Forum, 2019). Therefore, to develop Ukraine's economy and increase its competitiveness, it is essential to analyse the basic models of functioning of financial markets and choose the most acceptable for current conditions. In order to increase the efficiency of financial markets, it is necessary to determine the criteria for its evaluating and the main guidelines have given the achievements of European countries.

In addition to substantiating economic development's strategic directions, it is equally essential to develop regulatory measures in the financial sphere. Of particular importance is the legal support for the implementation of specific strategic plans.

Given the above, the study's purpose is to substantiate the basic European guidelines for the development of the financial services market of Ukraine, the necessary regulatory measures by the state, support for their legislation in line with EU rules and international standards.

2. THE MAIN FACTORS OF EFFICIENCY OF THE FINANCIAL SERVICES MARKET

2.1. Features of the financial services market of Ukraine and other countries

The financial market performs essential functions of mobilizing temporarily free funds and investing them in the real sector of economic development.

Countries around the world choose different approaches to the formation of the financial services market. But the most common is the Anglo-American and continental (European) models. They differ in the dominance of specific financial market sectors in investing in the economy's real sector. In the Anglo-American model, the leading role in investing belongs to the capital market, which has identified with the securities market. Its components are bonds and stocks. At the same time, corporations are mainly issuers of shares that have placed on local markets. Bond issuers can also be municipal bodies or the state, and the placement of such bonds can be carried out on international markets (Beck, Kaserer and Rapp 2015).

Powerful companies raise funds by issuing securities in the form of shares and (or) bonds. This approach opens up opportunities for risky long-term investments in innovative development. However, the market mechanism of pricing in the stock market forces entrepreneurs to care about improving the company's efficiency to increase its investment attractiveness. Thus, it is the leading role of the capital market that contributes to the development of high-tech industries and production efficiency growth.

Non-bank financial structures, which perform intermediary functions in trade, accounting, and securities storage, play a significant role in the capital market's predominant use. For example, the UK's organiser of securities trading is the London Stock Exchange, whose market capitalisation exceeds 3 trillion. Euro (London Stock Exchange, 2021).

Therefore, economically developed countries with well-established market traditions and with many influential producers prefer the Anglo-American model. The population of these countries is psychologically ready for risk, the presence of debt.

Most European countries prefer to finance development through bank loans. In 2015, the total volume of loans issued by EU countries amounted to 212% of their GDP, and in the US - only 147%. Simultaneously, the United States has dominated by financial resources in bonds - 220% of GDP, shares -115% of GDP. In the EU, the share of shares was only 60% of GDP (PwC, 2015).

Small businesses, households prefer bank lending. The population keeps funds in bank deposits. Banks also play a leading role in the capital market by acquiring securities and the organization of trading in them. Under conditions of bank dominance, regulatory functions have entrusted to the central bank.

In Ukraine, banks play a leading role in the financial market. However, their activities do not ensure effective economic development. One of the main shortcomings of the banking system of Ukraine is the low reliability of banks. In the ranking of global competitiveness in 2019, Ukraine ranked 131st in terms of bank reliability. Romania ranked 75th and Poland 57th. Another index is the availability of accessing credit resources. Regarding ease of access to credit (Domestic credit to private sector, % GDP), Ukraine has ranked 76th globally ranking, Poland ranked 66th, and Romania's situation was some worse – 105th place (The World Economic Forum, 2019).

Ukrainian banks prefer short-term lending. In 2013 the share of bank loans with a maturity of more than one year did not exceed 50.0% (48.1%).

Simultaneously, in Poland and Romania, these figures were 69.7% and 62.7%, respectively (The World Bank, 2015).

The situation with investment development through bank loans has complicated by a significant reduction in banks' number (Table 1).

Table 1. Some indicators of Ukrainian banks

Index	Year				
	2000	2005	2010	2015	2020
Number of banks in the register at the end of the period	195	186	176	117	74
Number of banks in which foreign capital is attracted	31	23	55	41	33
Including with 100% foreign capital	7	9	20	17	23

Source: (State Statistics Service of Ukraine, 2011; National Bank of Ukraine, 2021)

A sharp decline in the number of banks has observed after the start of military aggression by Russia, the country's unstable political situation. The number of banks with 100% foreign capital is more stable.

Forecast based on a linear trend forming on annual data for 2000-2020 with the reliability of R^2 = 0.7175 (Equation 1) shows that in 2025, there will be 62 banks in Ukraine.

$$Y=224.08-6.2494t \quad (1)$$

The situation on the market of non-banking services is also tricky. However, to ensure high-tech development in the future, it is necessary to develop all the financial market segments. At the same time, the leading role of the banking system remains. Therefore, from July 1, 2020, the National Bank of Ukraine (NBU) received the authority to regulate the markets for banking services and all other non-banking financial services.

2.2. Modern priorities for the development of the financial services market of Ukraine

With the independence of Ukraine, the primary vector of its development was gradually determined - integration into the European community. The idea of European integration is a conscious and natural strategic choice of Ukrainian society, confirmed by many trials. The guide to internal reforms was the Association Agreement with the EU, which entered into force in 2017. Therefore, Ukraine desperately needs to bring the level of socio-economic development closer to European countries.

Quantitative benchmarks are needed to form positive changes that will characterize the medium and long-term's desired achievements. Such standards can be performing by scoring indicators of financial markets in the overall ranking of global competitiveness. Simultaneously, in the next five years, the benchmarks for Ukraine may be the EU's neighbouring countries' indicators from the post-socialist space (Romania and Poland). In the long run, Germany's indexes that have high rankings can be benchmarks. Although West Germany's economy always had a well-established market tradition, uniting with former socialist Germany forced the country to overcome the manifestations of the Soviet approach to the organization of economic relations. Possible guidelines for the development of the financial market of Ukraine have given in Table 2.

Table 2. Desirable achievements in the development of the financial market of Ukraine

Index	Modern level	Desirable achievements	
		2025	2030
Domestic credit to private sector% GDP	47.5	53.5	77.5
Financing of SMEs	3.4	3.7 – 3.9	5.1
Market capitalization, % GDP	4.0	19.6 – 32.2	53.9
Insurance premium volume to GDP	1.4	2.6	5.0
Soundness of banks	3.2	4.9 – 5.2	5.3
Non-performing loans% of gross total loans	54.5	6.4 – 3.9	1.5
Banks' regulatory capital ratio% of total risk-weighted assets	13.7	17.1 – 18.8	19.6

Source: (The World Economic Forum, 2019)

Desired achievements have determined based on indicators of three countries: Poland, Romania and Germany. The presence of only one index in the middle data column means that for one of the countries, this criterion has not evaluated at all, or it is worse than the indicator of Ukraine. Most of the desired levels for 2030 have taken from Germany's achievements, except for the last (Banks' regulatory capital ratio, % of total risk-weighted assets), which belongs to Romania.

The leading indicators relate primarily to banking because it is the banks that play a leading role in financing development. However, government officials should not ignore the components of the stock market. Although the development of knowledge-intensive production, which is the key to a long-term basis for economic growth, is financed mainly by the capital market.

Foreign investment is considered an essential factor in economic growth for developing economies. Their advantage is in promoting large projects, new technologies and new corporate governance practices. However, the inflow of foreign investment into Ukraine's economy is highly volatile. It significantly depends on the economic and political situation in the country and the world. The most significant fluctuations in foreign direct investment in the economy of Ukraine for the period from 2004 to 2016 have shown in Table 3.

Table 3. Foreign direct investment (FDI) in Ukraine (million USD, since 2014 – excluding the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol, and part of the anti-terrorist operation zone)

FDI	Date						
	01.01.2004	01.01.2005	01.01.2006	01.01.2007	01.01.2008	01.01.2009	01.01.2010
From EU countries	3 805.2	4739.7	11997.8	16254.6	22908.8	28118.2	31538.4
Total	6 794.4	8570.2	16890.0	21618.7	29532.8	35607.1	38992.9
FDI	**Date**						
	01.01.2011	**01.01.2012**	**01.01.2013**	**01.01.2014**	**01.01.2015**	**01.01.2016**	**31.12.2016**
From EU countries	36969.1	39268.9	41132.3	41032.8	31046.9	26405.6	26099.2
Total	45370.0	48197.6	51705.3	53704.0	40725.4	36154.5	37655.5

Source: (State Statistics Service of Ukraine, 2020)

Significant growth in foreign investment has observed in 2005 and 2007. At the same time, in 2005 compared to 2004, investment increased 4.7 times (from EU countries 7.8 times), and in 2007 growth compared to 2006 was 1.7 times (from EU countries 1.6% times). This fact has facilitated by the expectation of positive change after the Orange Revolution.

The global economic crisis of 2008 negatively affected the further growth of the foreign direct investment. However, the highest level of investment observed in 2013. Compared to 2004, FDI increased 7.8 times (from EU countries 10.8 times). But in the following 2014-2016, the volume of investments decreased by more than a third (36.5%). Their outflow in 2014 was almost 1.5 times higher than the number of revenues in 2005.

The spread of the COVID-19 pandemic marked the beginning of 2020. In response to the COVID-19 pandemic, significant changes took place in the life of many countries around the world, including Ukraine. A state of emergency has declared in countries as whole or individual regions or areas. Sanitary and epidemiological measures have introduced in almost all countries (quarantine zones, temperature checks, cancellation of mass events, closure of educational and cultural and entertainment facilities). There are restrictions on travel/entry to countries and movement within countries. The first step of public administration in emergency conditions has strengthened established rules on employment. Governments introduced new distance forms of work and education. Such unprecedented steps have led to a slowdown in economic development and, consequently, a decrease in foreign direct investment inflow into Ukraine.

It should be attention that the economic downturn and political instability in Ukraine have negatively affected its investment attractiveness. During the period from 2014 to 2019, the index of investment attractiveness according to the European Business Association (EBA) increased from 2.5 to 2.85 but is in the opposing plane (1-negative, 3-neutral, positive value -5) (European Business Association, 2020). Therefore, it is worth relying mainly on domestic investment resources.

In the difficult conditions of Ukraine, the role of state regulation in ensuring the development of the financial services market is growing.

Among the priority tasks of state regulation of financial services market development is establishing a partnership between business and the state in ensuring the country's socio-economic development. Public authorities should take a prudent approach to management decisions, considering their possible negative consequences for a business. Private companies must realize that increasing the population's welfare, increasing the competitiveness of the country's economy is the key to increasing demand for products and investment.

Cooperation between government and business will help develop an effective mechanism to motivate the banking system to long-term lending to the development of the economy's real sector. It is also necessary to work together to develop a tool for activating the local capital market.

Thus, despite the complexity of the country's political and economic situation, social tensions in society, the development of a state investment program and the mechanism for its implementation are essential.

An essential aspect of public administration is the legal support of the movement in the chosen direction. Ukraine recognizes the importance of ensuring the gradual alignment of its existing laws and future legislation with the EU acquis, the implementation of international standards, the development of cooperation with regulatory and supervisory authorities of the EU Member States and its institutions, in particular, in the following areas:

- banking regulation and supervision;
- operation and development of payment systems;
- liberalization of capital movements and payments;
- regulation and supervision of the non-banking financial services market;
- protection of the rights of consumers of financial services;
- countering money laundering and terrorist financing;
- accounting;
- cybersecurity and information security in the banking system.

3. EUROPEAN GUIDELINES OF UKRAINE ON THE IMPLEMENTATION OF THE ASSOCIATION AGREEMENT WITH THE EU

Implementation of the Association Agreement with the EU provides for the Ukrainian Party's almost eight thousand measures. These measures have united within more than two thousand tasks in the action plan's performance to implement the Association Agreement (Verkhovna Rada of Ukraine, 2020).

As of the end of 2020, the overall progress in implementing the Association Agreement was 53.0%.

Depending on the deadline for implementation of the Action Plan, all activities have divided between years. The state of implementation of measures in the last five years indicates that Ukraine's government paid immediate attention to ensuring political dialogue, national security and defense. In this direction, 89% of tasks have implemented. The same level (85.0%) of implementation of measures in the areas of "Justice, Freedom, Security, Human Rights" and "Technical Barriers to Trade". From 81.0 to 84.0 per cent of implementing the program of entrepreneurship measures, public procurement and humanitarian policy. The highest level of performance (74.0%) in the area of "Public Finance Management" from an activity's financial aspects (Ministry of Finance of Ukraine, 2021).

It should take attention that the direction of "Financial Services" is provided for in Chapter 6 of Section IV "Trade and Trade-Related Issues" of the Association Agreement.

The Agreement stipulates that the EU and Ukraine:

- allow any payments and transfers in freely convertible currency between the parties;
- ensure the free movement of capital related to lending and portfolio investment;
- do not impose restrictions on the movement of capital and do not limit the current conditions;
- consult with each other to facilitate the movement of capital.

The implementation of the provisions of the Agreement should result in a reduction of restrictions on current payments; removal of restrictions on export-import operations and foreign direct investment to increase the export potential of our country; removal of restrictions on portfolio investments and debt capital flows; removal of obstacles to financial transactions of individuals abroad.

The plan for implementing measures defined by the resolution mentioned above of the Cabinet of Ministers of Ukraine in "Financial Services" includes 652 actions within 242 tasks. Overall progress in meeting Ukraine's commitments to approximate EU rules and practices in the financial sector is 36.0% (Ministry of Finance of Ukraine, 2021).

In the banking sector, a list of achievements consists of comprehensive fundamental work to strengthen the institutional capacity of the National Bank. There adopted the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine on Institutional Capacity Building" №541-VIII and the Law of Ukraine "On Amendments to the Budget Code of Ukraine Institutional Capacity Building of the National Bank of Ukraine" №542-VIII.

The banking sector's risk management system has improved - several resolutions of the National Bank of Ukraine on risk assessment of bank use, inspections of banks, reporting forms following IMF recommendations, verification of transaction information have approved.

The principles of consumer lending have improved - Requirements to credit intermediaries and their activities in consumer lending in the market of non-banking financial institutions have been approved (Verkhovna Rada of Ukraine, 2017).

Gradual implementation of international standards of regulation and supervision has ensured:

- banks have the right to form credit documentation (case) of the debtor from electronic documents created and signed by the bank and the debtor with the use of electronic digital signature - approved Amendments to the Regulations on determining the amount of credit risk by banks in active banking operations;
- improved the mechanism of application by the National Bank of a measure of influence in the form of imposition of a fine for violation of the legislation on financial monitoring. Expanded the grounds for application by the National Bank of a measure of influence in the form of imposition of a fine (conducted based on unconcluded agreements), etc. - Amendments to the Regulations on the application of standards of impact by the National Bank of Ukraine were approved;
- in preparation for the launch of the National Bank's Credit Register, a new form of statistical reporting was introduced, in which banks will report on credit operations with debtors (individuals and legal entities), and the statistical reporting form was expanded, according to which banks report risk concentration on active transactions with counterparties and persons related to the bank - approved Amendments to the Rules for the organization of statistical reporting submitted to the National Bank of Ukraine;
- the National Bank's right to recognize the bank's ownership structure as non-transparent in case of impossibility to identify a person or persons who have a significant influence on the management or activities of the bank. Approved amendments to the Regulation on the procedure for submitting information;
- the components of the calculation of the regulatory capital of the banking group and the names of individual names of asset items taken into account during the calculation of economic standards have clarified. Amendments to the

Regulations on the procedure for regulating the activities of banking groups have approved;

- the annual assessment of the stability of banks has introduced - approval of the Regulations to evaluate the strength of banks and the banking system of Ukraine.

The system of banking regulation and supervision has improved - the National Bank of Ukraine has regulated the provisions on plans to resume the activities of Ukrainian banks and banking groups.

Work has carried out on the organization of corporate governance and risk management system in banks. The draft Law "On Amendments to Certain Legislative Acts of Ukraine to Improve the Organization of Corporate Governance in Banks and Other Issues of the Banking System" has developed, registered in the Verkhovna Rada of Ukraine № 4367 11/12/2020. The need for legislative elimination of legal gaps to ensure effective risk management in banks, the introduction of capital buffers, the new capital structure of banks, as well as improvement of corporate governance in banks, has provided by the Association Agreement with the EU and by the new Memorandum of Economic and Financial Policy of 02 June 2020 (concluded with the International Monetary Fund under the stand-by loan program, as well as by the previous Memorandum on Economic and Financial Policy of 05 December 2018). The draft law also took into account the provisions of Directive 2013/36 / EU of the European Parliament and of the Council of 26 June 2013 on access to credit institutions and prudential supervision of credit institutions and investment firms (CRD IV) and Regulation (EU) 575/2013 Of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms (CRR).

In the context of the regulation of current payments and capital movements, several normative legal acts have been adopted in Ukraine today, and relevant draft acts have developed, comprehensively regulating this issue.

Thus, on June 19, 2020, the Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Concerning Simplification of Attracting Investments and Introduction of New Financial Instruments" (starting now - Law № 738) was adopted on July 1, 2021, which enters into force on July 1, 2021. However, some of its provisions will come into force on other dates - somewhat the day after the Law's publication and the rest in 2022-2023.

The document will eliminate some problems that hindered the whole functioning and further developed capital markets in Ukraine. After all, the product of fully functioning capital markets is significant for the Ukrainian economy's growth.

The process of reviewing all current legislation of Ukraine in the field of capital markets and commodity markets and adapting it to EU standards is underway. First of all, the key European legislative acts have used - MiFID II, MIFIR, EMIR, which are binding on all EU member states and those located in the European Economic Area. At the same time, this is not copying acts but adapting them to our realities, taking into account all the peculiarities of our market.

This law unifies the approach to the organization of trade in assets in commodity markets to ensure the transparency of prices formed in such markets and prevent manipulation in them.

The document expands the list of financial instruments by classifying money market instruments as financial instruments and introducing new types of securities - green bonds, option certificates, depository receipts, bank certificates of deposit, etc.

Under Law № 738, a financial instrument can be considered a contract that results in creating a financial asset of one entity and a financial liability or equity instrument of another entity.

Law № 738 introduces such a financial instrument as derivative contracts. Such contracts concluded by Ukrainian companies will recognize that derivative securities will finally receive general rules of issue, circulation, and trade on the international market.

A new type of securities, such as green bonds, is driven by institutional investors' rapidly growing demand for investments in environmentally friendly projects. This segment is developing dynamically in many countries around the world. Ukraine is no exception, and with the adoption of Law № 738, our country has the opportunity to create this instrument actively. Rules have established for participants in this market, and the instrument's concept is clearly defined, which provides for the use of borrowed funds exclusively for financing or refinancing the costs of green (environmentally friendly) projects.

Law № 738 establishes norms according to which bondholders' rights are protected, mainly by providing for the institution of a meeting of bondholders and a collective representative of corporate bondholders, following the best world practices.

The document also contains a list and description of professional activities in the capital markets and organized commodity markets, a description of the requirements for professional participants and their activities, including responsibilities to customers.

It is essential to introduce the know your customer model for all financial institutions used in Europe by all financial market participants - banks, stock exchanges, and other companies that work with private individuals. This practice helps counter fraud, embezzlement, money laundering and the financing of illegal transactions.

Amendments to Law № 738 provide for introducing the institution of related agents in the capital markets.

The introduction of the institution of related agents in the capital markets aims to expand the mechanisms of investors' access to investment firms' services.

In particular, by enabling related agents to provide certain services on behalf of and at the investment firm's expense based on an agreement. These include advertising the assistance of an investment firm, accepting orders from clients to enter into transactions in financial instruments, arranging the placement of securities, etc., as well as performing other actions provided by the agency agreement related to the investment's direct professional activity firm in the market.

Such changes will allow investment firms to increase their representation in Ukraine without the need to establish branches, which, in turn, could potentially reduce the cost of such expression and increase the clients of investment firms in general.

Due to the implementation of Law № 738, fundamental changes will take place for commodity exchanges.

Due to the imperfection of Ukrainian legislation, commodity and financial exchanges have been used for many years, primarily for other purposes, causing significant damage to its economic interests. Commodity exchanges were often part of tax evasion or tax optimization schemes.

Ukraine's primary goal is to provide the financial market and commodity markets with a reliable exchange infrastructure for organized trade and quality financial instruments. Therefore, at the legislative level, the concept of netting, a system of pre-trade and post-trade reporting on transactions with underlying assets, introduces a procedure for authorization of necessary infrastructure facilities and supervision of their activities to combat manipulation and other abuses in the markets. The main elements of such a new infrastructure of capital markets and commodity markets will be the Central Counterparty, repository, trading platform operators.

Instead of stock exchanges, Law № 738 introduces two types of markets. First of them - a regulated market with stricter requirements, which will ensure centralized execution and execution of transactions. The second is a less regulated market of alternative trading platforms (multilateral trading platform and organized trading platform, Ukraine). Ukraine will have a central counterparty that eliminates the risks of default and guarantees settlements under agreements and a trade repository, a mandatory element of a full-fledged derivatives market.

The securities trader will be transformed into a full-fledged investment firm model, which is widespread in Europe, and he will get more business opportunities. Licensing will base on the principle: less responsibility - fewer requirements for obtaining a license, more responsibility - more standards. The investment firm will be able to use in its activities related agents who will act on behalf of, under control and at the expense of such firm.

If earlier in the stock market there was one license for exchanges, and in the commodity market in general 0 licenses, there will be seven licenses - in the capital markets and two licenses - in the commodity market. This step will be evidence of greater diversification and flexibility in the market rather than a quantitative indicator.

Thus, Law № 738 has aimed at introducing international best practices in the capital markets of Ukraine, in particular the latest legislative changes in the European Union and the recommendations of the International Association of Swaps and Derivatives (ISDA).

The introduction of European standards and practices contributes to effective mechanisms for regulating financial institutions, improving supervisory approaches and transparency of the financial sector.

To open opportunities for further integration of Ukraine's payment infrastructure with the European (SEPA) with international experts' participation, developed a comprehensive bill, "On Payment Services", which takes into account EU law and best international experience.

On November 12, 2020, this draft law registered in the Verkhovna Rada of Ukraine under № 4364, which the Verkhovna Rada approved in the first reading.

Adoption of this Law will create conditions for further development of payment products, services and services. New members will be able to enter the market, contributing to the growth of healthy competition. Thanks to this, customers will get new convenient services - better quality and at a better price. Users will also feel more vital protection of their rights and empowerment.

The norms of this document have aimed at changing outdated approaches to the legal regulation of the payment market, expanding the range of payment service providers and streamlining their activities in the payment market, establishing rules for providing payment services in Ukraine and requirements for payment service providers, strengthening consumer protection, and efficiency of payment services, promotion of innovations.

The new regulation of the bill № 4364 payment market provides for the following fundamental changes in the payment services market:

- there will be nine payment services, of which seven are financial payment services, and two are non-financial. The range of their providers will also determine;
- requirements will establish for the authorization of payment service providers and the introduction, particularly the possibility of establishing and operating small payment institutions with simplified requirements for them. Payment service providers will acquire the status of financial institutions simultaneously with the right to provide payment services;
- non-bank financial institutions will be able to carry out payment transactions without mandatory participation in payment systems;
- not only banks but also other payment service providers who have received the appropriate license will be able to issue electronic money and issue payment cards;

- the future powers of the National Bank will create a regulatory platform for testing services, technologies and tools in the payment market based on innovative technologies will be determined, the operation of which involves close interaction of the regulator with startups and understanding their needs;
- there will be a basis for the introduction of "open banking" in the payment infrastructure of Ukraine;
- accounts will be identified that will be able to open payment service providers to perform payment transactions; in particular, it will be possible for non-bank payment service providers to open and maintain payment accounts;
- conditions for providing payment services will become more transparent, and customers will receive more information about them;
- Increased attention will be paid to the protection of users' rights, in particular, to minimise cyber fraud, increase liability for illegal actions with payment instruments and means of access to bank and payment accounts, etc.;
- requirements for the security of payment transactions will increase, particularly regarding the need for payment service providers to use enhanced user authentication in some instances.

Adopting the draft law will allow adaptation of Ukrainian legislation to EU legislation and form a legal basis for integrating Ukraine's payment system with the EU payment system, modernising Ukraine's payment market, and creating a foundation for its development.

Besides, in August 2020, amendments were made to the Regulation on electronic money in Ukraine, aimed at implementing the requirements of Directive 2009/110 / EC and improving the rules governing the activities of electronic money issuers and the procedure for conducting electronic money transactions.

In March 2020, a new Regulation on the BankID System of the National Bank of Ukraine has approved, taking into account European legislation requirements, particularly Regulation (EU) № 910/2014.

In the context of capital liberalisation, it should also be attention that to take full advantage of liberalisation and minimise the risks associated with volatility in capital flows. Several measures need to be put in place to improve the institutional capacity to manage capital inflows and outflows in the intermediate stages of liberalisation.

Liberalisation of cross-border capital movements contributes to the acceleration of economic development, as the inflow of foreign capital makes it possible to finance structural current account deficits, which have formed due to the rapid growth of investment and consumer activity. In the long run, capital inflows contribute to the development of the financial sector in recipient countries and expand investment opportunities within the country by facilitating economic agents' access to financial resources, thus stimulating economic growth.

Thus, in Ukraine, a new liberal currency regulation has been introduced, but certain currency restrictions remain. The new currency regulation system has aimed at deregulation of investments, simplifying cross-border transactions with currency values, and expanding the list of available currency transactions.

On February 7, 2019, the new Law of Ukraine, "On Currency and Currency Transactions", entered into force. This law completely changed the system of currency regulation in Ukraine.

A new simple, clear and transparent regulatory framework has launched – 7 basic currency regulations of the National Bank have replaced 56 obsolete acts and become the basis of a new liberal system of currency regulation provided by the new law.

The National Bank continues to lift currency restrictions step by step in line with the pace of improvement in macroeconomic conditions in Ukraine.

About 40 restrictions on foreign exchange transactions of businesses, banks, foreign investors and individuals have been relaxed or abolished, including:

- the requirement for the mandatory sale of foreign exchange earnings of the business was abolished;
- all restrictions on the repatriation of dividends have been lifted; businesses are allowed to buy foreign currency at the expense of credit funds in hryvnia without restrictions on the amount;
- the requirement for preliminary reservation of funds in hryvnia for further purchase of currency was abolished;
- the limit on the daily volume of foreign currency purchases by individuals has abolished;
- sale of currency to the population online is allowed;
- a convenient system of e-limits for investing abroad by both individuals and legal entities has introduced;
- it is possible to use new financial instruments for hedging currency risks (swaps, non-delivery forwards), etc.;
- currency supervision for export-import operations up to UAH 400,000 (about 15000 USD) has abolished.
- currency supervision of export operations of Ukrainian companies carried out using the letter of credit form of payment has been simplified.

The new currency regulation system has aimed at deregulation of investments, simplifying cross-border transactions with currency values, and expanding the list of available currency transactions.

New opportunities have emerged, particularly: opening accounts in Ukrainian banks by non-residents of Ukraine - legal entities in terms of investment funds and asset management companies acting on behalf of such investment funds; Clearstream International Securities Depository was connected to the infrastructure of the Ukrainian stock market.

The ultimate goal of the NBU in currency regulation is to remove all existing restrictions and move to a regime of free movement of capital. It is possible to achieve it if the appropriate macroeconomic conditions exist and legislation to combat tax base erosion and profits abroad (BEPS), and Ukraine becomes a member of the international system of automatic exchange of information on financial accounts.

Reducing the share of borrowings in foreign currency and reducing the dollarization of loans and deposits of the banking system will help increase the financial and corporate segments' stability.

4. CONCLUSIONS

The state of Ukraine's economy, the instability of the political situation, and the continuation of military aggression by Russia necessitate a model for the development of the financial services market with a dominant banking system. This model has preferred in most European countries. European guidelines for the growth of the financial services market in Ukraine have identified. Quantitative characterization of the desired achievements based on indicators of certain countries' financial markets. The achievements of Romania and Hungary are selected as benchmarks for the period until 2025. By 2030, it is desirable to reach the level of Poland or even Germany.

Rapid positive changes are possible only under the condition of state regulation, which will harmoniously combine strict control with the motivation for the development of local capital markets.

Analysis of Ukraine's achievements in an approximation of current Ukrainian legislation to European Union legislation and implementation of measures to implement the Association Agreement with the EU shows that the performance of the Association Agreement increases efficiency, in particular, the financial services market, ensures approximation of national regulations and supervision international standards. The implementation of the Agreement also creates preconditions for strengthening the competitiveness and equal cooperation of Ukrainian financial institutions with European ones, increasing the level of financial services and consumer protection. The introduction of European standards and practices contributes to effective mechanisms for regulating financial institutions, improving supervisory approaches and transparency of the financial sector. All this is a guarantee of the functioning of a stable Ukrainian financial market.

At the same time, it should note that Ukraine has risen seven points in the ranking of ease of making business "Doing business 2020" and ranked 64th out of 190 countries. Doing business from the World Bank is one of the most influential ratings, which serves as an additional marker for investors. This fact is a positive signal for Ukrainian entrepreneurs and foreign investors.

New Zealand heads the ranking. The second position was taken by Singapore, on the third line Hong Kong, on the fourth place Denmark, closing the top 5 South Korea. Of the post-Soviet countries, Georgia has the best business experience, ranking seventh. Next are Lithuania -11, Estonia-18, Latvia -19, Kazakhstan -25, Russia-28, Azerbaijan-34, Armenia-47, Moldova-48, and Bulgaria-49 (The World Bank, 2020).

This year, despite the impact and consequences of COVID-19, Ukraine has continued to work on critical legislative changes that make investment more accessible, secure, and attractive. Therefore, Ukraine has every chance to demonstrate improved positions, which will give a positive signal to new investors, both domestic and foreign.

Ukraine has made the most progress under the Minority Shareholder Protection component (+27 points) - by disclosing information on final beneficiaries and the Building Obtaining Component component (+10 points) - by eliminating the requirements for hiring an independent designer and technical inspection engineer and introducing online notification system, as well as reducing the cost of building permits within Kyiv.

According to the World Bank report, this year, Ukraine has improved its performance on 6 out of 10 indicators taken into account by World Bank experts in compiling the rating.

Measures to increase Ukraine's position in the Doing Business Rating have carried out within the Action Plan framework approved by the Cabinet of Ministers of Ukraine dated 04.12.2019 № 1413 to increase Ukraine's position in the World Bank's Doing Business rating. According to the results of 2020, 10 items of the Action Plan have implemented. This result is 38% (2 laws, 5 acts of the Government, 17 acts of authorities have adopted), 4 (15%) have partially implemented, 5 (19%) are under consideration by the Verkhovna Rada of Ukraine. Others are at different stages of implementation.

References

1) Beck, Th., Kaserer, Ch. and Rapp, M-S. (2015). *Beteiligungs und Kapital markt finanzierung im deutschen Finanz system: Zustand und Entwicklungsperspektiven* [Equity and capital market financing in the German financial system: status and development prospects]. [online] Available at: https://www.bmwi.de /Redaktion/DE/Publikationen/Studien/beteiligungsfinanzierung-kapitalmarktfinanzierung-deutsches-finanzsystem-zustand-entwicklungsperspektiven.html [Accessed 11.02.2021].
2) European Business Association, (2020). *Investors have worsened the assessment of Ukraine's business climate to the level of 2015.* [online] Available at: https://eba.com.ua/en/investory-pogirshyly-otsinku-biznes-klimatu-ukrayiny-do-rivnya-2015-roku/ [Accessed 09.04.2021].

3) London Stock Exchange, (2021). *Main Market at a glance.* [online] Available at: https://www.londonstockexchange.com/raise-finance/equity/main-market [Accessed 11.02.2021].
4) Ministry of Finance of Ukraine, (2021). *Implementation of the Association Agreement.* [online] Available at: https://mof.gov.ua/en/vikonannja-ugodi-pro-asociaciju [Accessed 21.02.2021].
5) National Bank of Ukraine, (2021). *Osnovni pokaznyky diialnosti bankiv [The main indicators of banks].* [online] Available at: https://bank.gov.ua/ua/statistic/supervision-statist/data-supervision#1 [Accessed 21.02.2021].
6) PwC, (2015). *Capital Markets Union: Integration of Capital Markets in the European Union.* Analytical report. [online] Available at: https://www.pwc.com/gx/en/banking-capital-markets/pdf/cmu-report-sept-2015.pdf [Accessed 21.03.2021].
7) State Statistics Service of Ukraine, (2011). *Statystychnyi shchorichnyk Ukrainy za 2010 rik [Statistical Yearbook of Ukraine for 2010].* [online] Available at: http://ukrstat.gov.ua/ [Accessed 9.03.2021].
8) State Statistics Service of Ukraine, (2020). *Priami investytsii (aktsionernyi kapital) z krain YeS v ekonomitsi Ukrainy [Direct investments (share capital) from EU countries in the economy of Ukraine]*. [online] Available at: http://www.ukrstat.gov.ua/operativ/operativ2017/zd/ives/ives_u/ [Accessed 23.02.2021].
9) The World Bank, (2015). *Global financial development report 2015-2016: long-term finance.* [online] Available at: http://documents.worldbank.org/curated/en/955811467986333727/Global financial development -report 2015-2016- long-term finance [Accessed 3.03.2021].
10) The World Bank, (2020). *Doing business. Measuring Business Regulations.* [online] Available at: https://www.doingbusiness.org/en/doingbusiness [Accessed 11.03.2021].
11) The World Economic Forum, (2019). *The Global Competitiveness Report 2019*. [online] Available at: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf [Accessed 1.03.2021].
12) Verkhovna Rada of Ukraine, (2017). *Pro zatverdzhennia Vymoh do kredytnykh poserednykiv ta do yikh diialnosti u sferi spozhyvchoho kredytuvannia na rynku nebankivskykh finansovykh ustanov [About approval of Requirements to credit intermediaries and to their activity in the field of consumer crediting in the market of non-bank financial institutions].* [online] Available at: https://zakon.rada.gov.ua/laws/show/z1119-17#Text [Accessed 11.03.2021].
13) Verkhovna Rada of Ukraine, (2020). *Pro vykonannia Uhody pro asotsiatsiiu mizh Ukrainoiu, z odniiei storony, ta Yevropeiskym Soiuzom, Yevropeiskym spivtovarystvom z atomnoi enerhii i yikhnimy derzhavamy-chlenamy, z inshoi storony [On the implementation of the Association Agreement between Ukraine, of the one part, and the European Union, the European Atomic Energy Community and their Member States, of the other part].* [online] Available at: https://zakon.rada.gov.ua/laws/show/1106-2017-%D0%BF?lang=en#Text [Accessed 12.03.2021].

PRESENTATION OF THE CORRUPTION PHENOMENON
IN THE ROMANIAN PRESS

IULIANA UNGUREANU
Alexandru Ioan Cuza University of Iasi
Iasi Romania
pantea.iulianaa@yahoo.com

Abstract
In democratic states, mass media is an important instrument in monitoring the behavior of public officials, companies and implicitly corruption. For this reason, newspaper publications refer to a multitude of important events, including those related to corruption. In this context, the paper aims to study news published in newspapers with an economic profile, which are about corruption, in order to identify how to present the phenomenon of corruption in Romania. To achieve the objective, the qualitative method of analysing the content of corruption publications presented in Ziarul Financiar from January 2019 to March 2021 was addressed. The analysis carried out shows that the phenomenon of corruption is very often brought to the attention of the Romanian people and that the subjects vary greatly because are presented articles related to: corruption investigations, combating corruption, the consequences of corruption, political corruption, COVID-19 and corruption, legislative changes on corruption, opinions on corruption and statistics. The results indicate that during the period under review there have been many cases of corruption that have been investigated, the subject of legislative changes on corruption has been hotly debated and there has been an interest and a need to inform the public about the fight against corruption, the political corruption and general views on corruption. Although the COVID-19 pandemic has caused a stir among the entire population, this topic related to corruption has been less debated.
Keywords: *corruption; news; mass media.*
JEL Classification: D73, G14, L82

1. INTRODUCTION

Corruption causes damage to economic security and social harmony (Liu and Lin, 2012). If corruption could be measured, it would also be likely to be eliminated. According to Enikolopov, Petrova and Sonin (2018), if the phenomenon of corruption was measured only through bribery, many other acts of corruption that do not include bribery would be ignored. Overall, the phenomenon of corruption refers to "abuse of power entrusted to obtain private benefits" (Cuervo-Cazurra, 2016; Transparency International, 2019). Currently, the degree of corruption present in an economy cannot be objectively measures, but there are certain indices that measure the level of perception of corruption.

Even if there are no direct ways to measure corruption, however, there are various indirect ways in which information on the presence of this phenomenon in a country, institution or company can be obtained (Tanzi, 1998; Pereș, Gherai and Balaciu, 2014), namely: reports on corruption available in certain sources, including newspapers; case studies of anti-corruption agencies, such as tax, customs and police administrations; and surveys such as questionnaires that measure perceptions of corruption rather than the phenomenon itself.

According to Liu and Lin (2012), monitoring and presenting the use of public resources, respectively the public functioning can result in the reduction of the abuse of power and resources. Democratic regimes, characterized by freedom of the press and freedom of expression, use the media as a tool for monitoring the behaviour of civil servants, companies and implicitly corruption (Stromberg, 2004; Besley and Prat, 2006; Ferraz and Finnan, 2008; Snyder and Stromberg, 2010; Enikolopov, Petrova and Sonin, 2018). The role of the media in informing the public is not limited (McMillan and Zoido, 2004; Djankov *et al.* 2003), but on the contrary the provision of good information must lead to socially beneficial results (Malesky, Schuler and Tran, 2012; Fergusson, Vargas and Vela, 2013; Chong, De La O and Karlan, 2015). In Romania, the media provide information daily and bring to the attention of the Romanian people all the events, including those related to corruption, as they are of great importance and are of interest.

The paper aims to identify the manner of presenting the phenomenon of corruption in Romania, having as a benchmark the strongest source of economic information, namely Ziarul Financiar. The identification of the news that talked about corruption and the classification thereof in certain categories showed that during the analysed period there was a higher frequency for the presentation of corruption acts that took place both in Romania and worldwide.

In addition to the introduction, the sections of the paper also include a review of the literature, the research methodology, the results obtained and the final conclusions.

2. LITERATURE REVIEW

Supporting the idea that the phenomenon of corruption is socially undesirable and detrimental to the development of a society or economy shows the awareness of its economic and social consequences and leads to an increased attention to the study of corruption. In general, the causes of corruption are studied in the hope of identifying the major determinants of its persistence.

According to the World Bank and Transparency International organization, the media is a major solution to the fight against corruption due to the fact that through it the information regarding this phenomenon is presented (Stapenhurst, 2000; Transparency International, 2003; Suphachalasai, 2005). There are two theoretical approaches that analyse the impact of the media on corruption. The first view is provided by Stromberg (2001), who argues that the lower the access to the media, the greater the corruption because the guarantee of reduced information encourages corrupt people to commit acts of corruption. In this respect, it is considered that the lack of transparency encourages corruption and creates problems that will not be made public (Enikolopov, Petrova and Sonin, 2018).

The second approach shows that an intense activity of the media leads to an increase in the weight of the informed public, who is aware of all the events that take place. Besley and Prat (2001) support this approach and argue that high media pluralism provides accurate information, unaffected by the influences of certain people. A more informed public should know how to separate media sources that provide quality information from those that do the opposite, and those who resort to corruption need to be aware of this. In other words, an effective media should lead to a lower level of corruption.

The role of the media in providing information has been analysed by the research literature, instead less attention has been paid to emphasizing the monitoring role of the media. The conduct of corrupt activities can be hidden until a certain moment, often being identifiable by the media, which later reports all the details about those involved and the steps that take place (Ades and Di Tella, 1999; Acemoglu and Verdier, 2000). Despite this, they also show that the phenomenon of corruption persists and that corrupt people are not very discouraged and find ways to hide information.

Ahrend (2002) and Brunetti and Weder (2003) studied the empirical relationship between media freedom and corruption and demonstrated that lower levels of corruption are associated with media freedom. Considering the state's ownership of the media, it is found that the level of corruption is positively associated with a higher state ownership because it implies less freedom of the media (Besley and Prat, 2001; Djankov *et al*., 2003).

In the context of an effective media, the people should be informed and made aware of all acts of corruption, and in turn they should share information about the wrongs committed by civil servants, politicians or employees of companies. This encourages transparency and enhances accountability, and corrupt people realize the power of this institution (Enikolopov, Petrova and Sonin, 2018).

3. RESEARCH METHODOLOGY: POPULATION, SAMPLE, DATA SOURCE

In order to achieve the goal, the news on corruption from January 2019 to March 2021, presented in Ziarul Financiar, were studied. In this regard, the qualitative method of analysing the content of these publications was addressed. The initiation in the data analysis was achieved by using the word corruption and searching for it in the economic news published in Ziarul Financiar (www.zf.ro). In a first search, 5660 news items on the corruption topic were identified.

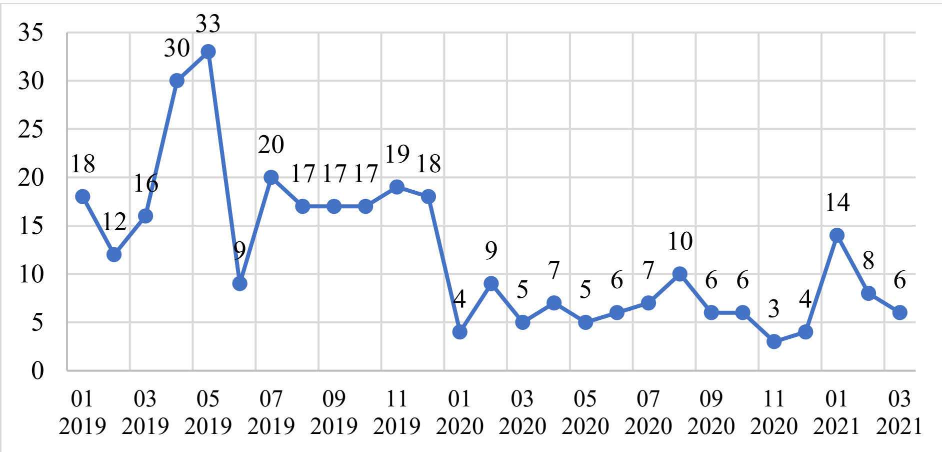
However, only the news published between January 2019 - March 2021 were selected, the final set including only 326 news.

By going through each news, an open coding was used. The identification of the phrases and sentences that refer to the subject of corruption determined the classification of the news in certain categories. The names of the categories and the inclusion of the news in these categories were achieved according to the topics discussed. The categories created are: corruption investigations, fighting corruption, consequences of corruption, political corruption, COVID 19 and corruption, legislative changes related to corruption, opinions on corruption and statistics.

4. RESULTS

The obtained results show that Ziarul Financiar brings very often, to the attention of the Romanian people, the events and topics that have corruption as their topic. After analysing the selected data, several developments of the news were captured, situations that will be reported as follows.

Figure 1. Evolution of corruption news published between January 2019 - March 2021

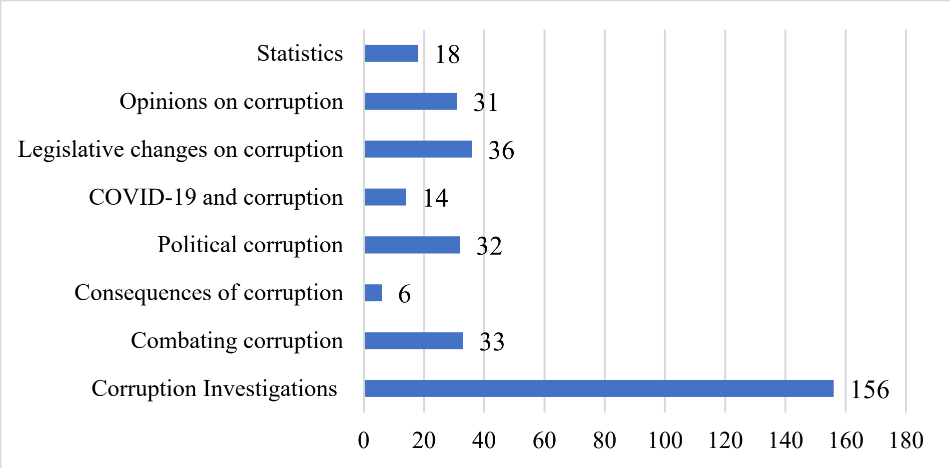


Source: processing performed by the author, 2021

Figure 1 shows that most corruption news (33) was published in May 2019, and the least (3) in November 2020. It can be seen that the number of corruption news differs from one month to another, except for August, September and October of 2019 (17), most of which exist in 2019 (226).

Regarding the categories created and the inclusion of news in each category, Figure 2 contains the number of articles published in each category.

Figure 2. Number of articles published in each category



Source: processing performed by the author, 2021

It can be seen that between January 2019 and March 2021, most published news refers to corruption investigations. Of the 326 news items, about half debate topics related to corruption investigations (156). One can see a moderate amount of news on legislative changes related to corruption (36), on combating corruption (33), political corruption (32) and opinions on corruption (31). The smallest number of corruption news relates to statistics on corruption (18), COVID-19 and corruption (14) and the consequences of corruption (6). This summary indicates that during the period under review there were many cases of corruption that were investigated, the topic of legislative changes related to corruption was intensely debated and there was an interest and need to inform the public about the fight against corruption, political corruption and general views on corruption. Although the COVID-19 pandemic has caused a stir among the entire population, this topic of corruption has not been much debated.

The category entitled *corruption investigations* includes news that is subject to acts of corruption both in Romania and around the world. One can see huge damage, many people and countries involved. Also, a number of large companies engaged in corruption, including Microsoft, Huawei, Oracle, Ericsson, Johnson & Johnson, Siemens, General Electric, Philips, McKinsey, PNK Orlen, Unifarm, AEM Timisoara, Tarom, CFR and IAR Brașov are identified, but also certain banks such as ING, Deutsche Bank, CBH Compagnie Bancaire Helvetique and Goldman Sachs. One of the biggest demands identified in the Romanian press took place in Saudi Arabia where an anti-corruption commission recovered money, real estate, companies and goods worth $ 107 billion, from 87 individuals.

Committing corruption offenses attracts a number of sanctions. Within this category of news, a number of pieces of information that refer to the fines granted to those involved in corruption investigations have been identified. Goldman Sanches Bank, one of the largest banking holding companies in the world, was fined with £ 34.3 million for failing to report accurate and timely information on about 220 million transactions. This bank is also involved in the 1MDB corruption scandal (the 1MDB scheme is a global fraud network that involved raising billions of dollars that were normally intended for certain Malaysian public development projects, but in practice this money got to the personal pockets of some people, including the former prime minister of the country, Najib Razak). The fine for involvement in this corruption scandal is of $ 3 billion, which the bank has agreed to pay in order to end the charge of infringement of the anti-bribery provisions of the FCPA (Foreign Corrupt Practices Act) by which companies or Foreigners are prohibited from offering sums of money to foreign officials for the purpose of assisting in obtaining or maintaining businesses. Airbus ($ 4 billion), Ericsson (over $ 1 billion), the Swiss investment banking giant UBS (£ 27.6 million) and Merrill Lynch, part of Bank of America (with 35 million pounds), were also fined for this infringement. US giant Microsoft is fined with $ 25.3 million for corruption acts in Hungary and other countries, and the former EEA leadership has been accused of fraud worth 50 million euro.

News in this category brings up many important national and international figures who are involved in corruption investigations. Among them we can mention Donald Trump (former US president), Rudy Giuliani (former New York mayor), Ivo Sanader (former Croatian prime minister), Benjamin Netanyahu (Israeli prime minister), Alan Garcia (former Peruvian president), Sebastian Kurz (former Chancellor of Austria), Michel Platini (former UEFA President), Isabela dos Santos (daughter of the former President of Angola), Riza Aziz (producer of "The Wolf of Wall Street"), Leonardo DiCaprio, Dimitriu Sorin-Petre (former president of the Chamber of Commerce and Industry of Romania - CCIR), Mihuț Gabriel-Dan (former General Manager within CCIR), Laurenția Vasilescu (former Financial Manager CCIR), Toni Greblă (former Secretary General of the Government), Octavian Alin Greblă (son), Gheorghe Bunea Stancu (former leader of the Social Democratic Party Brăila), Liviu Dragnea (former president of PSD (Democratic Socialist Party) and former president of the Chamber of Deputies), Cristian Rizea (former PSD deputy), Sorin Oprescu (former mayor of Bucharest), Mircea Sandu (executive member of the UEFA Executive Committee), Mihai Voicu (former PNL (National Liberal Party) deputy), Sorin Mîndruțescu (head of Oracle Romania), Gabriel Marin (head of the IT company Omnilogic), Răzvan Cuc (former Minister of Transport), Lucian Netejoru (former head of the Judicial Inspection), Florin Frunzăverde (former minister), Gabriel Necșulescu (former head of the Economic Police within the Bucharest Police), etc. Also, in 2019, in Romania, the statistics published by the Public Ministry show that 4 defendants - legal entities were tried for corruption offenses.

The news included in the category of *combating corruption* debates multiple topics related to both the awareness of corruption phenomenon and measures against it as the fight against corruption is considered a priority because it hinders social and economic development and affects the consolidation of democracy. The published articles specify that both nationally and globally there is zero tolerance for any act of corruption and that this phenomenon must be firmly combated. The National Anti-Corruption Strategies and their importance are discussed, as well as the efforts of the Romanian Government and all EU Member States to fight corruption throughout the EU, namely cross-border corruption. The issue of eliminating corruption in institutions is an important issue. It is often claimed that weak institutions, weak financial regulations and complicated laws create a prolific environment for corruption. One of the news points out that a study carried out by the European Commission (2019a) shows that almost half of European citizens do not know where to report the acts of corruption they are aware of and that only 15% of them know about the existence of rules that would give them protection in cases where they take action and report infringements.

Articles containing topics on *the consequences of corruption* focus on Lebanon, a country that has collapsed after decades of high-level corruption. Basically, this phenomenon has caused rising unemployment and poverty, forced businesses to close, boosted inflation to astronomical levels and made wages worthless.

The category of news related to *political corruption* is vast and brings into question both Romania and the EU. In the case of Romania, the case of the former president of PSD (Liviu Dragnea) and his acts of corruption are very much discussed. Bulgaria has faced mass resignations from the government because the people concerned have been involved in a corruption scandal over the purchase of luxury apartments at very low prices. Austria also faced a similar situation, in which all the ministers of a party (The Freedom Party) resigned due to a corruption case. Poland is also not immune to corruption scandals involving certain political parties, which still remain in power. Hungary is also characterized by Transparency International as having a corrupt administration, mainly because of Prime Minister Viktor Orban. The New York Times reports that part of the EU's investment in agricultural subsidies reaches politicians' accounts and finances their corrupt relations.

The COVID-19 pandemic has created numerous corruption scandals. Starting with April 2020, news started to appear on this topic. The news included in this category debates the economic deadlock caused by COVID-19. The grey economy that was unveiled in Italy, Spain and Greece as a result of the pandemic crisis is being discussed. Data provided by the World Labour Organization show that in 2020, the underground economy represents 27% of GDP in Romania, 31% in Bulgaria (the poorest economy in the EU) compared to Germany (the largest European economy), where the weight is of 10%. According to the IMF, in 2016, the underground economy accounted for 35% of GDP in Romania, 38% in Bulgaria and 17% in Germany. These data only confirm that this underground economy is characteristic of resource-limited states, weak institutions and corruption. Also, this category included news items that refer to the private system and how affected it is by the pandemic, especially in the conditions of high corruption. However, economist Dragoș Dragoteanu stated that the pandemic will also cause benefits for the private environment, one of which being the digitization of all operations involving bureaucracy, corruption and unnecessary consumption of multiple resources. The Sinovac vaccine is being discussed, which could be the salvation for poor countries that do not have access to Pfizer, Moderna or AstraZeneca sera. However, the world's governments may not have much confidence as the company has a history of corruption and bribery. At Romanian's level, the subject of over-sold masks is being debated, and the international press (Washington Post) states that all contracts concluded for the provision of protective masks lead to a "corruption pandemic".

The news in the category of *legislative changes on corruption* mentions intensely the referendum organized to amend the law regarding the ban on amnesty and pardon for corruption offenses. Topics vary and include both information on the organization of the referendum and its results or the opinions of different people. The European parliamentarian, Ska Keller, stated that at that time the desired changes to the laws only legalized corruption in Romania. It encouraged the organization of the referendum and the defence of the rule of law. The Romanian people answered favourably (2,642,172 votes "Yes", 80.9% of the total votes) to the question on the prohibition of corruption. So, Romanians have shown a desire to fight corruption and to implement this in practice, namely in the legislation, by introducing a ban on granting amnesty and pardons to the corrupt. However, the Constitutional Court (CCR) invalidated this proposal, considering that the ban on the amnesty of the acts of corruption exceeds the limits of revision of the Constitution. It was considered that it is not possible, through the Constitution, to deprive the category of citizens who are convicted of corruption of their rights, while other categories of citizens convicted of other acts could have benefited from the amnesty or be pardoned. In this case, a great Constitutional inequality would have been created and discrimination on fundamental rights would have been created. Another legislative amendment mentioned refers to Company Law 31/1990, in which people convicted of corruption can set up companies. The imposition of the CCR for the enactment of the amending law only makes no one be scared of corruption anymore.

There are many items of news which present opinions on corruption at national level. During an event on the fight against corruption, several Romanian lawyers and judges stated that the level of corruption in Romania is high, but its perception is ahead of its real level. They list the following causes that determine and facilitate the acts of corruption in Romania: lack of political will, opaque bureaucracy, weakness of state institutions, but also tradition. Another opinion (Gabriel Biriș, business lawyer) dismantles populism and corruption and states that Romania's prosperity must be based on work, ambition and investment. During a meeting, however, Donald Trump stated that Romania is among the countries that have made huge progress in combating the phenomenon of corruption. According to Ovidiu Șandor (Mulberry Development), Romania is divided into two, one is represented by the administrative apparatus and state-controlled companies, and the other is represented by private companies working for the state and which is considered underperforming, a large consumer of resources and corrupt. Instead, Sorin Roibu (former staff officer) chooses to build a career on his own because of the system he considers full of corruption (nepotism) issues. The IMF supports the fight against corruption because it would bring extremely beneficial results to all governments of the world. In a 2019 report, the IMF stated that reducing global corruption would generate tax revenues of more than 1,000 billion dollars (almost 1.25% of global GDP) worldwide.

The statistics presented in the articles of Ziarul Financiar include national and world results. In 2019, the US ranked 22nd in the report on the Corruption Perception Index, carried out by Transparency International. The scandals surrounding Trump have led to a 6-point drop in the rankings, recording a score of 77, the worst result since 2011. Considered the tenth state with the highest corruption score in the world, Venezuela has big problems with the phenomenon of corruption, which generates various consequences, including the inflation rate, which stands at almost 3000%. Romania ranks 3rd in the ranking of the most corrupt countries in the EU. According to a study carried out by Transparency International (2019), the situation of corruption in Romania has worsened in the last year as Romanian society has shown less the intention to sanction corruption and lack of integrity. Against the background of the COVID-19 pandemic, the health system and democracy are weakened by persistent corruption. According to European Commission (2019b), in Romania 9 out of 10 companies considered nepotism, clientelism and corruption as serious problems in doing business in this country. Among the companies that were the subject of the survey, 88% of them see corruption as a serious problem and 97% of them consider that acts of corruption are very widespread in Romania. Corruption is an impediment in terms of the access to a public contract, 23% of respondents say, while only 4% of them say they were asked to offer bribes to obtain services or permits. Global Economic Crime and Fraud Survey (2020) identifies the main types of economic crimes, namely bribery and corruption (30%), theft of goods and money (31%), cybercrime (34%) and fraud committed by customers (35%).

5. CONCLUSIONS

This paper analyses the manner of presenting the phenomenon of corruption in the Romanian media (press). Selection and analysis of the 326 news items published in between January 2019 and March 2021, in Ziarul Financiar showed a wealth of information on corruption. The number of news items on corruption differs from one month to another, most of which are presented in 2019.

Classification of news into created categories (corruption investigations, the fight against corruption, the consequences of corruption, political corruption, COVID 19 and corruption, legislative changes on corruption, opinions on corruption and statistics) allowed us to have a better view and enabled the determination of the most common categories of news encountered throughout the selected period. Corruption investigations appear most often, with news in this category reporting acts of corruption that took place both in Romania and around the world. In fact, important names, famous companies and colossal sums are also mentioned here, which means that the media resort to detailed presentations and do not omit information.

Another category of news that has had a high frequency of appearance is the one related to political corruption. There was a clear and systematic presentation of information on political corruption, as there was consistency from day to day and new information was added, when appropriate.

The referendum on amending the law on banning amnesty in Romania was very frequently brought to the attention of the people, the news in this category always presenting the updated information and without traces of influences on the people.

Opinions and statistics on corruption present it as a negative phenomenon that needs to be brought to light, especially through the media, and that needs to be reduced and combated both nationally and internationally.

Referring only to the 326 news items published in Ziarul Financiar, it can be concluded that the Romanian media presents as often as possible the events and acts of corruption that have taken place, making the people aware of the persistent nature of this phenomenon.

References

1) Acemoglu, D. and Verdier, T. (2000). The choice between market failure and corruption. *American Economic Review*, 90(1), pp. 194-211.
2) Ades, A. and Di Tella, R. (1999). Rents, Competition, and Corruption. *American Economic Review*, 89(4), pp. 982-993.
3) Ahrend, R. (2002). Press Freedom, Human Capital, and Corruption. *DELTA Working Paper* No. 2002-11.
4) Besley, T. and Prat, A. (2001). Handcuffs for the Grabbing Hand? Media Capture and Government Accountability. *London School of Economics*.
5) Besley, T. and Prat, A. (2006). Handcuffs for the Grabbing Hand? Media Capture and Government Accountability. *American Economic Review,* 96(3), pp. 720-736.
6) Brunetti, A. and Weder, B. (2003). A Free Press is Bad News for Corruption. *Journal of Public Economics*, 87(7-8), pp.1801-1824.

7) Chong, A., De La O, A. L. and Karlan, D. (2015). Does Corruption Information Inspire the Fight or Quash the Hope? A Field Experiment in Mexico on Voter Turnout, Choice, and Party Identification. *Journal of Politics*, 77(1), pp. 55-71.
8) Cuervo-Cazurra, A. (2016). Corruption in International Business. *Journal of World Business*, 51(1), pp. 35-49.
9) Djankov, S., McLiesh, C., Nenova, T. and Shleifer, A. (2003). Who Owns the Media? *Journal of Law and Economics*, 46(2), pp. 341-382.
10) Enikolopov, R., Petrova, M. and Sonin, K. (2018). Social Media and Corruption. *American Economic Journal: Applied Economics,* 10(1), pp 150-174.
11) European Commission, (2019a). *EU anti-corruption report. Brussels: European Commission*. [online] Available at: https://ec.europa.eu/home-affairs/what-we-do/policies/corruption/anti-corruption-report_ro [Accessed 23.03.2021].
12) European Commission, (2019b). *Flash Eurobarometer 479*. [online] Available at: https://ec.europa.eu/info/news/eurobarometer-479-2019-jun-07_en. [Accessed 28.03.2021].
13) Fergusson, L., Vargas, J. F. and Vela, M. A. (2013). *Sunlight Disinfects? Free Media in Weak Democracies.* [online] Available at: http://siteresources.worldbank.org/INTPOVRES/Resources/JuanVargas_Paper_25Sept13_Draft_March2013.pdf [Accessed 20.04.2021].
14) Ferraz, C. and Finnan, F. (2008). Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes. *Quarterly Journal of Economics,* 123(2), pp. 703-745.
15) Liu, J. and Lin, B. (2012). Government Auditing and Corruption Control: Evidence from China's Provincial Panel Data. *China Journal of Accounting Research,* 5(2), pp. 163-186.
16) Malesky, E., Schuler, P. and Tran, A. (2012). The Adverse Effects of Sunshine: Evidence from a Field Experiment on Legislative Transparency in an Authoritarian Assembly. *American Political Science Review*, 106(4), pp. 762-786.
17) McMillan, J. and Zoido, P. (2004). How to Subvert Democracy: Montesinos in Peru. *Journal of Economic Perspectives*, 18(4), pp. 69-92.
18) Pereș, I., Gherai, D. S. and Balaciu, D. E. (2014). Research on the Contribution of Supreme Audit Institutions to Government Efficiency and to Corruption Perception. *Audit Financiar*, 12(112), pp. 28-38.
19) Snyder, J. M. and Stromberg, D. (2010). Press Coverage and Political Accountability. *Journal of Political Economy*, 118(2), pp. 355-408.
20) Stapenhurst, R. (2000). The Media's Role in Curbing Corruption. *WBI Working Papers,* World Bank Institute, Washington D.C.
21) Stromberg, D. (2001). Mass Media and Public Policy. *European Economic Review*, 45(4-6), pp. 652-663.
22) Stromberg, D. (2004). Radio's Impact on Public Spending. *Quarterly Journal of Economics*, 119(1), pp. 189-221.
23) Suphachalasai, S. (2005). Bureaucratic Corruption and Mass Media. *Environmental Economy and Policy Research Working Papers* No. 05.2005, University of Cambridge, Department of Land Economics.

24) Tanzi, V. (1998). Corruption Around the World. Causes, Consequences, Scope, and Cures. *IMF Staff Papers*, 45(4). [online] Available at: http://www.imf.org/external/Pubs/FT/staffp/1998/12-98/pdf/tanzi.pdf [Accessed 15.04.2021].
25) Transparency International, (2003). *Global Corruption Report 2003*. [online] Available at: https://www.transparency.org/en/publications/global-corruption-report-2003-access-to-information [Accessed 10.02.2021].
26) Transparency International, (2019). *Corruption perception index*. [online] Available at: https://www.transparency.org/en/cpi [Accessed 12.02.2021].
27) Ziarul Financiar, (2021). *Website of Ziarul Financiar*. [online] Available at: www.zf.ro [Accessed 02.02.2021 – 01.03.2021].

NATIONAL STRATEGY FOR THE RESEARCH, DEVELOPMENT AND INNOVATION OF ROMANIAN HIGHER EDUCATION IN A EUROPEAN CONTEXT

DIANA VICOL
Alexandru Ioan Cuza University of Iași
Iași, Romania
diana.vargavrg@gmail.com

Abstract
Higher education plays a key role in achieving the objectives of the European Strategy 2014 - 2020, as it is presented at the level of strategic directions and indicators. The principles considered with regards to the development strategy of higher education have, as a main idea, the increase of long-term economic competitiveness. This is possible through the gradual transition to a knowledge-based economy and a growing demand for highly skilled jobs. In order to accomplish the central objective, there must be a highly qualified workforce of tertiary education graduates who can guarantee in all areas an increase in efficiency processes as well as quality of the resulting products. So as to achieve the focal purpose, the Europe 2020 strategy proposes to improve three support requirements: the funding model, governance and public accountability and the institutionalization of the evidence-based policy-making process. Based on the recommendations, the National Research, Development and Innovation Strategy 2014-2020 for Romania, as an integral part of the Europe 2020 strategy, sets its general objectives helped by the experience of the previous strategic cycle which showed that the program results depend on building and maintaining a wide partnership for innovation. With innovation as its central theme, a pillar of the RDI Strategy 2014 - 2020, we want the analysis proposed in this document, even if not exhaustive, to capture various relevant aspects regarding the stimulation of research/ innovation in Romania and boost the visibility of our country in a European context. A study on the evolution of the number of PhD students and researchers in the last 10 years, as well as the level of funding, can provide useful information on the phenomenon studied. This type of analysis can help the organization and exploration of higher education decision-makers in choosing the best research development strategy at European level.
Keywords: *RDI Strategy; higher education; researcher***.**
JEL Classification: H52, I23, I28

1. INTRODUCTION TO THE NATIONAL STRATEGY FOR RESEARCH, DEVELOPMENT AND INNOVATION 2014 - 2020

Succeeding the wrap-up of the public policy cycle 2007-2013 in the field of research, development and innovation, the new cycle called the National Strategy for Research, Development and Innovation, abbreviated as the RDI Strategy, began in 2014 and ended in 2020. The development of the RDI Strategy has been part of the wider context of the Europe 2020 strategy, in particular, of the initiative “A Union of innovation” and of the main implementation tool: Horizon 2020. The strategy was implemented through a number of instruments, mainly through the National Research, Technological Development and Innovation (PNCDI 3) and through the “Competitiveness” Operational Program.

The formulation of the General and Strategic Objectives of the RDI Strategy was based on three main pillars - affirmation at regional level, affirmation at global level: companies to become key operators of innovation; excellence through internationalization: the RDI sector as an area of opportunity; regional "leadership" at the frontier of science and technology: breakthroughs in strategic areas. Considering the vision regarding research and innovation in Romania, the general and strategic objectives were set as follows:

General objectives:

1. Increasing the competitiveness of the Romanian economy through innovation;
2. Increasing the Romanian contribution to the progress of frontier knowledge;
3. Increasing the role of science in society.

Specific objectives:

1. Increasing a stimulating environment for private sector initiative;
2. Supporting smart specialization;
3. Focusing an important part of RDI activities on societal issues;
4. Supporting the aspiration for excellence in frontier research.

Specific transversal objectives

1. Reaching the critical mass of researchers by 2020;
2. Development of successful research organizations.

2014 – 2020 RDI Strategy and the academic environment

Global recognition of the role of universities in economic and social growth (Kong Fah, 2016) increases the motivation of European governments to restructure universities (Deem, Mok and Lucas, 2008). A study of 146 countries around the world highlights that well-educated people are associated with a high level of labor productivity and a high capacity to absorb advanced technology (Barro and Lee, 2013).

Analyzing the general objectives of the RDI Strategy 2014 - 2020 in Romania, we can see that the academic factor is the basis for their achievement. In formulating the objectives, the surprised terms are: innovation, knowledge and science, terms closely related to the academic environment of research.

Starting from the idea that PhD students contribute to the emergence of a significant proportion of knowledge (Lariviere, 2012) and also research and allocation of funding are among the most important factors that help improve the place in international rankings (Kong Fah, 2016), we analyze in the following part of the document the way in which both the number of students, respectively of the doctoral students as well as of the researchers evolved in the period 2009 - 2019 in Romania.

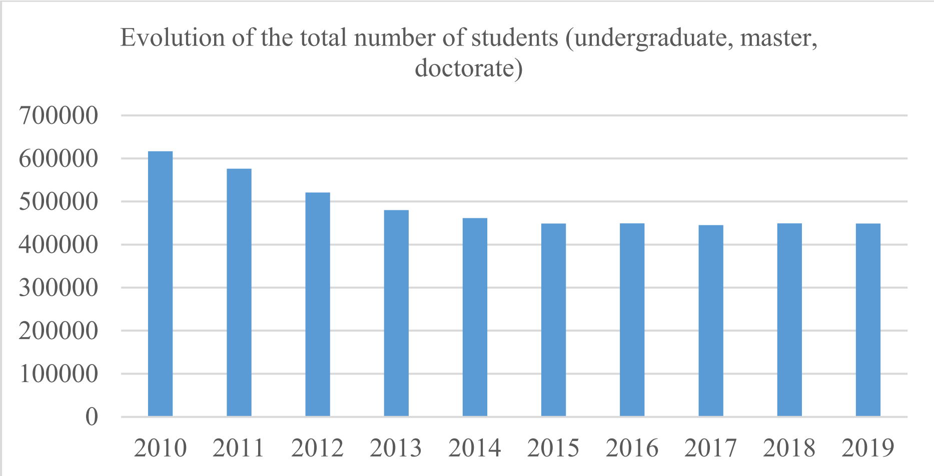
2. ROMANIAN HIGHER EDUCATION - ELITE EDUCATION

The higher education system, through its contribution to the development of the interest and research and innovation skills of young people, throughout the educational process, through the initial training activities of researchers (doctoral students), as well as through the quality of university education provided, is an essential complementary component. the classic system of research - development - innovation (Anghelache *et al.,* 2018).

After the fall of communism in 1989, Romania experienced a rapid increase in demand for higher education. Registering in 2007 an increase in the number of students enrolled in undergraduate studies by approximately 470% compared to 1990, Romania becomes part of the states with mass higher education. However, the increased number of students does not necessarily guarantee a higher level of experimentation, moreover, some researchers argue that the massification of higher education is the sacrifice of elite education (Grant, 2011). Considering the evolution of the number of students in the last 10 years (2010 - 2019), as well as the evolution of funding, we try to draw some conclusions regarding the implications of the RDI Strategy 2014 - 2020 on the Romanian academic and research environment.

Starting with 2008, the number of students enrolled in higher education gradually decreased until around 2014, and from 2015 will experience a certain stagnation around 450,000 students (Figure 1).

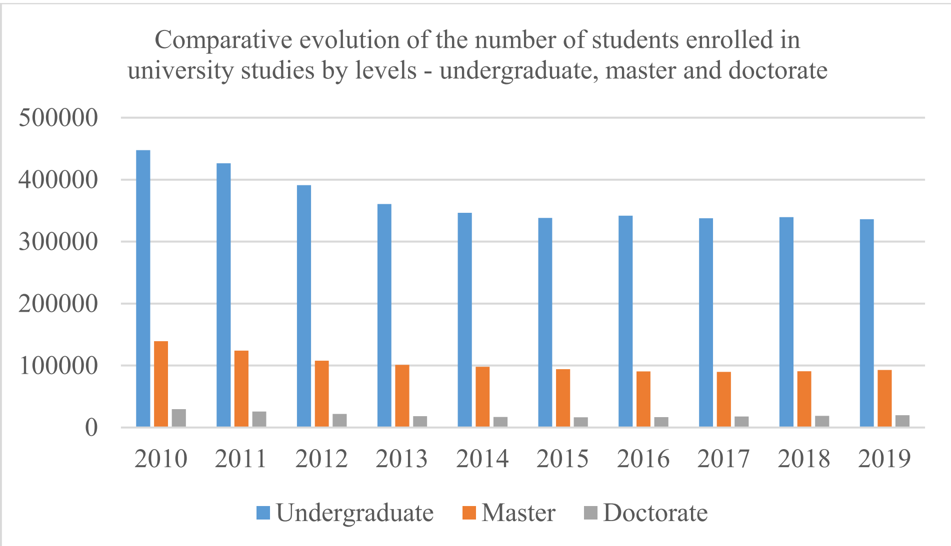
Figure 1. The evolution of the number of students enrolled in undergraduate, master and doctoral studies in the period 2010 - 2019 in Romania



Source: own processing using data from CNFIS (2021)

However, the number of students enrolled in undergraduate, master's and doctoral studies has experienced different evolutions (Figure 2).

Figure 2. The evolution of the number of students enrolled in university studies by levels - undergraduate, master and doctorate in the period 2010 - 2019 in Romania

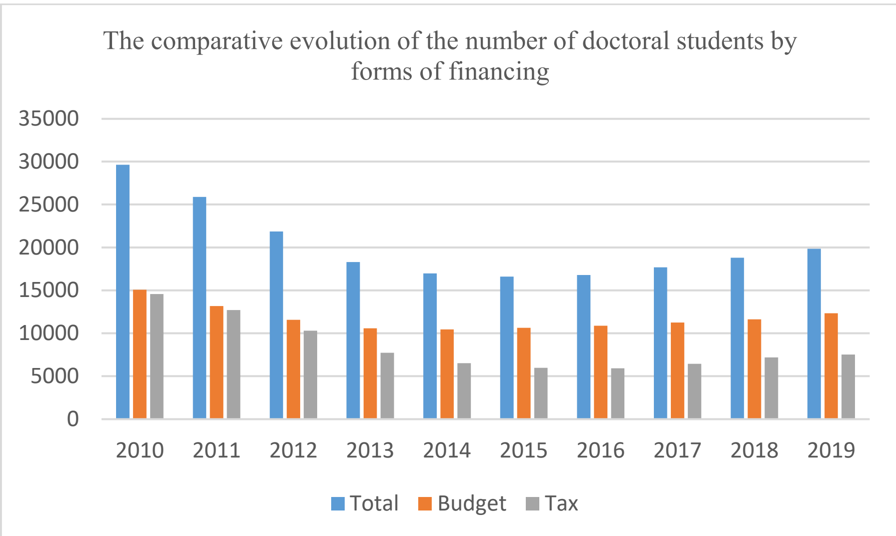


Source: own processing using data from CNFIS (2021)

According to the data captured in the figure above, the evolution of the number of students enrolled at the three university levels is different. It can be seen that the number of students enrolled in undergraduate studies in 2019 is 133% lower than their number in 2010. Regarding the evolution of the number of students enrolled in master's degree studies, their number decreased by about 150 % in 2019, compared to 2010. However, the lowest number of students enrolled in master's degree studies for the chosen interval is recorded in 2017, and starting with 2018 a slight increase can be observed which is maintained the following year. The evolution of students enrolled in doctoral studies has a reduction of 149% in 2019, compared to the reference year 2010 and yet the historical minimum for the period studied is represented by 2015, where the decrease compared to 2010 is about 179%. Starting with 2016, the number of students enrolled in doctoral studies has an upward trend, a phenomenon that may be the result of achieving the objectives of the RDI Strategy 2014 - 2020.

Starting from the specific transversal objective: *reaching by 2020 the critical mass of researchers*, established by the RDI Strategy 2014 - 2020, we propose a more complex analysis of the evolution of the number of students enrolled in doctoral studies, evolution captured in Figure 3.

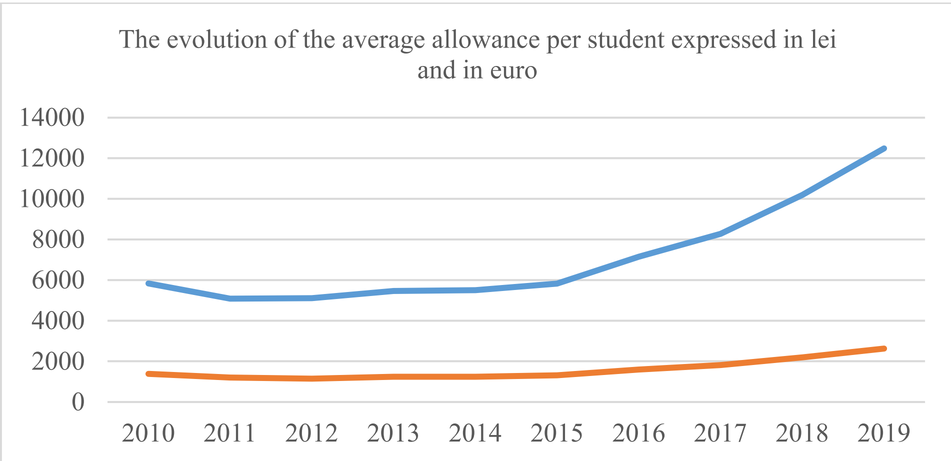
Figure 3. The evolution of the number of students enrolled in higher doctoral studies by forms of financing in the period 2010 - 2019 in Romania



Source: own processing using data from CNFIS (2021)

It can be easily observed from Figure 3. that the number of PhD students in the state funded section and those in the paid section have different evolutions, which may capture new details regarding the implications of the RDI Strategy 2014 - 2020. If at the level of 2010 the ratio between the number of students enrolled in the state funded section vs those enrolled in the paid section is almost 1 to 1, in 2019 the ratio is 1.6 doctoral students on a budget basis to 1 doctoral student in the paid scenario. We can see that although the number of students enrolled in doctoral studies has decreased dramatically compared to the total level of 2010. The number of students enrolled in the doctoral studies in the state funded section is much higher than the number of students enrolled in the paid section. This may be the result of state involvement in stimulating performance at the national level, by subsidizing a larger number of budgeted places for doctoral studies. Supporting a successful education is not only the result of allocating budgeted places for young PhD students, but also the distribution of adequate budgets to support research. Thus, the average allowances per student expressed in lei and euro in the last 10 years (2010 - 2019) have had an increasing evolution, doubling at the level of 2019, compared to the level of 2010 (Figure 4).

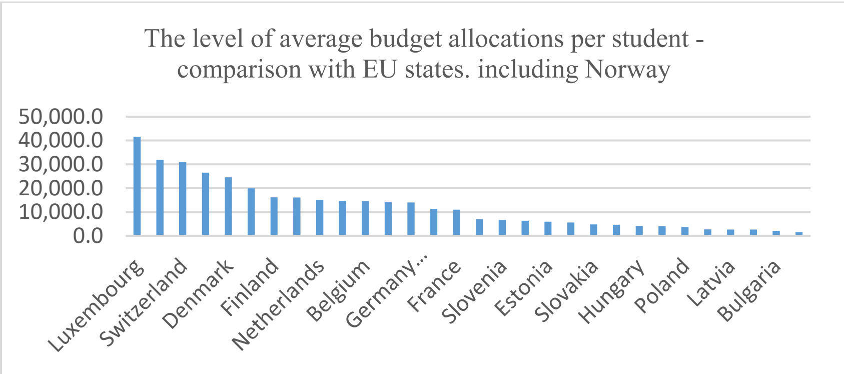
Figure 4. The evolution of the average allowance per student expressed in lei and euro in the period 2010 - 2019 in Romania



Source: own processing using data from CNFIS (2021)

Yet, the budget allocations for Romanian students are by far among the lowest in the entire European Union. At the opposite pole are states such as Luxembourg, Norway, states that allocate funds about 1500% higher than Romania. Even compared to the European Union average, we have a score lower by 72%, which ranks us on the penultimate place in the ranking made in 2017 (Figure 5).

Figure 5. The level of average budget allocations per student - compared to EU member states. including Norway, at the level of 2017



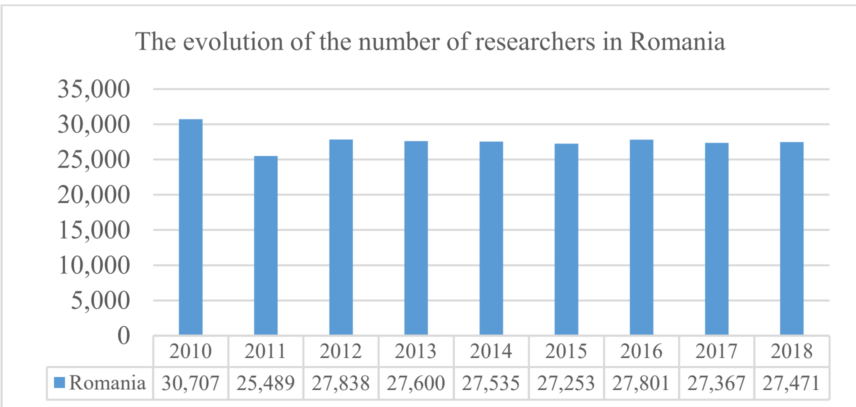
Source: own processing using data from Eurostat (2021)

The low level of budgetary allocations for higher education, as a pillar of supporting and developing a successful, research-oriented academic environment needs to be reformed so that there is comparability at European level, not only of results but also of inputs needed to achieve academic goals.

3. RESEARCH IN THE ROMANIAN AREA

Despite doctoral students being assimilated to researchers, according to the data identified on www.eurostat.eu, the number of researchers in Romania does not necessarily have an increasing evolution for the period 2010 - 2018 (Figure 6).

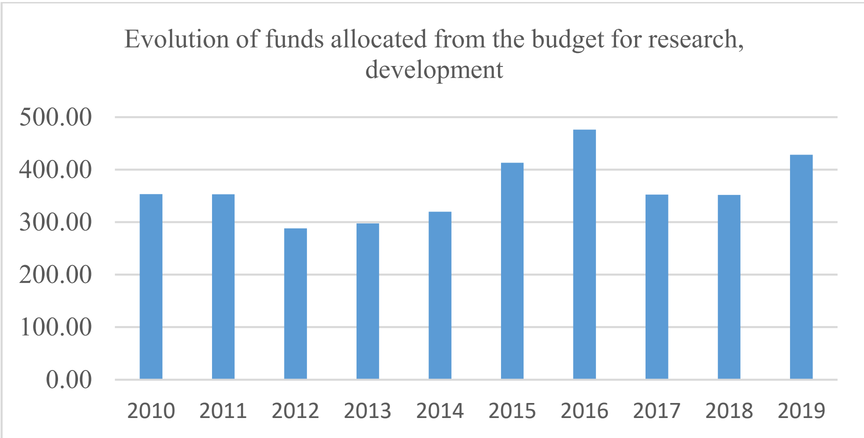
Figure 6. Evolution of the number of researchers in the period 2010-2018 in Romania



Source: own processing using data from Eurostat (2021)

Both the number of students enrolled in doctoral studies and the number of researchers decreased from 2010 to 2018 by about 11%. This may be due to the fact that the research profession is no longer very attractive, it is not well remunerated enough, the endowments necessary for research activities are often not of the highest quality and external pressures are increasing. However, the evolution, in real terms, of the funds allocated to research and development in Romania has experienced multiple variations in the last 10 years, reaching the maximum value of the allocation in 2016, and then in the following years to decrease. However, at the level of 2019, the level of budgetary allocations for research and development in Romania are higher, except for 2016, compared to the rest of the periods considered in the analysis (Figure 7).

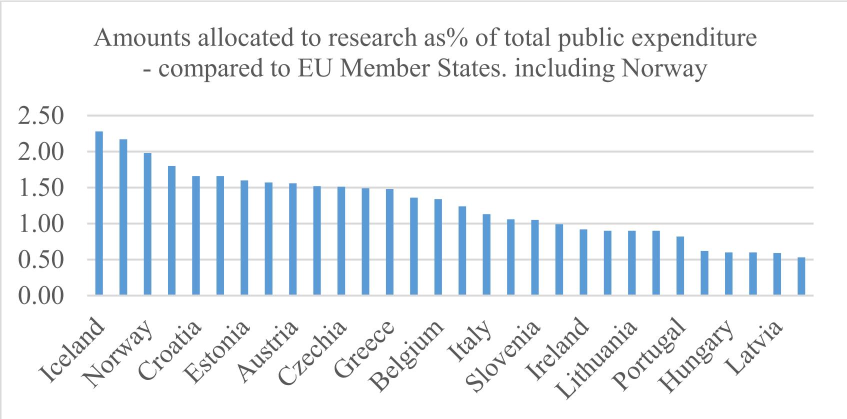
Figure 7. Evolution of funds (million euros) allocated from the budget for research, development in Romania in the period 2010 – 2019



Source: own processing using data from Eurostat (2021)

Even so, in 2019, the amounts allocated by the Romanian government as a percentage of total public spending on research and development compared to the rest of the European Union, including Norway (Figure 8) are the lowest, ranking us last.

Figure 8. Amounts allocated for research as% of total public expenditure - compared to EU member states. including Norway, at the level of 2019



Source: own processing using data from Eurostat (2021)

Being in last place in the allocation of budgetary resources for research must be a wake-up call for decision-makers. Work and investment in the material base for research improve research results (Noh, 2012) and help us become visible in world rankings. At the same time, research creates the leverage needed for progress and adaptation in the context of current new medical challenges. The training of future generations of researchers and the appropriate investments in this field will reposition Romania on the economic map of Europe.

4. CONCLUSIONS

Now, more than ever, amid the pandemic crisis, we have been able to see the beneficial effects of research. Thus, the state must intensify its efforts to support elite higher education, as well as research in order to make Romania visible at European and even global level.

References

1) Anghelache, C., Pârțaci, I., Anghel, G. M., Avram, D. and Burea, D. (2018). The role of scientific research in economic development. *Economica*, 3(105), pp. 122-141.
2) Barro, R. and Lee, J.-W. (2013). A new data set of educational attainment in the world, 1950–2010. *Journal of Development Economics*, 104(C), pp. 184-198.
3) CNFIS, (2021). *CNFIS website.* [online] Available at: http://www.cnfis.ro/ [Accessed 22.02.2021].
4) Deem, R., Mok, K. and Lucas, L. (2008). Transforming Higher Education in Whose Image? Exploring the Concept of the ”World-Class” University in Europe and Asia . *Higher Education Policy*, 21, pp. 83-97.

5) Eurostat, (2021). *Eurostat database*. [online] Available at: https://ec.europa.eu/eurostat [Accessed 23.02.2021].
6) Grant, H. (2011). Competitors of Rankings: New Directions in Quality Assurance and Accountability. *Springer Science Business Media*, 3, pp. 35-53.
7) Kong Fah, T. (2016). Suitability of performance indicators and benchmarking practices in UK. *Benchmarking: An International Journal*, 23(3), pp. 584-600.
8) Lariviere, V. (2012). On the shoulders of students? The contribution of PhD students to the advancement of knowledge. *Scientometrics*, 90, pp. 463-481.
9) Noh, Y. (2012). The impact of university library resources on university research achievement outputs. *Aslib Proceedings,* 64(2), pp. 109-133.

Section III

EU TAXATION AND ACCOUNTING: CHALLENGES OF THE DIGITAL ERA

CERTAINTY OF TAX SYSTEM AND QUALITY OF TAX LAW

EMIL BĂLAN
National University of Political Studies and Public Administration
Bucharest, Romania
emil_balan2005@yahoo.fr

MARILENA ENE
University of Bucharest
Bucharest, Romania
marilena.ene@drept.unibuc.ro

Abstract
The principle of certainty has governed the tax system since the eighteenth century when Adam Smith in his "Wealth of Nations" mentioned the four basic rules applicable to the tax system. The same principles, including certainty, are resumed by the OECD in 2014. In this article is included an analysis of this principle from a theoretical point of view but also in terms of national jurisprudence in the field of tax regulations.
Closely related to the principle of certainty, there is also the obligation of the legislator, both primary and secondary, to elaborate normative acts that follow the national requirements regarding the quality of the law. This aspect, of the quality of the law, is particularly important in tax matters since the tax legislation generate pecuniary obligations on the persons. Imperfect drafting of a normative act, found by the courts after a number of years, causes significant damage initially to the taxpayer, and subsequently, after the publication of the court decision, to the state budget forced to reimburse the unlawful tax.
Keywords: *tax system*; *good governance; good administration; certainty principle; quality of law.*
JEL Classification: K34.

1. PRELIMINARY CONSIDERATIONS

Complying with the laws, ensuring that no one is above the law, and protecting the subject of law against arbitrariness are essential characteristics of the rule of law. Clear, predictable and accessible regulations are needed to ensure that all these values are effective.

Technological and social development in the 20th century, its sustained pace generated an impressive number of regulations, but its clarity, consistency and predictability has often been suffering. Due to a massive enacting, the emphasis was placed on the idea of constituting the legal framework for new legal relationships, not always following the elements of quality. As a result, the addressees of the norms have often been faced with lacunary, non-accessible, non-predictable texts, thus affecting the certainty and stability of legal relations. To remedy such situations, states have developed good regulation policies, policies promoting quality standard assessments and impact studies. And also citizens rely on their own Constitution and national courts to ensure the application of the rule of law. In addition when there is no other national remedy the nationals of the states located in Europe rely on the provisions of the Convention for the Protection of Human Rights and Fundamental Freedoms ("the Convention") as interpreted by the European Court of Human Rights ("ECHR") and on the provisions of Treaty on European Union ("TEU") and Treaty on the Functioning of the European Union ("TFEU") as applied by the Court of Justice of the European Union ("CJEU").

The nationals of the states may rely on Article 6 of the Convention and Article 1 of Protocol No. 1 of the Convention. These provisions are invoked in many cases in tax matters in front of the Romanian courts of law because the interpretation of ECHR based on these articles are confirming the necessity of legal certainty and clarity both in national jurisprudence and legal acts adopted by the states.

The EU nationals may also invoke the decisions of the CJEU in the cases in front of their national court or may formulate a question based on Article 267 TFEU for a preliminary ruling of the CJEU. As mentioned below, there are several CJEU decisions confirming that legal certainty is an important principle derived from rule of law that must be fulfilled both at the EU level and Member States.

At the national level, legal certainty is a complex of guarantees of constitutional validity inherent to the rule of law, which requires the legislator to preserve natural stability and to make the best use of fundamental rights and freedoms. The stability of the rules requires that the law be accessible and predictable, and essentially expresses the fact that citizens must be protected, at times, against a danger that may come from the right itself, against the insecurity that the right itself has created or risks to create.

Although the rules of legislative technique have no constitutional value, by their regulation the legislator imposed a set of mandatory criteria for the adoption of any legislative act, the observance of which is necessary both for the systematization and coordination of the legislation and for ensuring the appropriate content and form for each legal act.

For the modern state, the quality of life is of interest in the aspect of all its components. There is a causal link between the quality of regulations and the quality of life, based on the grounds that legal stability and security, non-retroactivity, certainty of social relations norms, including tax enforcement, provides a necessary order for the trust, development and well-being of individuals.

The cause of this research is the Bucharest Court of Appeal Decision no. 3284 of 25 September 2017 based on which the Order of the Ministry of Public Finance no. 1210 of 9 September 2014 approving the Decision of the Fiscal Central Commission no. 5 of 2014 and the Decision no 5 were annulled by the Court of Appeal. It should be mentioned that the Decision no 5 of the Fiscal Central Commission was actually breaching one of the most clear principles of law, i.e. a secondary norm cannot add provisions to the primary norm. In this case, the Fiscal Central Commission added "*support towers of the wind turbines*" as new type of building, even if the definition the building mentioned expressly in the Tax Code was very clear and did not include any kind of tower.

The effects of this court decision based on to provisions of the Article 126 (4) of the Romanian Constitution and Article 23 of the Law no. 554 of 2 December 2004 regarding the administrative contentious are applicable only after the publication of this decision in the Official Gazette that happened in this particular case almost four years after the Court of Appeal issued it and its effects are applicable only for the future.

Nevertheless, a small group of members of the Deputy Chamber had the initiative to modify directly the Tax Code in order to annul any effect of the above mentioned decision and based on provisions of the Law no. 285 of 29 November 2018 Article 453 item b) of the Tax Code was modified and now can be read as follows: "building includes any construction located above or below ground level, regardless of its name or use, and which has one or more rooms that can be used to house people, animals, objects, products, materials, installations, equipment and others like it, and its basic structural elements are the walls and the roof, regardless of the materials from which they are built, *including the constructions representing the support towers of the wind turbines and their foundations*".

This study is not about the tax reasons behind the Court of Appeal Decision above mentioned representing the pretext for an analysis of the principles that are breached in case the primary or secondary lawmaker is issuing pieces of legislation that are lacking in clarity and are breaching the minimum requirements of quality of legal norms. In one chapter it is analyzed the principle of legal certainty that one can rely based on the Romanian Constitution and ECHR jurisprudence and CJEU decisions. In the next chapter it is reviewed shortly the principle of non-retroactivity as mentioned in the Romanian Constitution and finally the principles of certainty and efficiency of tax law as regulated in the Romanian Tax Code.

2. PRINCIPLE OF LEGAL CERTAINTY

In the Romanian system of law, the supremacy of the Constitution and laws has been elevated to the status of constitutional principle, enshrined in Article 1 paragraph (5) of the Constitution, according to which "In Romania, observance of the Constitution, its supremacy and the elections is mandatory". This has put in place a general obligation, imposed on all subjects of law, including the legislator, which must ensure that law-making is carried out within the limits and according to the Constitution, while ensuring the quality of the legislation.

This is because, in order to comply with the law, it must be known and understood, and in order to be understood, it must be sufficiently precise and predictable and therefore provide legal certainty to its addressees. In this respect, in close connection with the general principle of legality, as laid down in the said constitutional text, another principle, that of legal certainty, has been developed. Without being expressly stated by the constitutional rules, being rather a creation of case law, it is also a fundamental principle of the rule of law.

Having a complex structure, the principle of legal certainty essentially expresses the fact that citizens must be protected "against a danger coming from the law itself, against the insecurity that the right has created or risks creating". This principle has been embedded and has been continuously enriching in European law, both at EU level and in terms of the protection of human rights (Costas, 2016).

The European Court of Human Rights stressed in its case-law the importance of observing the principle of legal certainty, both in the application of the laws and in the national jurisprudence. ECHR mentioned that this principle is "implicit in all the Articles of the Convention and constitutes one of the basic elements of the rule of law" for example in Baranowski v. Poland (paragraph 56), Beian v. Romania (paragraph 39) or Brezovec v. Croatia (paragraphs 66 and 67). The lack of certainty with regard to the national case-law constitutes a violation of Article 6 paragraph 1 of the Convention as one person cannot benefit of the same application of a law as any other person in similar situation including in cases involving conflicting decisions.

It is important to underline that the "States have an obligation to organize their legal system so as to avoid the adoption of discordant judgments". A person reasonably expects from the interpretation and application of a law to obtain a certain benefit and if there is interference "with the right to peaceful enjoyment of possessions and no reasonable explanation is given for it" then it could be considered also a breach of Article 1 of Protocol No. 1 to the Convention. This interpretation was mentioned by ECHR in Brezovec v. Croatia and Guță Tudor Teodorescu v. Romania (paragraph 48). In these cases the Court analyzed the interference resulted from discordant judgements but in early cases ECHR applied the same conditions also to the legal norms of the states.

In Carbonara and Ventura v. Italy (paragraphs 63 and 64) it was reiterated by the Court: "The rule of law, one of the fundamental principles of a democratic society, is inherent in all the Articles of the Convention and entails a duty on the part of the State or other public authority to comply with judicial orders or decisions against it". And also that "the requirement of lawfulness means that rules of domestic law must be sufficiently accessible, precise and foreseeable".

This principle was stated by the Court in early cases such as Hentrich v. France in the judgment of 22 September 1994 and the Lithgow and Others v. the United Kingdom in the judgment of 8 July 1986.

If one of these elements is missing than the interference of a public authority is no longer lawful and the person can invoke that Article 1 of Protocol No. 1 of the Convention is breached.

In order for the law to satisfy the requirement of certainty, it must specify with sufficient clarity the extent and modalities of the exercise of the power of consideration of the authorities in the area concerned, taking into account the legitimate purpose pursued, in order to provide the person with adequate protection against the arbitrariness.

The Court of Justice of the European Union has held that the principle of legal certainty forms part of the EU legal order and must be observed by both the EU institutions and the Member States when exercising the powers conferred on them by EU laws as part of the rule of law (Terra and Kajus, 2021).

As the CJEU mentioned in Case T308/05, Italy v. Commission the "principle of legal certainty requires that legal rules be clear and precise, and aims to ensure that situations and legal relationships governed by Community law remain foreseeable" (paragraph 158). And also that this principle "implies that provisions of Community law must not be drafted in contradictory terms".

But the same principle of legal certainty must be observed by the Member States "more strictly in the case of rules liable to entail financial consequences, in order that those concerned may know precisely the extent of the obligations which those rules impose on them" (Ene, 2020) as mentioned by the Court for example in the cases C-183/14, Salomie and Oltean (paragraph 31) and 325/85, Ireland v Commission (paragraph 18).

A law observes the qualitative requirements imposed both under the Constitution and under the Convention only if the norm is formulated accurately enough so as to allow the citizens to adapt their conduct and predict, to a reasonable extent, in the light of the circumstances of the case, the consequences that could follow from a certain legal act and to correct their conduct. Of course, it may be difficult to draft entirely accurate laws and that a certain level of flexibility might be desirable, so as not to affect the predictability of the law.

The principle of legal certainty ensures continuity and stability of situations created by requiring any law or administrative provision to be clear, precise and known to those concerned so that they can make an informed decision, convinced that the rights born under a law will not be withdrawn or canceled by a later law. The specific nature of legal certainty is reflected by the non-retroactivity of the law, which means that the citizens are protected by abusive practices of the states to adopt legislation applicable to past events (Kryvoi and Matos, 2021).

3. PRINCIPLES OF NON-RECROACTIVY

According to Article 15(2) of the Romanian Constitution, "Law shall act only for the future, except for more favorable criminal or non-criminal law".

As a result of its constitutional consecration, the principle of non-retroactivity has become binding not only on the judge enforcing the law, but also on the legislator, who is also bound to observe it in the lawmaking process, the non-retroactivity of the law constituting a fundamental guarantee of constitutional rights, in particular, as emphasized in the doctrine, of the freedom and security of the person.

The principle of non-retroactivity also applies to regulatory acts issued by the heads of ministries and other bodies of the specialized central public administration or autonomous administrative authorities which, according to the provisions of Articles 78 and 79 of Law no. 24/2000, “are issued only on the basis of and in the implementation of laws, of Government decisions and orders” and “must be strictly limited to the framework established by the acts on the basis of and in the execution of which they were issued and cannot contain solutions contrary to their provisions”.

Moreover, pursuant to Article 69 paragraph (2) of Law no. 24/2000, legislative interventions to clarify the meaning of certain legal rules may confirm, reverse or amend the administrative interpretations adopted until that date, but without prejudice to the rights acquired by the addressees of those rules.

4. PRINCIPLE OF CERTAINTY OF TAX LAW

According to the provisions of Article 3 of the Tax Code, the taxes and duties covered by this code are based on the following principles:

(a) neutrality of tax measures;
(b) certainty of taxation;
(c) tax fairness at the level of natural persons; and
(d) the efficiency of taxation.

The certainty of taxation primarily concerns the clarity of the legal rule and the predictability of tax measures, so that the taxpayer can determine as precisely as possible the impact of the tax burden on its financial management decisions.

This requirement of certainty is particularly important in terms of the rule that is appropriate to give rise to financial consequences, precisely in order to ensure that the persons concerned are clearly aware of their obligations. The impact of this principle also requires that the legal rules be known within a reasonable period of time before their enforcement.

These two principles applicable to tax regulations are mentioned by OECD in the 2015 Final Report for Action (OECD, 2015) being defined as follows: “Tax rules should be clear and simple to understand, so that taxpayers know where they stand”. It is emphasized also, especially for states, that it is necessary to implement a tax system that is simple in order to be “easier for individuals and businesses to understand their obligations and entitlements”.

It is obvious that before starting any project a person builds a projection based on social, economic, legal and predictable factors known. If the tax rules are certain and simple then the individuals or businesses are “are more likely to make optimal decisions and respond to intended policy choices” (OECD, 2015).

The Romanian Constitutional Court mentioned that the state has the right to establish any tax in order to fulfill its contractual obligations but it should be paying attention to the form (Ene, 2020) without concluding on legal certainty or predictability.

The legal certainty exists only if other criteria are fulfilled such as predictability. Even if the Romanian Constitutional Court is not mentioning directly the legal certainty as one of the quality criteria for tax laws it is clear that legal certainty exists only if predictability principle is met. In several decisions the Constitutional Court mentioned that: “any law must meet certain qualitative requirements, including predictability, which means that it must be sufficiently precise and clear to be applicable; thus, the wording with sufficient precision of the normative act allows interested persons, who can have recourse, if necessary, to the advice of a specialist, to reasonably foresee, in the circumstances of the case, the consequences which may result from a specific act.” (for example in Decision 1/2012, Decision 743/2011, Decision 903/2010).

5. CONCLUSIONS

The aspiration of the citizens is to have access to clear, predictable and accessible regulations. It is clear that this should be the desire of the states in order to be sure that the tax obligations are fulfilled voluntarily by its citizens and business. If the legal norms are complicated, complexed or subject to change the taxpayers have the tendency to use different schemes, the so-called “aggressive” schemes in order to avoid paying taxes. A state that is not offering legal certainty in taxation will face many problems starting with low level in collections of taxes and ending with aggressive tax planning. The courts will have to take into consideration the importance of legal certainty and non-retroactivity also in tax matters as both ECHR and CJEU are mentioning these principles as part of rule of law. The relevance of the case-law analyzed in this study was underlined by the Romanian Constitutional Court in many cases so the lawmakers should not ignore it.

NOTES

[1] Bucharest Court of Appeal Decision no. 3284 of 25 September 2017 published with the Official Gazette of Romania, Part I, no. 141 of 11 February 2021.

[2] Case no. 28358/95, Baranowski v. Poland, Reports of Judgments and Decisions 2000-III.

[3] Case no. 30658/05, Beian v. Romania, Reports of Judgments and Decisions 2007-V.
[4] Case no. 13488/07, Brezovec v. Croatia, http://hudoc.echr.coe.int/eng?i=001-104155.
[5] Case no. 33751/05, Guță Tudor Teodorescu v. Romania. [online] Available at: http://hudoc.echr.coe.int/eng?i=001-177258 [Accessed 05.06.2021].
[6] Case no. 24638/94, Carbonara and Ventura v. Italy. Reports of Judgments and Decisions 2000-VI.
[7] Case no. T-308/05, Italy v. European Commission, Judgment of 12 December 2007, ECLI:EU:T:2007:382.
[8] Case C-183/14, Salomie and Oltean, Judgment of 9 July 2015, ECLI:EU:C:2015:454.
[9] Case 325/85, Ireland v Commission, Judgement of 15 December 1987, EU:C:1987:546.
[10] Constitutional Court Decision no. 1 of 11 January 2012, published with the Official Gazette of Romania, Part I, no. 53 of 23 January 2012.
[11] Constitutional Court Decision no. 743 of 2 June 2011, published with the Official Gazette of Romania, Part I, no. 579 of 16 August 2011.
[12] Constitutional Court Decision no. 903 of 6 July 2010, published with the Official Gazette of Romania, Part I, no. 584 of 17 august 2010.

References

1) Costaș, C. F. (2021). *Drept fiscal [Fiscal law],* 3rd ed. Bucharest: Universul Juridic Publishing House.
2) Ene, M. (2020). *Drept fiscal [Fiscal law]*. Bucharest: Solomon Publishing House.
3) Kryvoi, Y. and Matos, S. (2021). Non-Retroactivity as a General Principle of Law. *Utrecht Law Review,* 17(1), pp. 46–58. DOI: https://doi.org/10.36633/ulr.604.
4) Law no. 554 of 2 December 2004 regarding the administrative contentious, published with the Official Gazette of Romania, Part I, no. 1154 of 7 December 2004, as subsequently modified.
5) Law no. 285 of 29 November 2018 for the modification of article 453 lit. b) of Law no. 227/2015 regarding Tax Code, published with the Official Gazette of Romania, Part I, no. 1028 of 3 December 2018.
6) OECD, (2015). *Addressing the Tax Challenges of the Digital Economy, Action 1 - 2015 Final Report*. https://doi.org/10.1787/9789264241046-en.
7) Romanian Constitution, republished in the Official Gazette of Romania, Part I, no. 767 of 31 October 2003.
8) Terra, B. and Kajus, J. (2021). *A guide to the European VAT Directives 2021*, Amsterdam: IBFD.

THE IMPACT OF THE CAPITAL STRUCTURE ON THE ENTERPRISE VALUE AT DIFFERENT STAGES OF THE LIFE CYCLE. CASE OF INDUSTRIAL ENTERPRISES IN THE REPUBLIC OF MOLDOVA

IURIE BEȘLIU
Alecu Russo State University
Bălți, Republic of Moldova
iurie.besliu@gmail.com

OLEG PETELCA
Alexandru Ioan Cuza University of Iași
Iași, România
oleg.petelca@gmail.com

VERONICA GARBUZ
Alecu Russo State University
Bălți, Republic of Moldova
garbuz_veronica@yahoo.com

Abstract
This paper summarizes the arguments and counter-arguments in the scientific discussion on the topic of the optimal structure of capital and the multitude of micro and macro-level factors that influences the decisions of the company's management regarding the choice of financing sources. The main purpose of the research is to determine how changing the structure of capital influences the value of the company. The quantitative models provide only an approximate assessment of the ratio between debts and equity. In the real situation, the structure of capital is formed under the influence of many factors, many of which are difficult to analyze. Among them can be the attractiveness of different sources of funding for company management, information asymmetry, the stage of the life cycle of the company, the need to maintain financial flexibility and questions of shareholder control over the enterprise, the influence of stakeholders. The proposed model for estimating the influence of the capital structure on the company's value is based on the establishment of risk indicators, which may be applicable in the conditions of the economy of the Republic of Moldova, namely risk-free rate of return, risk margin associated with indebtedness, cost of borrowed capital, risk premium, Beta Unlevered, rate of income tax, Beta Levered, cost of equity. The object of the research is joint-stock companies, the most representative for the industrial sector of the Republic of Moldova. The results received confirm that the proposed capital structure optimization model can be used in capital structure planning and assess the impact of capital structure decisions on maximizing the value of the enterprise.

Keywords: *capital structure; financing sources; the value of the company; risk indicators Republic of Moldova.*
JEL Classification: G10, G30

1. INTRODUCTION

In the current conditions of the Republic of Moldova, among the managers of domestic enterprises is vital the problem of determining such a strategic parameter of the enterprise, such as the capital structure.

The development of enterprises depends to a large extent on the optimal ratio between own and attracted resources. On the one hand, the low share of borrowed funds indicates the insufficient use of a much cheaper source of financing than equity. Respectively, the company does not realize its full potential, obtaining a result lower than its potential. On the other hand, the excessive use of borrowed funds exposes the company to the risk of non-payment.

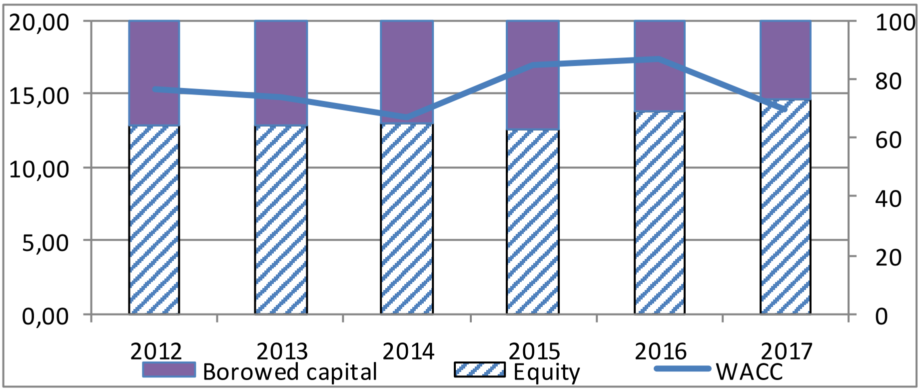
Unfortunately, the management of enterprises in the Republic of Moldova draws little attention to the task of optimizing the capital structure, and in some special cases, the methods of optimizing the capital structure are quite simple, sometimes even primitive, and do not contribute to solving crisis situations and to increase the value of the enterprise. The causes of this situation can be summarized in the gaps in the professional training of managers, the lack of models applicable in local practice, the lack of methodological guidelines, underdevelopment of the capital market, etc. (Tornea, 2011).

Based on the local corporate practice, we find that the large share of borrowed funds in the company's liabilities often correlates with the existence of problems related to financing the activity, respectively is an obvious indication of the company on the verge of bankruptcy. Thus, we note that the prudent and rational management of the capital structure of the enterprise is an important managerial tool and of maximum utility in the conditions of development of the local corporate environment, based on the following considerations:

- the capital structure is a tool for creating the value of enterprises, because following the thorough analysis of the capital structure of domestic enterprises, we can find essential reserves to maximize their value;
- the capital structure is a tool for the strategic development of the enterprise, by attracting cheaper sources of financing than the existing ones, and respectively contributes to the full use of the financial potential of the enterprise;
- the capital structure is a tool for the recovery of companies in crisis.

In order to argue the need for capital structure management, we present the situation regarding the capital structure of industrial enterprises in the Republic of Moldova during the period 2012-2017 in Figure 1.

Figure 1. Capital structure of domestic industrial enterprises for 2012-2017



Source: author's estimates based on the companies' financial reports

For a relevant analysis, in Figure 1, the evolution of the average size of the capital structure at the analyzed enterprises is performed in correlation with the evolution of the average size of weighted average cost of capital (WACC) for the period 2012-2017.

The statistical data of the capital structure of the analyzed enterprises show us that equity is the dominant source of financing the activity of the enterprises. In 95% of the analyzed enterprises, the equity exceeds 50% of the total liabilities of the enterprise. In the capital structure of the analyzed enterprises, the average size of the equity for 2012 constituted 64%, respectively of the debts 36%, and for 2017 - 73%, respectively 27%. The data confirm the trend of increasing the share of equity in the capital structure of domestic enterprises by 9% over the analyzed period.

But a contradictory result records the evolution of the average value of WACC, which over the analyzed period decreases from 15.34% in 2012 to 13.99% in 2017. Usually, as the share of equity in the company's liabilities increases, there is an increase in WACC. The contradictory result is due to the specificity of the macroeconomic environment in the Republic of Moldova and is due to the significant decrease in recent years of average rates on bank deposits and the base rate of the National Bank of Moldova (NBM).

Among the causes that influenced the financing structure of enterprises in the Republic of Moldova we can mention: (1) lack of financial education among representatives of the local business environment, which considers financing the enterprise from shareholders' equity is the cheapest source of financing, and bank loans are the most expensive source of financing; (2) the inability of the domestic banking environment to finance long-term investment projects, i.e. longer than 3-5 years, due to the long-term deficit of financial resources; (3) significant changes in banking regulations in terms of prudential rules for accepting credit risks in recent years have caused a huge discrepancy between the requirements imposed by banks on the domestic business environment and its ability to comply with these requirements; (4) high requirements imposed by financial institutions on forms of bank credit insurance; (5) significant reduction of prices for commercial and residential buildings on the real estate market of the Republic of Moldova. Real estate is a secure guarantee for banks in order to guarantee the repayment of bank loans, and with the reduction of their market price, the possibilities of the business environment for contracting loans have been significantly reduced; (6) the cessation of the financing in 2015 by the international financial institutions through the domestic banking system of various investment and innovation projects; (7) high costs related to contracting bank loans (valuation of collateral, notarial authentication of transactions, completion of various documents issued by state bodies, obtaining extracts from state registers, etc.); (8) high costs of loans to microfinance organizations vis-à-vis simplified requirements for the set of documents required.

The strategic importance of financing policy decisions is related to the fact that high capital expenditures that occur both in the non-use and in the use of attracted resources, create obstacles in the development of the enterprise, namely: (1) the enterprise will have to follow the curve of its life cycle with much higher requirements than the return on invested capital; (2) companies will not be flexible enough to make investments; (3) the occurrence of conflicts of interest between management and owners; (4) the large share of borrowed capital may affect the trust of stakeholders in the enterprise.

Therefore, the purpose of the research is to determine how changing the capital structure influences the value of the enterprise at different stages of the life cycle and to determine the optimal capital structure of the enterprise.

To achieve this goal, the paper continues to briefly introduce the main theoretical explanations for determining the optimal capital structure, the factors that determine the importance of capital structure at different stages of the life cycle, and explain how changing capital structure influences the value of the enterprise. Section 3 provides information on data collection and the method used to conduct the research, and then Section 4 presents the results and discusses the findings. Finally, section 5 is devoted to the conclusions.

2. LITERATURE RESEARCH

Determining the existence of the link between the capital structure and the value of the enterprise, the scientific community tries to determine the aspects of the formation of the optimal capital structure - structure, to which the value of the company tends to the maximum. English researchers R. Brealy and S. Mayers called the problem of determining the optimal capital structure one of the most important problems, which remains unresolved in modern financial science (Brealey, Mayers and Allen, 2020).

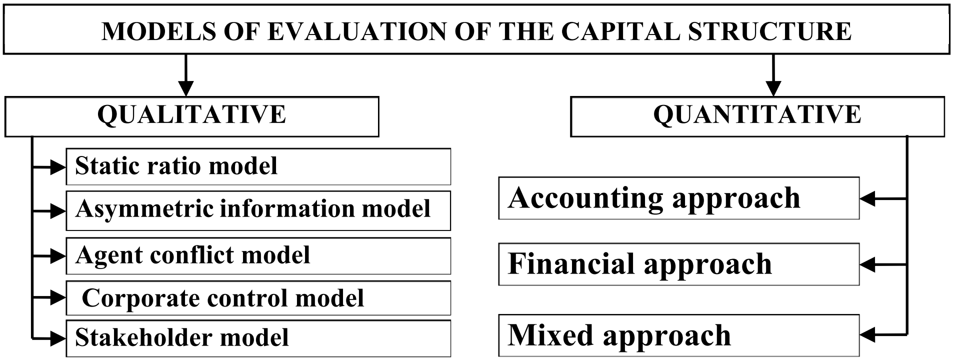
Most often, the management of enterprises in the Republic of Moldova prefers to focus on internal sources of funding (Government RM, 2012), based on the principles of the so-called theory of hierarchies (Modigliani and Miller, 1958). Within this theory, the change of the capital structure is dictated by the lack of own means, which is manifested, as a rule, in the realization of some development projects.

Within the theory of corporate finance, the aspects of the optimal capital structure are determined by a multitude of micro and macro-level factors, which in one way or another influence the decisions of the company's management regarding the choice of financing sources. For a number of these factors, the interdependence between the capital structure and the value of the enterprise can be described mathematically. Thus, we deduce the quantitative models for the analysis of the capital structure. However, quantitative models provide only a rough estimate of the debt-equity ratio. In the real situation, the structure of capital is formed under the influence of many factors, many of which are complicated to analyze. Among them can be: the different attractiveness of financing sources for the company's management, information asymmetry, the stage of the life cycle of the company, the need to maintain financial flexibility and shareholder control questions over the company, the influence of so-called stakeholders. All these factors are studied in the qualitative models of capital structure analysis.

To determine the optimal capital structure of the enterprise, the results of the quantitative methods must be supplemented with a detailed qualitative analysis. A classification of the evaluation models is given by the author in Figure 2.

One of the methods of quantitative assessment of the capital structure used in the corporate practice of the Republic of Moldova is the method of operational profit, aimed at determining the permitted level of debt in the capital structure. This method is based on an accounting approach to the capital structure and is aimed at detecting the probability of the company's bankruptcy based on the analysis of its profit volatility. The bankruptcy, in this case, is examined in simple form and can be described as the inability of the company to make current debt payments, i.e. the probability that the profit will not cover interest and the current part of the debt. For each specific level of financial leverage (CI / CP), the probability of bankruptcy is analyzed and compared with the size of the previously assigned allowable level. If at a given level of debt the probability of bankruptcy is lower than the introduced limit, then the loan financing must be increased, and conversely, if the probability of bankruptcy is higher than the established level, the financial leverage is to be reduced. Thus, the optimal size of the debt is that at which the probability of bankruptcy is equal to the established amount.

Figure 2. Models for evaluating the capital structure



Source: synthesized by the author based on bibliographic sources (Băncilă, 2007; Jensen and Meckling, 1976; Bodie, Merton and Cleeton, 2009)

This method simplifies the view on the problem of capital structure, firstly by the nature of the division of future profit and secondly by the hypothesis of dependence on the level of financial leverage. The first hypothesis establishes the possibility of servicing the debt, which the management intends to increase and addresses the maximum possible size of the debt. The second hypothesis sets out the situations in which the high financial leverage will work against the company (Altaf and Shah, 2021), for example, customers and suppliers will see increased risks, tighten contractual conditions, or refuse to work with the company, which will reduce cash flows. The reduction of cash flows is a step towards reducing the value of the enterprise, respectively the increase of borrowed capital becomes, in essence, meaningless from the point of view of solving the task aimed at increasing the welfare of business owners (Vo, 2021).

However, the operating profit method can be used in practice as an element of creating the capital structure optimization model and can be very useful in expressly assessing the capital structure.

At first glance, the methods used in local practice described above seem quite primitive, but can be justified by the theory proposed by Nobel laureates Modigliani and Miller in "The Cost of Capital, Corporation Finance and the Theory of Investment" (Modigliani and Miller, 1958) which is reduced to the fact that the cost of capital of the enterprise does not depend on the method of financing. In other words, it makes no sense to manage the structure of own and borrowed funds. In its classic version, this theory is indeed true, but with the existence of conditions such as lack of taxation and the existence of an ideal capital market. The amended model, which takes into account the taxation factor, presupposes the existence of a rational share of borrowed capital, which would be useful to the company. The basic question that arises is: what would be the share of borrowed capital in the structure of the company's liabilities, to ensure a maximum market value for the company, while minimizing the expenses with the company's liabilities?

To answer the question of changing the efficiency of the company's activity when using the attracted funds, we will use the financial leverage effect indicator (EPF). In general, under the notion of leverage, is meant the factor, the correction of which causes the change of the resultant indicator. In the context of the science of financial management, the use of financial leverage means changing the ratio of own and attracted resources to influence the profit of the enterprise. The effect of financial leverage reflects the level of additional profit on equity when using different weights of borrowed capital. The effect of financial leverage is determined by the formula:

$$EPF=(ROE - R_d) \times (1-T) \times CI / CP \quad (1)$$

where ROE – return on equity, R_d - the interest rate on loans, T - corporate tax rate.

The calculated size of the EPF shows how much the return on equity will increase when attracting borrowed funds, compared to the existing return. The EPF size is positive when the financial return is higher than the interest rate on the borrowed funds. In other cases, the use of financial leverage will cause losses. In this way, the company that attracts additional resources has a greater financial potential for development (Altaf and Shah, 2021). Loans have a positive impact on increasing profitability, but up to a point. The subsequent attraction of the borrowed funds creates financial risk, and therefore the threat of bankruptcy of the company.

In the local financial practice, increased interest is presented by qualitative models, which take into account the factors and cause-effect links, developed mainly by Western theorists. A classification and a systematization of these models will be presented below:

- static report models, in which the emphasis is placed on the impact of the expenses of the possible bankruptcy and the fiscal shield on the capital structure;
- asymmetric information models, assume that there are information asymmetries on the market, and managers are operators with access to the information within the company;
- agent expenses models reflect the impact of the problems, related to the agent expenses on the capital structure. Agent issues may arise between managers and owners due to the use of profit, shareholders, and bondholders to attract additional capital;
- corporate control models imply the existence of a direct link between the share price and the efficiency of the company's management. Changing the capital structure is the impact of changing the ownership structure;

- stakeholder models, unlike previous models, take into account, in addition to the interests of bond owners and holders, the external environment in which the company operates. By the notion of stakeholders, we mean employees, suppliers, competitors, consumers, etc. These models recognize the influence of stakeholders, as well as shareholders and managers, on the formation of capital structure.

Previously, the issue of forming an optimal capital structure was addressed. Next, we examine the criteria, maximizing or minimizing which establish an optimal structure between own and borrowed funds. Studying the existing approaches in the literature (Copeland, Koller and Murrin, 2000; Damodaran, 2012; Pratt, Morrison and Fishman, 2013; Fishman *et al.*, 2002), the authors synthesized the following main criteria:

1. *The value of the enterprise*: maximizing value is the priority objective because achieving it leads to increasing the well-being of shareholders.

2. *Financial flexibility*: its increase consists of increasing the company's capacity to bear various unforeseen expenses.

3. *The value of sources*: it is expressed by minimizing the costs of servicing the attracted resources.

4. *Financial sustainability*: building up sufficient reserves, increasing asset liquidity.

It should be noted that each independent enterprise determines the priority criteria, after which it will optimize the capital structure. Based on these considerations, the authors propose to assign more significant weight to one or another criterion depending on the stage of the life cycle of the company and the specific objectives to be addressed in each stage.

The launch stage is characterized by the creation of the enterprise, therefore at this stage, the value of the enterprise is largely conditioned by the forces outside it, the financial activity is only at the beginning of the path. However, from a financial point of view, the value of the enterprise at this stage can be defined by the net accounting assets of the enterprise (the value of invested capital).

Throughout the launch phase, the cash flow of the enterprise from the operational and investment activity is negative, respectively for supplying the enterprise with financial means, the enterprise uses external financial sources, registering a positive cash flow from the financial activity.

The task of management is to bring the operational flow of the company in the area of positive sizes. Therefore, we consider that the key process is to transform entrepreneurial energy into a constant cash flow from operational activity.

According to the authors, to manage the value of the company at the launch stage, special attention should be paid to liquidity and financial stability indicators. As this period is characterized by the start of production activity and production capacities have not yet been put into operation, it is not rational to draw conclusions based on indicators of profitability or turnover. Usually, at the launch stage, the share of borrowed sources in the liabilities of the company's balance sheet is impressive, which increases the financial risk, therefore the actions related to the management of the company's value will aim at stabilizing the financial indicators.

At the growth stage, the key process is to transform cash flow into market share. The dilemma of sharing the position of the owner with new investors arises in front of the entrepreneur because to solve the growth task it is necessary to attract new capital and, respectively, to share control over the company. Solving the growth tasks based on the active attraction of the borrowed capital, but not based on the own capital, collides with the limits of the company's credibility and the quality of the management of the attracted loans. Thus, the authors identify a problem needed to be solved at this stage, namely the strategic nature of the capital structure, which is conditioned by:

- high capital expenditures, determined by the small share of borrowed capital;
- the strategic nature of the capital structure indicates that the attempt to solve the growth through loans without attracting new investors-owners leads to the considerable share of borrowed capital in the capital structure and the increase of financial leverage, hence financial dependence (Ferrés *et al.,* 2021).

The task of the growth stage requires solving the problem of investments in working capital, and that of acceleration - long-term investments in development.

To manage the value of the company at the growth stage, the authors conclude that the issue of determining the optimal sources of financing adjusted for growth is of particular importance.

During the maturity period, the enterprises register a dispersed capital structure. Therefore, to ensure the longevity of the maturity period, the task of the company's management is to optimize the costs related to the financing of the company and to establish an optimal capital structure. At this stage, the role of internal factors, namely financial ones, in the enterprise value management is maximum, because the external conditions are beneficial to a mature enterprise.

According to the authors, one of the models for establishing the optimal capital structure, which could be successfully adapted in the corporate practice of the Republic of Moldova is the WACC model, which is part of the quantitative models, based on a financial approach to enterprise capital. We consider that WACC is a tool that combines several factors in the analysis of the company's capital. WACC is one of the key factors in the recovery of the financial situation and the enterprise value management, which fulfills the role of the critical point of return on capital. Accordingly, reaching the minimum rate of return on the critical point of return on capital widens the company's ability to make efficient investments, makes its investment policy more flexible, reduces the inflow of money, and leads to increased earnings for owners.

From the point of view of the task of optimizing the capital structure, recovering the financial situation, and increasing the enterprise value, the analysis of the capital structure is quite complex. It is necessary to answer the main question: what ratio between equity and borrowed capital will lead to maximizing market value?

The key to the answer is rational to be sought first of all in dealing with the investment value of the company itself, which expresses the amount of discounted free cash flows that the investor expects in the future. Updating the earnings flows that investors rely on means recognizing the impossibility of receiving the expected profit immediately and therefore taking into account the alternative rate of missed profit. For enterprises that use borrowed capital for development, this rate includes the minimum rates of return required by creditors (k_d) and owners (k_e). If we take into account the share of borrowed (w_d) and own (w_e) assets in the total capital, then the profitability requirements submitted by the two investors can be unified in a single rate - WACC, as shown in Figure 3.

Figure 3. Two parts of the relationship of capital expenditures

$$\frac{CI}{CI+CP} \cdot K_d + \frac{CP}{CI+CP} \cdot K_e = WACC$$

Investment risks for the given type of investor = Requested rates, results from analysis of alternatives | Critical point = Rates of the alternative investments for the enterprise

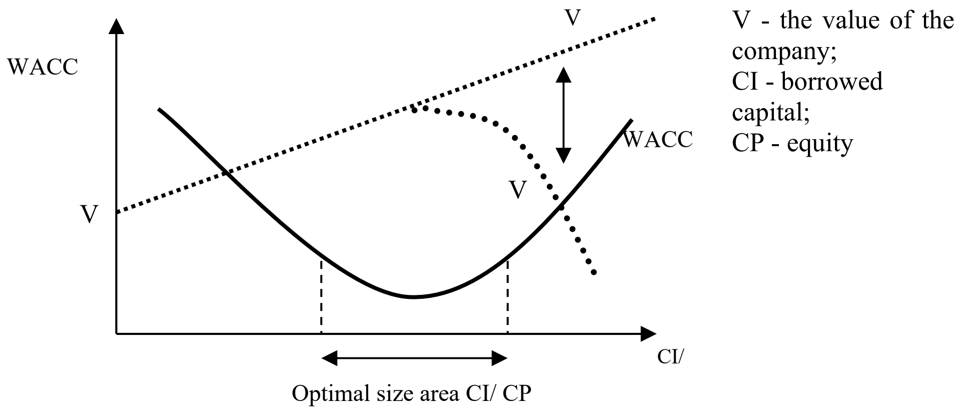
CI – borrowed capital;
CP – equity;
CI / (CI+CP) – the share of borrowed capital (W_{CI});
CP / (CI+CP) – the share of equity (W_{CP}).

Source: developed by the author based on the calculation relationship

The equality of the weighted profitability in Figure 3 looks simple, but if we avoid the mathematical form and think about the positions of the financial rules, then we see at the same time two equalities. The left side of equality expresses investors' expectations about a concrete enterprise. The first part of equality (WACC) must be read by the company's management team. From the point of view of management tasks, both groups of rates (k_d and k_e) mean the burden of meeting the requirements of investors, which are placed on the shoulders of managers. The WACC rate means the nature of the expenses to attract capital because it must be covered from the income earned. Therefore, the right side of equality expresses the critical point of profitability, which the management of the company is obliged to take into account when carrying out the strategy and financial policy of the company. In other words, this rate serves management as an instruction for the necessary investments, which will shape the future flows of the company and its value.

The dynamics of the total capital expenditure rate (WACC), as shown in Figure 4, looks unusual. At a low share of borrowed capital in the company's sources of financing, the critical point of capital profitability is higher, because equity is more expensive than borrowed capital. Not going into the details of a complex analysis of profitability, required by the owners of the company, we will note that in a general form, this rate can be expressed as follows: $k_e = k_d$ + risk premium for owning the company.

Figure 4. Optimal capital structure

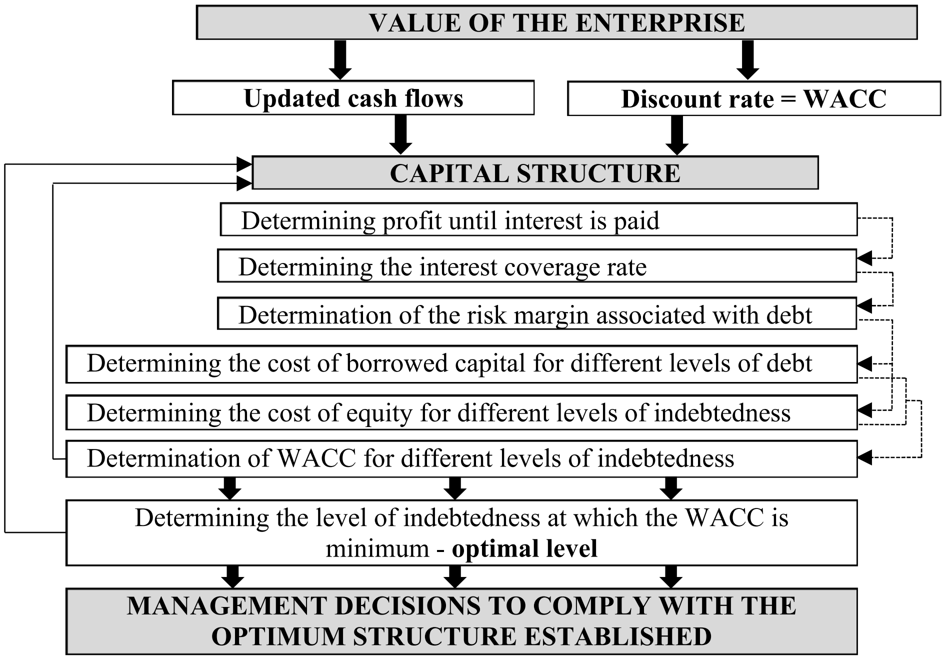


Source: adapted from Brigham and Ehrhardt (2017)

As the share of borrowed capital increases, the critical point of return on total capital (WACC) decreases, as the share of cheaper capital increases and the effect of the economy on income tax works, and then the situation changes and the critical point rises. As the value of the enterprise depends on the total capital expenditure rate (WACC), the task of the management team is to build a policy to finance the long-term development of the enterprise in such a way as to locate the ratio between equity and borrowed in the area of optimality. However, this task involves setting the following objectives: a) determining the area of the optimal size of the WACC and b) determining the financial instruments to maintain the structure of funding sources within the optimal corridor under the influence of the changing environment. Thus, in the analysis of the financial leverage, we can conclude that not all its sizes achieve the purpose of increasing the value of the enterprise. Respectively, the task of managing the value of the enterprise, applied to the financing policy is transformed into the task of locating the enterprise in the area of the optimal sizes of the capital structure.

The application in the domestic financial practice of the capital structure optimization mechanism is difficult due to the involvement of some indicators, the determination of which is problematic due to the lack of statistics on the risks related to the national economy. But notwithstanding these difficulties, the author proposes a model for determining the optimal capital structure for domestic enterprises, summarized in Figure 5.

Figure 5. The model for estimating the optimal capital structure based on the logic of managing the value of the enterprise



Source: prepared by the author

The proposed model for estimating the optimal capital structure of the enterprise is based on the establishment of risk indicators, which could be applicable in the conditions of the Moldovan economy, namely:

- *risk-free rate of return* (R_{fr}). In global practice, the rate of return on long-term government securities issued is used to determine it. In developed countries this rate varies between 4% and 8%;
- *the risk margin associated with the debt* (M_r) - represents the net profitability of the loan providers, which is determined depending on the risk related to the loan. According to the Modigliani-Miller theory, companies prefer debt financing to benefit from tax advantages obtained

through the deductibility of interest expenses. But the increase of debts leads to the increase of the risk of bankruptcy, respectively the increase of the indebtedness rate is considered a negative signal, both by creditors, who will request a higher risk premium and by external partners, which will lead to reduced relations with the enterprise.

3. METHODOLOGY

To solve the problem of determining the optimal capital structure, the author proposed a model for estimating the optimal capital structure applicable in the conditions of the Republic of Moldova, which is based on establishing risk indicators, namely: risk-free return rate, risk margin associated with debt, cost of borrowed capital, risk premium, Beta Unlevered, corporate tax rate, Beta Levered, cost of equity.

For our calculations, we used the risk margin associated with indebtedness developed by the American researcher Damodaran (2017), representative of the Stern School of Business, and it will be estimated depending on the size of the interest rate, shown in Table 1.

Table 1. Interest coverage ratios and the risk margin associated with borrowing interest on loans

If the interest rate is		Company rating	Risk margin associated with debt
>	≤ up to		
-100000	0.499999	D2/D	18.60%
0.5	0.799999	C2/C	13.95%
0.8	1.249999	Ca2/CC	10.63%
1.25	1.499999	Caa/CCC	8.64%
1.5	1.999999	B3/B-	4.37%
2	2.499999	B2/B	3.57%
2.5	2.999999	B1/B+	2.98%
3	3.499999	Ba2/BB	2.38%
3.5	3.9999999	Ba1/BB+	1.98%
4	4.499999	Baa2/BBB	1.27%
4.5	5.999999	A3/A-	1.13%
6	7.499999	A2/A	0.99%
7.5	9.499999	A1/A+	0.90%
9.5	12.499999	Aa2/AA	0.72%
12.5	100000	Aaa/AAA	0.54%

Source: (Damodaran, 2018)

From the data presented in Table 1, we can notice that the lower the interest coverage rate, the higher the risk margin associated with the debt, ie the cost of borrowed resources will increase, following the worsening of debt service capacity.

To automate the mechanism for determining the optimal capital structure, the authors developed a spreadsheet program in the Microsoft Office Excel package, the purpose of which is to automatically identify the optimal capital structure based on the introduction of initial data.

Following the processing of the initial data (Table 2), the program developed by the author estimates the WACC at different sizes of the capital structure of the enterprise. To determine the cost of borrowed capital, the program allocates a margin associated with borrowing depending on the interest rate, estimated on the basis of the data in Table 1.

Following the estimation of WACC at different equity structures, the optimal capital structure was determined, at which WACC is the smallest.

We chose 5 domestic enterprises and compared the efficiency of capital use by analyzing the estimated optimal capital structure in correlation with the existing capital structure.

4. RESULTS AND DISCUSSIONS

To determine the risk associated with indebtedness for domestic enterprises, it is necessary to determine the interest rate indicator (R_{ad}), which is estimated according to the formula:

$$R_{ad} = \frac{PPD_n}{CI \times (R_{fr} + PR)} \quad (2)$$

where PPD_n - profit until the payment of interest and taxes, CI - borrowed capital, R_{fr} - the risk-free rate of return, PR - risk premium.

To determine the WACC we use the following indicators:

- *the cost of borrowed capital* (CCI) - is determined as the sum of the risk-free rate of return and the risk margin associated with the debt. The calculation formula is as follows:

$$CCI = R_{fr} + M_r \quad (3)$$

- *risk premium (PR)* for the Moldovan economy set by US Professor Damodaran at level of 5% (Damodaran, 2018);

- *Beta Unlevered (B_U)* - the market risk of an asset in a particular branch of economy, based on data established by US Professor Damodaran exposed in Damodaran (2018);

- *corporate tax rate (T)*, which in the Republic of Moldova was 12% for 2017.

- *Beta Levered (B_L)*, the risk coefficient for an asset in a particular branch of economy adjusted by the effect of financial leverage, which is estimated by the formula:

$$B_L = B_U \times (1 + {}^{W_{CI}}\!/\!_{W_{CP}}) \times (1 - T) \quad (4)$$

where B_U - Beta coefficient without taking into account the effect of financial leverage;

- *cost of equity (CCP)*:

$$CCP = R_{fr} + PR \times B_L \quad (5)$$

where: PR - market premium (risk).

The following initial data reflected in Table 2 (based on the practical data of ”Supraten” S.A.) were used to determine the optimal capital structure:

Table 2. Initial data for the program for determining the optimal capital structure (based on data from "Supraten" S.A.)

Initial data	Abbreviations	Size
The risk-free rate of return	R_{fr}	10.36%
The margin of risk associated with	M_r	0.54%
The cost of borrowed capital	CCI	10.90%
The size of equity	CP	207 687
The size of the borrowed capital	CI	309 296
Total assets	TA	516 983
Risk premium	PR	5.0%
Unlevered beta	B_u	0.61
Income tax rate	T	12%
Existing capital structure	CI/CP	59.83
Profit until interest is paid	PPD	89 381

Source: prepared by the author

Following the estimation of WACC at different equity structures, the optimal capital structure will be determined, at which WACC is the smallest. The following is an example of the result of determining the optimal capital structure using the model developed by the author based on a domestic industrial enterprise, presented in Table 3.

Following the calculations performed, we establish that the optimal capital structure for "Supraten" S.A. constitutes a share of borrowed capital of 35% of the total capital attracted. At this capital structure, the expenses with the attracted capital will be the lowest, ie 13.19%. Based on the data in Table 3 we find that the area of allowable sizes of WACC within "Supraten" S.A. constitutes between 13% and 14%, with a maximum share of 60% of the borrowed capital. After the rate of

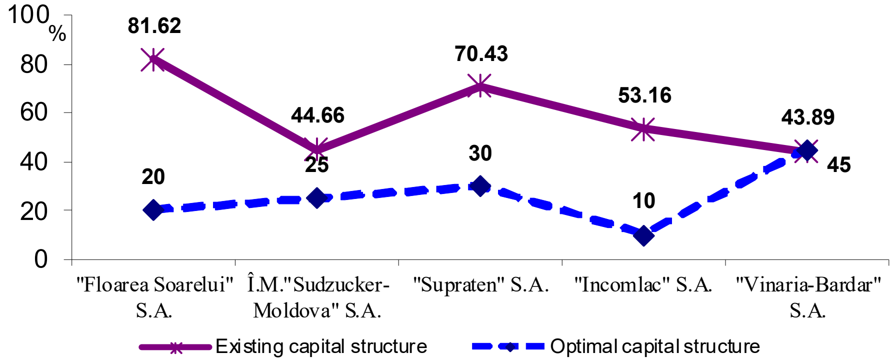
14%, the growth rate of WACC is more pronounced and respectively unacceptable for the company.

Table 3. Estimation of the optimal capital structure for "Supraten" S.A.

CI/TA	R_{ad}	Risk margin	CCI	CI/CP	Beta Levered	CCP	WACC
5%	31.7	0.54%	10.90%	0.05	0.64	13.55%	13.35%
10%	15.9	0.54%	10.90%	0.11	0.67	13.71%	13.30%
15%	10.6	0.72%	11.08%	0.18	0.70	13.88%	13.26%
20%	7.9	0.90%	11.26%	0.25	0.74	14.08%	13.25%
25%	6.3	0.99%	11.35%	0.33	0.79	14.30%	13.23%
30%	5.3	1.13%	11.49%	0.43	0.84	14.56%	13.23%
35%	4.5	1.13%	11.49%	0.54	0.90	14.86%	13.19%
40%	4.0	1.98%	12.34%	0.67	0.97	15.20%	13.46%
45%	3.5	1.98%	12.34%	0.82	1.05	15.61%	13.47%
50%	3.2	2.38%	12.74%	1.00	1.15	16.09%	13.65%
55%	2.9	2.98%	13.34%	1.22	1.27	16.69%	13.97%
60%	2.6	2.98%	13.34%	1.50	1.42	17.44%	14.02%
65%	2.4	3.57%	13.93%	1.86	1.61	18.39%	14.41%
70%	2.3	3.57%	13.93%	2.33	1.86	19.67%	14.48%
75%	2.1	3.57%	13.93%	3.00	2.22	21.46%	14.56%
80%	2.0	4.37%	14.73%	4.00	2.76	24.15%	15.20%
85%	1.9	4.37%	14.73%	5.67	3.65	28.62%	15.31%
90%	1.8	4.37%	14.73%	9.00	5.44	37.57%	15.42%
95%	1.7	4.37%	14.73%	19.00	10.81	64.41%	15.53%

Source: author's estimates based on financial report data

Figure 6. Analysis of the existing and optimal capital structure of domestic industrial enterprises



Source: author's estimates based on the companies' financial reports

For a comparative analysis of the estimated optimal capital structure in correlation with the existing capital structure of domestic enterprises, we decided to choose 5 domestic enterprises and to compare the efficiency of capital use. We will present the results in Figure 6.

The results of the comparative analysis of the existing capital structure in correlation with the optimal capital, demonstrate that domestic industrial enterprises overuse the source of financing through loans, except for "Vinăria-Bardar" S.A., which shows a fairly prudent and well-founded policy to attract borrowed capital. Thus, the level of the capital structure for "Vinăria-Bardar" S.A. is located in the optimal area, while other companies to optimize the cost of capital should reduce the share of loans in the following proportions: "Floarea Soarelui" S.A. by 61.62%, "Sudzucker-Moldova" S.A. by 19.66%, “Supraten” S.A. by 40.43%, “Incomlac” S.A. by 43.16%.

5. **CONCLUSIONS**

The management of enterprises in the Republic of Moldova pays little attention to the task of optimizing the capital structure, and in some special cases, the methods of optimizing the capital structure are quite simple, sometimes even primitive, and do not contribute to solving crises and increasing the value of the enterprise. The causes of this situation can be summarized in the gaps in the professional training of managers, the lack of models applicable in local practice, the lack of methodological guidelines, underdevelopment of the capital market, etc.

High capital expenditures are an obstacle in the development of industrial enterprises in the Republic of Moldova, and they do not have policies and techniques to establish the optimal structure of capital. However, the prudent and rational management of the capital structure of the enterprise is an important managerial tool and of maximum utility in the conditions of the development of the local corporate environment, based on the following considerations:

- firstly, the capital structure is a tool for creating the value of enterprises, because, following a thorough analysis of the capital structure of domestic enterprises, we can find essential reserves to maximize their value;
- secondly, the capital structure is a tool for the strategic development of the enterprise, by attracting cheaper sources of financing than the existing ones, and respectively contributes to the full use of the potential of the enterprise (Hansen and Block, 2019);
- thirdly, the capital structure is a tool for the recovery of companies in crisis.

The results of the analysis of the capital structure of the analyzed enterprises show us that equity is the dominant source of financing the activity of enterprises in the Republic of Moldova. In 95% of the analyzed enterprises, the own capital is higher than 50% of the total liabilities of the enterprise. In the capital structure of the analyzed enterprises, the average size of the own capital for 2012 constituted 64%, respectively of the debts 36%, and for 2017 - 73%, respectively 27%. The data confirm the trend of increasing the share of equity in the capital structure of domestic enterprises by 9% over the analyzed period.

A contradictory result records the evolution of the average value of WACC, which over the analyzed period decreases from 15.34% in 2012 to 13.99% in 2017. Usually, with the increase of the share of equity in the company's liabilities, it takes place an increase in WACC. The contradictory result is due to the specificity of the macroeconomic environment in the Republic of Moldova and is due to the significant decrease in recent years of average rates on bank deposits and the base rate of the NBM.

The model of analysis of the optimal structure of the capital proposed can be applied without restrictions to various enterprises in different branches of the national economy. Businesses that are currently successful in the market, have a steady growth rate, as well as those in crisis, can apply in practice and perceive the impact of the potential decisions on the capital structure on achieving the fundamental goal of business activity - maximizing value. The results received confirm theoretical models for optimizing the capital structure and can be used in planning the capital structure of domestic enterprises.

References

1) Altaf, N. and Shah, F. (2021). *Capital Structure Dynamics in Indian MSMEs.* Singapore: Springer.
2) Băncilă, N. (2007). *Teoria și practica de evaluare a unităților economice în baza cerințelor actuale bancare.* Chișinău: Thesis of doctor habilitat.
3) Bodie, Z., Merton, R. and Cleeton, D. (2009). *Financial Economics.* New Jersey: Pearson.
4) Brealey, R., Mayers, S. and Allen, F. (2020). *Principles of Corporate Finance.* New York: McGraw-Hill Education.
5) Brigham, E. and Ehrhardt, M. (2017). *Financial Management. Theory & Practice.* Boston: Cengage Learning.
6) Copeland, T., Koller, T. and Murrin, J. (2000). *Valuation: measuring and managing the value of companies.* New York: John Wiley & Sons.
7) Damodaran, A. (2012). *Investment valuation: tools and techniques for determining the value of any asset.* Hoboken, New Jersey: John Wiley & Sons.
8) Damodaran, A. (2017). *Narrative and Numbers. The Value of Stories in Business.* New York: Columbia University Press.
9) Damodaran, A. (2018). *Inputs for synthetic rating estimation*. [online] Available at: http://people.stern.nyu.edu/adamodar/pc/wacccalculator2018.xls [Accessed 21.04.2021].
10) Ferrés, D., Ormazabal, G., Povel, P. and Sertsios, G. (2021). Capital structure under collusion. *Journal of Financial Intermediation, 45*(100854), pp. 1-13.

11) Fishman, J., Pratt, S., Griffith, J., Wilson, D., Meltzer, S., Wells, M. and Lipnicky, E. (2002). *Guide to Business Valuations.* Hanover: Practitioners Publishing Company.
12) Government RM. (2012). *Strategia de dezvoltare a sectorului întreprinderilor mici şi mijlocii pentru anii 2012–2020*. [online] Available at: http://green.gov.md/pageview.php?l=ro&idc=43&t=/Cadrul-normativ-si-de-politici/Strategia-de-dezvoltare-a-IMM [Accessed 21.04.2021].
13) Hansen, C. and Block, J. (2019). Public family firms and capital structure: A meta-analysis. *Corporate Governance: An International Review*, 29(3), pp. 297-319. doi:10.1111/corg.12354
14) Jensen, M. and Meckling, W. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics,* 3(4), pp. 305-360.
15) Modigliani, F. and Miller, M. (1958). The cost of Capital, Corporation Finance and the Theory of Investment. *American Economic Review,* 48(3), pp. 261-297.
16) Pratt, S., Morrison, W. and Fishman, J. (2013). *Standards of value theory and applications.* New Jersey: John Wiley & Sons.
17) Tornea, I. (2011). *Finanţarea IMM-urilor în Republica Moldova*, 1. *Politici Publice, 1*. Institutul pentru Dezvoltare şi Iniţiative Sociale (IDIS) „Viitorul", pp. 1-44. [online] Available at: http://www.viitorul.org/files/library/POLITICI_PUBLICE_1_Finantare_IMM.pdf [Accessed 21.04.2021].
18) Vo, M. (2021). Capital structure and cost of capital when prices affect real investments. *Journal of Economics and Business,* 113(105944), pp. 1-15.

NON-FINANCIAL REPORTING, VECTOR FOR PROMOTING SUSTAINABLE DEVELOPMENT GOALS

MARGARETA BOCANCIA
Alexandru Ioan Cuza University of Iași
Iași, Romania
mbocancia@yahoo.com

DANIELA GABRIELA COZMA
Alexandru Ioan Cuza University of Iași
Iași, Romania
dana17miruna@yahoo.com

Abstract:
The pandemic phenomenon COVID-19 has induced at the level of stakeholders additional financial and non-financial information needs from economic entities, which in turn are faced with the need to build confidence in the sustainability of their business. As forms of revealing sustainability under the effect of the pandemic, non-financial reports seem to have lost their relevance, becoming dependent on the reflection of past events only. Faced with the limitations of its non-financial reporting regulations, the European Commission intends to change the regulatory framework for sustainability reporting in Europe, considering the creation of a single reporting standard that includes the 17 Sustainable Development Goals set out in the 2030 Agenda of the United Nations (UN) as appropriate. In this context, through their study, the authors aim to identify the way in which, in anticipation, economic entities include in their reports the objectives of sustainable development. In our approach we use content analysis as a qualitative method combined with descriptive and inferential statistics as quantitative methods for the processing of non-financial reports.
Keywords: *Sustainable Development Goals; non-financial reporting; stakeholders.*
JEL Classification: M40

1. INTRODUCTION

The 17 UN Sustainable Development Goals (SDGs), with 169 subdivisions, were adopted in 2015 with the aim of giving countries the opportunity to increase their efforts in order to generate sustainable global development by 2030. The absence of an international law framework able to regulate the manner of implementation of the Sustainable Development Goals and the fact that the targets were created as general guidance tools for UN member countries and not for the business environment has caused difficulties for companies in determining how they can fit into their activities the requirements of the 17 sustainable development goals, Figure 1 presenting an overview of the SDGs.

Figure 1. Overview 17 SDGs

Source: own representation

Noting that "the world has high expectations about the way in which the private sector can support the 17 sustainable development goals" (Betti, Consolandi and Eccles*,* 2018) and that companies face difficulties in reporting the SDGs, in order to support them, the United Nations Global Compact (UNGC), in cooperation with Global Reporting Initiative (GRI) and the Business Council on Sustainable Development (WBCSD) have launched several guidelines - "SDG Compass" (GRI and UN Global Compact and WBCSD, 2015), "Analysis of the Goals and Targets" (GRI and UN Global Compact, 2017) and „Practical guide to defining priorities and reporting" (GRI and UN Global Compact, 2018).

It is currently intended to connect the SDGs and GRI standards in order to provide corporations a regulated framework for reporting on these goals, by providing companies the tools they need to disclose their impact on sustainable development to investors and other stakeholders in corporate reporting.

In the Europe Sustainable Development Report 2020 (Sustainable Development Solutions Network and Institute for European Environmental Policy, 2020) the Sustainable Development Goals are seen as a framework that can pave the way for the post-COVID 19 economic recovery of the European countries' economies, by encouraging investment in resilient and sustainable activities. As part of the reform of Directive 95/2014/EU, the European Commission considers it appropriate for large and transnational companies to report in the future on the 17 Sustainable Development Goals (SDGs) set out in the 2030 Agenda of the United Nations (UN).

In academia, interest in SDGs has grown significantly in recent years, as these were included in corporate sustainability studies from multiple perspectives (Curtó-Pagès *et al.*, 2021), because they can provide the opportunity to unite corporate and governmental efforts for sustainable development (Caprani, 2016), and "the academic literature does not yet have studies to focus on the determinants of the SDG reporting quality" (Pizzi, Rosati and Venturelli, 2020). Gulluscio *et al.* (2020) consider that in recent years sustainability reporting has become a priority for corporations, with many stakeholders calling for these companies to adapt their accounting and corporate reporting not only to financial, social and environmental performance reporting but also to sustainability performance.

Haywood and Boihang (2020) consider that the research literature indicates that sustainability reporting is an important factor in the sustainable orientation of a company and, as such, sustainability reporting commitments act as triggers of the SDGs integration into the business model.

The Alliance for Corporate Transparency (ACT) published a report in 2019 based on a study of 1,000 non-financial reports of companies in Europe and concluded that, with the exception of companies in Austria, Belgium, Denmark, Spain and Sweden, a small number of companies from other European countries refer to sustainable development goals in their reports.

2. LITERATURE REVIEW AND HYPOTHESIS BUILDING

Witte and Dilyard (2017) consider that the studies of researchers examining how the private sector includes SDGs in its work are rare, "very little being known about how multinational enterprises (MNEs) operate in unstable countries and how the practices of these enterprises affect the sustainable development goals set by the international community".

Starting from the premise that companies can play a significant role in implementing sustainable development goals, Rosati and Faria (2019) had studied 2,413 sustainability reports since 2016 from 90 different countries and concluded that companies that report these targets were located in countries that were vulnerable to climate change and had legislation on corporate social responsibility. Bebbington, Russell and Thomson (2017) consider that sustainable development goals "crystallize a supranational political vision that promotes sustainable development" and represent a potential framework for the development of sustainability accounting, which must "discover what kind of development society should seek for and what would be the appropriate mechanism to achieve this "(Bebbington, 2001). Rinaldi, Unerman and Tilt (2014) consider that for the improvement of the sustainability of their business, economic entities must develop and use dialogue mechanisms with stakeholders, given that these stakeholders are "trying to influence the activities and reporting of companies through a variety of behaviours such as antagonism, cooperation and collaboration". Diaz-Sarachaga (2021) considers that, although there is pressure from stakeholders to encourage companies to contribute to the achievement of sustainable development goals, most Spanish companies have not implemented a corporate strategy in this regard, with inconsistencies between GRI disclosures and company shares. The same author concludes "intangibility, omission of negative impacts, poor standardization, diversity of criteria and the lack of comparability are the main features of corporate reporting used by companies". Studying the way in which the Italian stock exchange companies introduced the SDGs in their non-financial reports, Izzo, Ciaburri and Tiscini (2020) discover that "most Italian companies, very traded, liquid and with high capital" introduced the SDGs in their disclosure practices, but the description of key non-financial performance indicators related to the SDGs was missing. At the opposite end, Curtó-Pagès *et al.* (2021) found in their study that despite the apparent commitment of large Spanish corporations to the SDGs, the information about their documented contribution in the 2030 Agenda is still rare, with companies listed on the Spanish stock exchange showing a low commitment in terms of sustainability reporting, although "companies are fully aware of the importance to include sustainable development goals (SDGs) in their corporate social responsibility (CSR) strategies and of the importance to ensure that the information disclosed allows the identification of stakeholder groups" (García-Sánchez *et al.,* 2020). A 2018 study carried out by PricewaterhouseCoopers (Pwc) on 729 firms in 21 countries found that companies had not yet discovered the strategy and tools needed to report on their progress in meeting the SDGs and therefore could not demonstrate to investors, employees and other stakeholders how these goals can contribute to the sustainable performance of the business.

Requests for information on how SDG are reflected in the reports of economic entities have also determined professional accounting organizations to consider how professional accountants can contribute to the SDGs. The growing interest in sustainability reporting that has captured the attention of both business and academia (Curtó-Pagès *et al.,* 2021) helped us to identify in our study how economic entities include sustainable development objectives in their reports and whether there are factors that influence companies' decision to include SDGs in their non-financial reports. There are numerous studies in the literature that support the existence of a positive relationship between the quality of non-financial reporting and the size of the company (Venturelli *et al.,* 2017; Dyduch and Krasodomska, 2017; Frias-Aceituno, Rodríguez-Ariza and Garcia-Sánchez, 2014), the business line of the company (Dyduch and Krasodomska, 2017; Matuszakand Różańska, 2017) and firm profitability (Dyduch and Krasodomska, 2017; Frias-Aceituno, Rodríguez-Ariza and Garcia-Sánchez, 2014). Hummel and Szekely (2021) consider that there are few studies on the implementation of the SDGs in business practice and on how these objectives are reported in the non-financial reports of companies considering that "more thorough information is needed on the SDG disclosure practices for different countries, industries and years of reporting in order to better understand this new reporting phenomenon".

In this context, we intend to test the following working hypotheses:

Hypothesis 1 (H1) Large economic entities include in their non-financial reporting, voluntarily, references to sustainable development goals;

Hypothesis 2 (H2) Considering the diversity of sustainable development goals pursued by economic entities, the relevance and priority of the reporting thereof varies depending on the field of activity and the country of origin of the company;

Hypothesis 3 (H3) The company's performance, expressed by the size of turnover and total assets, influences the SDG reporting in the non-financial reporting of the economic entity.

3. METHODOLOGY AND DATA

To test our hypotheses, we built a study sample, by accessing the database provided by GRI (2021). The imposed selection filters were: region-Europe, business line, type of GRI Standards reporting and reporting year 2019. There were 113 economic entities that uploaded the report in the GRI platform, from 11 sectors of activity selected by us (Table 1), of which we eliminated 17 reporting economic entities that published reports in languages other than English, Spanish, Italian and French, ultimately resulting in 96 reporting economic entities.

Table 1. Frequencies for sector

Section	Frequency	Percent
Automotive	8	8,333
Computers	2	2,083
Structure	7	7,292
Construction Materials	5	5,208
Energy	25	26,042
Energy Utilities	12	12,500
Metals Products	7	7,292
Mining	4	4,167
Metal Products	8	8,333
Technology Hardware	7	7,292
Telecommunications	11	11,458
Total	**96**	**100**

Source: own representation

The economic entities in our sample came from 24 European countries (Table 2) and published on the GRI platform seven types of reports, with the prevalence of sustainability reports (Table 3), considered by Dilling (2016) as the optimal way to disclose information on long-term value creation to companies. Among the companies that have mentioned SDG in their reporting, 70.58% fulfilled it in their sustainability report, with the Carrots & Sticks 2020 Report finding the same preference for the SDG reporting format.

Table 2. Frequencies for Country

Country	Frequency	Percent
Austria	2	2.083
Belgium	2	2.083
Croatia	2	2.083
Czech Republic	1	1.042
Denmark	4	4.167
Finland	3	3.125
French	5	5.208
Germany	10	10.417
Greece	3	3.125
Hungary	1	1.042
Italy	13	13.542
Latvia	1	1.042
Luxembourg	1	1.042
Netherlands	2	2.083
Norway	4	4.167
Poland	1	1.042
Portugal	2	2.083
Romania	3	3.125
Russia	6	6.25
Slovenia	1	1.042
Spain	9	9.375
Sweden	6	6.25
Switzerland	9	9.375
UK	5	5.208
Total	**96**	**100**

Source: own representation

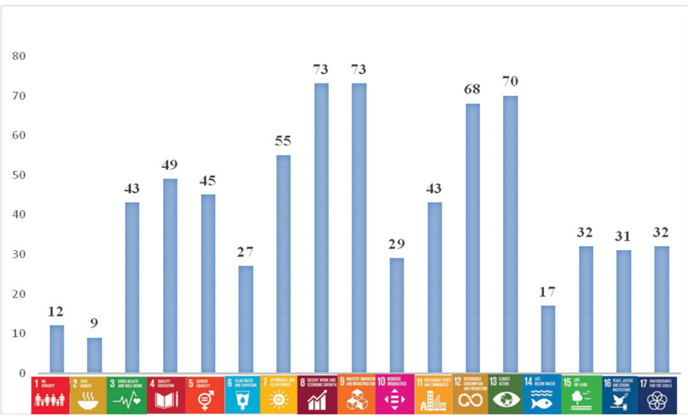
Table 3. Frequencies for report type

Report type	Frequency	Percent
ESG report	1	1.042
RSC report	1	1.042
Annual report	17	17.708
Integrated report	8	8.333
Sustainability report	68	70.833
Universal report	1	1.042
Total	**96**	**100**

Source: own representation

For the analysis of the reports we used textual analysis in order to detect if the companies' reports refer to the SDGs, regardless of the quantity and quality of the analysis information used in their study by Hummel and Szekely (2021), using simple queries by the "find" command associated with the pdf formats of the reports. The terms we searched for were "SDG", "SDG s", "global goal". We used the binary notation 0 (absence from the report of the searched terms) and 1 (presence in the report of the searched terms) resulting in a number of 85 companies that referred to the SDGs in their reports, which represents a percentage of 88.54 %. Subsequently, we used the content analysis to see the degree of detail on the 17 SDGs (Figure 2) in the reports of economic entities, used by other researchers (Hummel and Szekely, 2021; Cho, Roberts, and Patten, 2010; Clarkson *et al.,* 2008).

Figure 2. Goals mentioned in the analysed documents



Source: own representation

The most reported SDGs by economic entities are those related to trade and climate operations: SDG 8 on decent work and economic growth, SDG 9 Industry, innovation and infrastructure, SDG 12 Consumption and production, SDG 13 Climate action. The Carrots & Sticks 2020 report finds that the most reported SDGs are SDG 12 on production and responsible consumption, SDG 16 inclusive societies and responsible institutions, as well as SDG 8 on decent work and economic growth. In the study carried out in 2019 by PwC, it was found that 65% of the analysed companies have mentioned in their SDG 8 reports, and the WBCSD "Reporting Matters 2019" report mentioned that the vast majority of companies referred in their report to SDG 13 (88%), SDG 12 (79%) and SDG 8 (73%). The study carried out by Izzo, Ciaburri and Tiscini (2020) revealed that SDG 8 Decent work and economic growth was the most revealed goal in the reports of the organizations included in their sample (27%), followed by SDG13, Climate actions (24%) and SDG 9: Industry, innovation and infrastructure (23%).

The heterogeneity of the disclosure in the companies' reports of the SDGs and the fact that the use of qualitative proxies is more efficient for evaluating the specific characteristics of a non-financial report (Helfaya and Whittington, 2019) have determined us to use a disclosure score used by other researchers in their studies on SDGs (Pizzi, Rosati and Venturelli, 2020). We calculated the SDG disclosure score (SDG) according to the formula:

$$GDP = \sum_{1}^{17} \frac{n}{N} \mathrm{X}\, 100 \quad (1)$$

where n SDGs number reported by the company and N total SDGs.

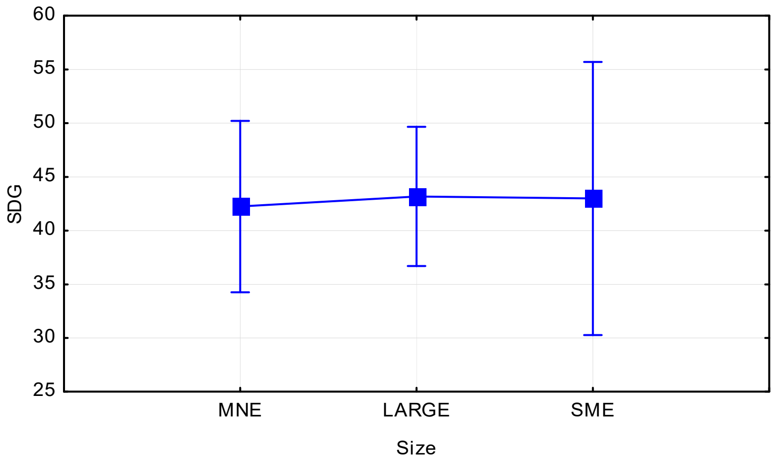
For testing the first hypothesis H1 we use as a dependent variable the SDG disclosure score that we noted ***SDG***, and as an independent variable ***Size,*** considered a qualitative variable, graded in 3 steps, SME, MNE and LARGE. According to the GRI classification, SME represents the category of economic entity with a workforce <250 and turnover ≤ € 50 million or total balance sheet ≤ € 43 million, MNE represents multinational companies with a workforce ≥ 250, turnover> € 50 million or total balance sheet> € 43 million, and LARGE economic entities with employees ≥ 250, turnover> € 50 million or total balance sheet> € 43 million. The testing of H2 and H3 hypotheses will be done by introducing in the statistical model the independent variables, ***Sector*** (considered as a qualitative variable, graded in 11 steps, corresponding to 11 business lines), the country of affiliation of the company, ***Country*** (considered as a qualitative variable, graded according to the country of origin of the company), ***Turnover*** and ***Total assets***.

4. RESULT

To check the influence of the ***Size*** variable on the values of the ***SDG*** index (Figure 3), we use the ANOVA one way test (unifactorial) which reveals the absence of significant differences between the averages of the ***SDG*** values depending on the size of the companies in our sample, leading to the result (F

(2.93) = 0.016, p = 0.983). In this case, the Kruskal Wallis test (the nonparametric equivalent of the ANOVA test, the latter being parametric) is performed, which reconfirms the absence of statistical meaning (H (KW, df = 2; n = 96) = 0.044, p = 0.978. Therefore, there is no influence of the independent variable ***Size*** over the dependent variable ***SDG.***

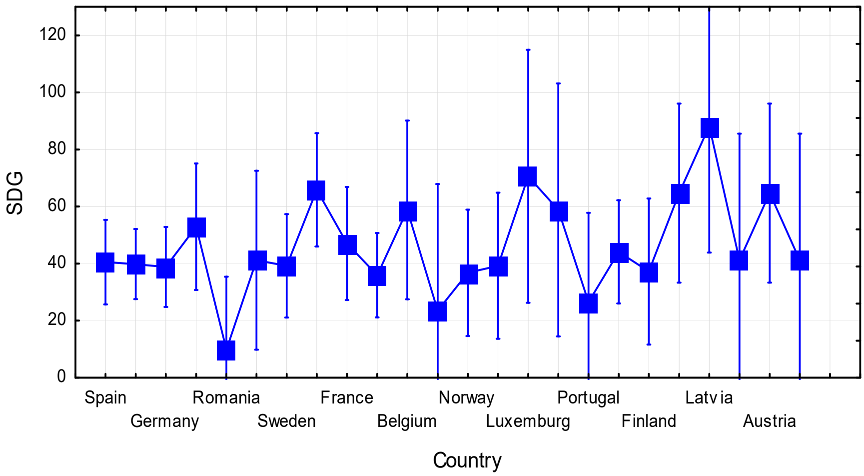
Figure 3. Influence of company size on SDG



Source: own representation

The check of the influence of the ***Sector*** variable on the values of the SDG variable (Figure 4), is also done by means of the one way (unifactorial) ANOVA test which, also in this case, reveals the absence of significant differences between the averages of the ***SDG*** values related to the variable ***Sector,*** leading to the result (F (10, 85) = 1,511, p = 0.149). We perform the Kruskal Wallis test which reconfirms the absence of statistical meaning (H (KW, df = 2; n = 96) = 0.044, p = 0.978 between the two variables. Consequently, there is no influence of independent variable ***Sector*** on the dependent variable ***SDG.***

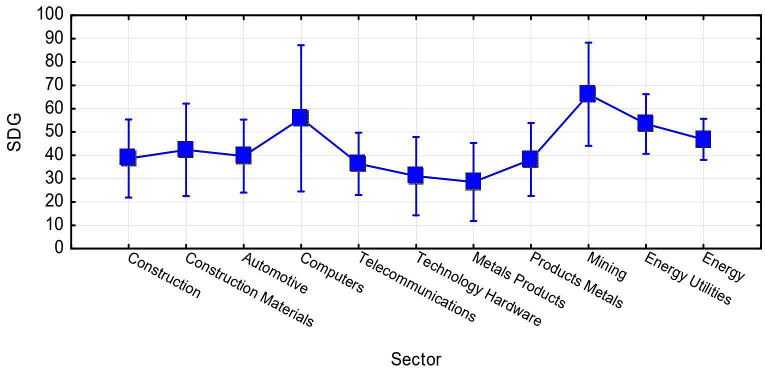
Figure 4. Influence of company sector on SDG



Source: own representation

The application of the one-way ANOVA test to identify the influence of the independent variable ***Country*** on the dependent variable ***SDG*** (Figure 5) reveals the absence of statistically significant results, leading to the result (F (23.72) = 1.228, p = 0.250). The Kruskal Wallis test reconfirms the absence of statistical meaning (H (KW, df = 23; N = 96) = 28.535, p = 0.196.

Figure 5 Influence of the country in which the company operates on SDG



Source: own representation

To identify dependencies between the dependent variable SDG and the independent variables Turnover (y = **SDG = f (Turnover),** respectively Total assets **y = SDG = f (Total_assets)** we develop a linear regression model such as VD = SDG, VI = Turnover and VD = SDG, VI = Total assets.

The resulting gross data are:
Dependent: SDG Multiple R = 0.01685681 F = 0.0267179 R^2 = 0.00028415 df = 1.94
No. of cases: 96 adjusted p = 0.870510
Standard error of estimate: 22.967412777
Intercept: 42.703305494 Std.Error: 2.468925 t (94) = 17.296 p = 0.0000
Turnover b * = 0.017
Dependent: SDG Multiple R = 0.08122230 F = 0.6242420 R^2 = 0.00659706 df = 1.94
No. of cases: 96 adjusted p = 0.431464
Standard error of estimate: 22.894781722
Intercept: 42.083654707 Std.Error: 2.520406 t (94) = 16.697 p = 0.0000
Total_assets b * = 0.081

From the gross data it is found that the model of a linear regression with specified VD, VI is statistically insignificant, on n = 96 cases (companies), among which the correlation coefficient Pearson is 0.016, intercept is 42.703 (the only statistically significant), slope is 9.3 * 10-6 (much too small, statistically insignificant), adjusted R^2 has a small value (-0.010) and shows a low degree of explanation of the VD variace (SDG) by VI (Turnover). Even in the model with the independent variable Total assets, the variables are not statistically significant, the correlation coefficient Pearson is 0.081, the intercept is 42.083 (the only statistically significant), the slope is 3.39 * 10-5 (much too small, statistically insignificant, but about 10 times higher than in the previous case, of the Turnover influence), adjusted R^2 has a low value (-0.003)and shows a low degree of explanation of the VD (SDG) variance by VI (Total_assets).

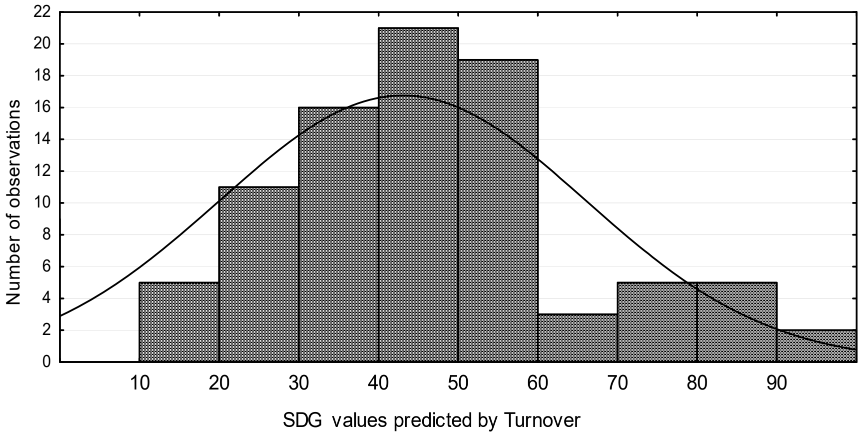
The regression equations have the following form:
Prediction equation for: SDG = 42.703 + 9.304e-6 * Turnover
Prediction equation for: SDG = 42.083 + 3.396e-5 * "Total_assets"

Despite the precariousness of the model, Turnover values can anticipate the SDG coefficients from 10 to 100%. The modal value in this histogram (21 predicted values) corresponds to the SDG range between 40 and 50%, followed by SDG value classes between 50-60% (with 19 predicted values) and 30-40% with 16 predicted values).

The linear regression model we created provides an equation with a statistically significant value of the intercept, but the slope has a much too small value. For this reason, the histogram corresponding to the values frequency of the SDG (Figure 6) predicted under the influence of the VI Turnover, finding a polydispersion of the anticipated values of SDG, ordered by decile.

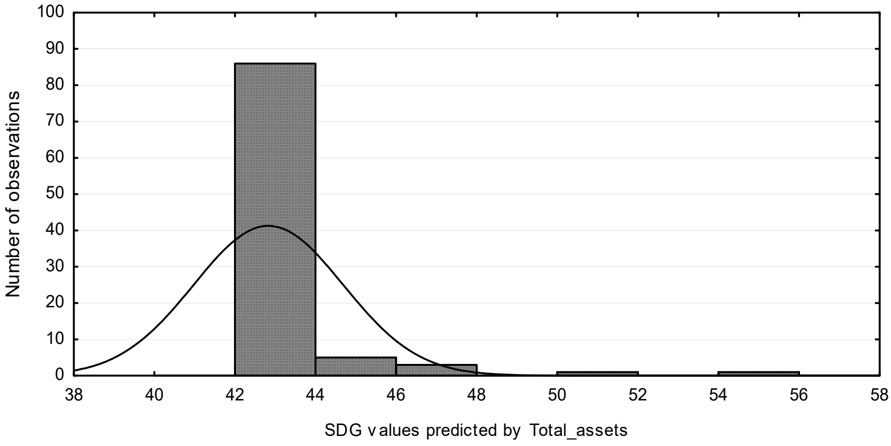
Turnover values can anticipate the SDG coefficients from 10 to 100%. The highest number of anticipated values (21 values) of the SDG based on Turnover values corresponds to the SDG range between 40 and 50%.

Figure 6. SDG value classes predicted by the linear regression model depending on Turnover



Source: own representation

Figure 7. SDG value classes predicted by the linear regression model depending on Total_assets



Source: own representation

The distribution of SDG values anticipated by the regression model with the variable Total assets shows a concentration between 42 and 44% (corresponding to a number of predicted values between 80 and 90), the next class of values (44-46%) appearing in the case of an extremely low number of predictions as compared to the first situation (about 5 values). Furthermore, the number of predictions for other classes of predicted SDG values is much too small. We resort to the histogram corresponding to the frequency of the predicted values (Figure 7) of the SDG under the influence of VI Total_assets, finding a much smaller dispersion of the anticipated values of the SDG, ordered by deciles, as compared to the situation encountered under the influence of Turnover. Total_assets values can significantly anticipate SDG coefficients only in the range of 42-44% (for which there are between 80 and 90 anticipated SDG values), as this accuracy is a quality attribute of this regression model.

5. DISCUSSIONS AND CONCLUSIONS

According to the results of our models, company size does not influence the disclosure of SDGs in non-financial reporting contrary to the study carried out by Rosati and Faria (2019) that suggests a statistically significant relationship between company size and the probability of including SDGs in non-financial financial reports. The sector of activity and the country of origin of the company according to our model does not influence the disclosure of the SDGs, contrary to the opinion of the study conducted by Nechita *et al.* (2020) at the level of chemical industry companies in 5 Eastern European countries according to which the country and business sector plays a statistically significant role in the evolution of the SDG score. In our study, in order to avoid the limitations related to the use of the traditional one-way ANOVA that requires a normal distribution of observations within the sample (Eccles, Serafeim and Krzus, 2011; Rossati and Faria, 2019) we performed a Kruskal-Wallis test that led us to the same result - the absence of an influence regarding the size of the company, the business line and the country on the disclosure of the SDG in non-financial reporting. The linear regression model, developed by other researchers (Nechita *et al.,* 2020, Rossati and Faria, 2019) in studying the economic performance of the company in relation to the disclosure of the SDGs provided an equation with a statistically significant intercept value, but as the slope had a much too small value determined us to resort to the histogram corresponding to the frequency of the predicted values that revealed an influence of the turnover, respectively of the total assets only over a limited period of the SDG score. Moreover, the opinions of researchers on the same subject are divergent, Kent and Monem (2008) considering that firms with high levels of profitability are more committed to implementing the SDGs compared to small firms with low economic performance, and Rosati and Faria (2019) do not support the link between economic performance and the SDGs.

The comprehensive nature of the SDG framework requires companies to prioritize areas of involvement (Haywood and Biohang, 2020) and prioritize their goals specific to their field of activity (Mhlanga, Gneiting and Agarwal, 2018). Regarding the priority SDGs in the non-financial reports of the companies in our sample, the most reported ones were those related to commercial and climate operations: SDG 8 on decent work and economic growth, SDG 9 Industry, innovation and infrastructure, SDG 12 Consumption and production, SDG 13 Climate action, Hummel and Szekely (2021) identifying high frequencies at the same SDGs.

We note that SDG 8 on decent work and economic growth is the most frequently used, in accordance with the study conducted by PwC (2019) the presence of this goal being confirmed by Izzo, Ciaburri and Tiscini (2020).

The limitations of our study are due to the heterogeneous sample that included 11 fields of activity, using only *cross-sectional* data, at the level of 2019, and did not allow us to establish cause-effect relationships and identify the temporal evolution of the structure and the type of SDGs reported by companies in their non-financial reports.

References

1) Bebbington, J. (2001). Sustainable development: a review of the international development, business and accounting literature. *Accounting Forum,* 25(2), pp. 128–157.
2) Bebbington, J., Russell, S. and Thomson, I. (2017). Accounting and sustainable development: Reflections and propositions. *Critical Perspectives on Accounting*, Elsevier, 48(C), pp. 21-34.
3) Betti, G., Consolandi, C. and Eccles, R. (2018). The Relationship between Investor Materiality and the Sustainable Development Goals: A Methodological Framework. *Sustainability,* 10(7), pp. 22-48.
4) Caprani, L. (2016). Five ways the sustainable development goals are better than the millennium development goals and why every educationalist should care. *Management in Education*, 30(3), pp. 102–104.
5) Cho, C. H., Roberts, R. W. and Patten, D. M. (2010). The language of US corporate environmental disclosure. *Accounting, Organizations and Society*, 35(4), pp. 431–443. https://doi.org/10.1016/j.aos.2009.10.002.
6) Clarkson, P. M., Li, Y., Richardson, G. D. and Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4), pp. 303–327. https://doi.org/10.1016/j.aos.2007.05.003.
7) Curtó-Pagès, F., Ortega-Rivera, E., Castellón-Durán, M. and Jané-Llopis, E. (2021). Coming in from the Cold: A Longitudinal Analysis of SDG Reporting Practices by Spanish Listed Companies Since the Approval of the 2030 Agenda. *Sustainability*, 13*,* 1178.
8) Diaz-Sarachaga, J. M. (2021). *Monetizing impacts of Spanish companies toward the Sustainable Development Goals*. [online] Available at: https://onlinelibrary.wiley.com/doi/10.1002/csr.2149?af=R [Accessed 11.03.2021].
9) Dilling, P. (2016). Reporting on Long-Term Value Creation-The Example of Public Canadian Energy and Mining Companies. *Sustainability*, 8(938), pp. 1-26.
10) Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and

diversity information by certain large undertakings and groups. [online] Available at: https://op.europa.eu/en/publication-detail/-/publication/406ad3b8-6c9f-11e4-9680-01aa75ed71a1/language-en [Accessed 10.04.2021].

11) Dyduch, J. and Krasodomska, J. (2017). Determinants of Corporate Social Responsibility Disclosure: An Empirical Study of Polish Listed Companies. *Sustainability,* 9(11), pp. 19-34.
12) Eccles, R., Serafeim, G. and Krzus, M. (2011). Market interest in nonfinancial information. *The Journal of Applied Corporate Finance*, 23(4), pp. 113–127.
13) Frias-Aceituno, J. V., Rodríguez-Ariza, L., and Garcia-Sánchez, I. M., (2014). Explanatory Factors of Integrated Sustainability and Financial Reporting. *Business Strategy and the Environment*, 23(1), pp. 56–72.
14) García-Sánchez, I. M., Amor-Esteban, V. and Galindo-Álvarez, D. (2020). Communication Strategies for the 2030 Agenda Commitments: A Multivariate Approach. *Sustainability,* 12(24), 10554, pp. 1-25. https://doi.org/10.3390/su122410554.
15) GRI and UN Global Compact, (2017). *Business reporting on the SDGs. An analysis of the goals and targets.* [online] Available at: https://www.unglobalcompact.org/library/5361 [Accessed 01.05.2021].
16) GRI and UN Global Compact, (2018). *Integrating the SDGs into corporate reporting. A practical guide.* [online] Available at: https://www.unglobalcompact.org/library/5628 [Accessed 06.05.2021].
17) GRI, UN Global Compact and WBCSD, (2015). *SDG compass. The guide for business action on the SDGs.* [online] Available at: https:// sdgcompass.org/wp-content/uploads/2015/12/019104_SDG_Compass_Guide_2015.pdf [Accessed 01.05.2021].
18) GRI, (2021). *Database.* [online] Available at: https://database.globalreporting.org/ [Accessed 10.04.2021].
19) Gulluscio, C., Puntillo, P., Luciani, V. and Huisingh, D. (2020). Climate Change Accounting and Reporting: A Systematic Literature Review. *Sustainability,* 12(13), pp. 2-31.
20) Helfaya, A. and Whittington, M. (2019). Does designing environmental sustainability disclosure quality measures make a difference? *Business Strategy and the Environment,* 28(4), pp. 525-541. doi:10.1002/bse.2262.
21) Hummel, K. and Szekely, M. (2021). *Disclosure on the Sustainable Development Goals – Evidence from Europe.* [online] Available at: https://ssrn.com/abstract=3411017 or http://dx.doi.org/10.2139/ssrn.3411017 [Accessed 11.03.2021].
22) Haywood, L. K. and Boihang, M. (2020). Business and the SDGs: Examining the early disclosure of the SDGs in annual reports. *Development Southern Africa,* 38(2), pp. 175-188. https://doi.org/10.1080/0376835X.2020.1818548.
23) Izzo, M. F., Ciaburri, M. and Tiscini, R. (2020). The Challenge of Sustainable Development Goal Reporting: The First Evidence from Italian Listed Companies. *Sustainability*, 12(8,) pp. 1-18.
24) Kent, P. and Monem, R. (2008). What drives TBL reporting: good governance or threat to legitimacy? *Australian Accounting Review,* 18(4), pp. 297-309.

25) Matuszak, L. and Różańska, E. (2017). CSR Disclosure in Polish-Listed Companies in the Light of Directive 2014/95/EU Requirements: Empirical Evidence. *Sustainability*, 9(12), pp. 1-18.
26) Nechita, E., Manea, C. L., Nichita, E. M., Irimescu, A. M. and Manea, D. (2020). Is Financial Information Influencing the Reporting on SDGs? Empirical Evidence from Central and Eastern European Chemical Companies. *Sustainability*, 12, 9251. https://doi.org/10.3390/su12219251.
27) Mhlanga, R., Gneiting, U. and Agarwal, N. (2018). *Walking the talk. Assessing companies' progress from SDG rhetoric to action*. [online] Available at: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620550/dp-walking-the-talk-business-sdgs-240918-en.pdf [Accessed 01.05.2021].
28) Pizzi, S., Rosati, S. and Venturelli, A. (2020). The determinants of business to the 2030 Agenda: Introducing the SDG Reporting Score. *Business Strategy and the Environment*, 30 (1), pp. 404-421.
29) PwC, (2019). *PwC's SDG Challenge 2019*. [online] Available at:https:// www.pwc.com/gx/en/services/sustainability/sustainable-development-goals/sdg-challenge-2019.html [Accessed 01.05.2021
30) Research Report, (2019). *An analysis of the sustainability reports of 1 000 companies Pursuant to the EU Non-Financial Reporting Directive Alliance for Corporate Transparency.* [online] Available at: https://www.responsible-investor.com [Accessed 10.04.2021].
31) Rinaldi, L., Unerman, J. and and Tilt, C. (2014). The role of stakeholder engagement and dialoguewithin the sustainability reporting process. *Sustainability Accounting and Accountability, 2 ed.* Abbingdon: Routledge, pp. 86-107.
32) Rosati, F. and Faria, L. (2019). Addressing the SDGs in sustainability reports: The relationship with institutional factors. *Journal of Cleaner Production*, 215(1), pp. 1312-1326.
33) Sustainable Development Solutions Network and Institute for European Environmental Policy, (2020). *Europe Sustainable Development Report 2020*. [online] Available at: https://www.sdgindex.org/reports/europe-sustainable-development-report-2020/ [Accessed 10.04.2021].
34) Venturelli, A., Caputo, S., Cosma, S., Leopizzi, R. and Pizzi, S., (2017). Directive 2014/95/EU: Are Italian Companies Already Compliant. *Sustainability*, 9(8), 1385.
35) Witte, C. and Dilyard, J. (2017). Guest Editors' Introduction to the Special Issue: The Contribution of Multinational Enterprises to the Sustainable Development Goals. *Transnational Corporations*, 24(3), pp. 1-8.

TAXABLE PERSONS IN VAT MATTERS: THE VAT GROUP BETWEEN CONSOLIDATION AND AUTONOMY

IOANA MARIA COSTEA
Alexandru Ioan Cuza University of Iași
Iași, România
ioana.costea@uaic.ro

DESPINA-MARTHA ILUCĂ
Alexandru Ioan Cuza University of Iași
Iași, România
despina.iluca@uaic.ro

Abstract
The VAT Directive provides a flexible regulatory framework for the treatment as single taxable persons of any persons who, while legally independent, are closely bound to one another by financial, economic and organizational links. Therefore, formal or informal groups can become single taxable persons, as long as the criterion of a close bond between composing entities is proven. The present study aims at analyzing the concept of "VAT group" by putting under the magnifying glass the financial, economic or organizational link and the flexibility of this binder. The issue becomes relevant especially when it comes to operations taking place within the group, reason for which our study also analyzes the VAT regime applicable to these operations.
Keywords: *VAT group; taxable person; VAT Directive; financial, economic and organizational link.*
JEL Classification: K34, K41

1. INTRODUCTION

The concept of Value-Add Tax (VAT) in the European Union is marked by flexibility as it addresses multiple national regulations and it is matched to the national and pan-national busines environment. The present study analyzes a fragment of this construct, mainly the VAT group, a provision that under Article 11 of the Council Directive 2006/112/EC regulates the VAT statute in a grouping scheme. The study uses as a method of research legal analysis, case-law study and some incidental comparative law aspects. The aim is to identify the formal and jurisprudential content of this concept and the relevant effects of the tax burden. The premise of the study is given by the purpose of this regulatory regime, "as a VAT group can be described as a 'fiction' created for VAT purposes, where economic substance is given precedence over legal form" (COM(2009)325). In the process of administering taxable persons to VAT purposes, the range of companies' structures and their relations to other entities is extremely large. This amplitude is given both by the freedom of optimizing the business model and by the specific will of limiting tax liability. The latter factor is correlated to VAT abuse, part of the tax avoidance or tax evasion strategies implemented by companies. This purpose was addressed by the European Union legislature under Article 11 of the VAT Directive; "a literal interpretation could be that the purpose was to authorize Member States to disregard, for VAT purposes, artificial arrangements of several taxable persons when in reality such persons should be considered as one taxable person for VAT purposes" (Egholm Elgaard, 2017).

2. LEGAL PROVISIONS AND THE SAGA OF THEIR TRANSPOSITION

Article 11 of the Council Directive 2006/112/EC creates an optional legal solution for the Member States to treat as a *single taxable person* – "any persons established in the territory of that Member State who, while legally independent, are closely bound to one another by financial, economic and organizational links" if these persons opt for a VAT grouping scheme. The VAT group regulations are not mandatory for the taxable persons who fulfill these conditions. The second paragraph of Article 11 reaffirms the subsidiarity principle, as national regulations are free to include "any measures needed to prevent tax evasion or avoidance through the use of this provision".

The purpose of the regulation can be extracted from the Explanatory Memorandum as it searches "to simplify administration for the taxpayer and tax authorities and to combat abuse by preventing persons which are not truly independent business units from being treated as separate taxable persons" (ECJ, C-85/11, European Commission v. Ireland, paragraph 23). This outines the premise of VAT grouping, which is the consolidation of an informal structure and its corresponding VAT regime. Such consolidation into one taxable person of a group of entities seeks to facilitate the administrative process, both for the members of the group, hence the opt-in regime of application and for the tax authorities (Ehrke-Rabel, 2012).

The European provision gives us a number of permanency points, mandatory in the transposition process, as it follows: the group is formed by any persons (with a minimum of two members), established within the same national territory; the persons forming the group are legally independent (both as a functional and structural autonomy) and the members of the group are closely bound to one another by financial, economic and organizational links. As to the last condition, national regulations operate with different standards; for example, the Romanian tax legislation values a restrictive bound, as "they are considered … in close connection from a financial, economic and organizational standpoint, taxable persons whose capital is held directly or indirectly in proportion of over 50% by the same shareholders" (article 269 (9) Romanian Tax Code; article 5 (5) Application Norms). We notice that the bond is significantly formalized under

Romanian legislation and stricter than the European provision, as it factors in only organizational links and ignores other financial and economic bounds (such as the main activity or shared market). Other national legislatures gave relevance to a broader and more flexible bound; such is the case of the Italian legislation, where the economic link is given by "at least one of the following forms of economic cooperation: (i) carrying out a principal activity of the same nature; (ii) carrying out a complementary or interdependent activity; (iii) carrying out an activity that is wholly or substantially to the benefit of one or more of the other persons" (Contrino, 2020). The latter formula seems more suitable to the purpose of this construct as it allows the consolidation of a variety of structures and business maps.

2.1 **A legal Conundrum**

The European regulatory framework uses a very general definition as to the subjects addressed by the analyzed regulation: *any person*. This soft regulatory option derives from the aim of the construct. We notice that the legal provision does not comprise the circumstance that the persons included in the group should verify the condition of being solely *taxable persons*. Some Member States transposed the text as such (for example Ireland, hence the C-85/11 case-law); other Member States (Romania and Italy included) imposed a supplementary condition that the members of the VAT group qualify individually as taxable persons.

In this framework, some legal issues have arisen. The Commission's standpoint is that Article 11 of the VAT Directive must be interpreted as meaning that non-taxable persons for VAT purposes cannot be included in a VAT grouping scheme. In reaction to the variations in the transposition process, the Commission brought infringement actions against Member States that did not share this interpretation. At the core of these actions laid the Commission's conviction that the provision in Article 11 is "an exception to the general rule that each taxable person is to be treated as a separate entity for the application of the VAT rules" (ECJ, C-85/11, paragraph 21) and that this calls for the use of a restrictive interpretation. The opinion delivered by Advocate General Jääskinen underlines that the historical evolution of the VAT Directive (the previous Second VAT Directive, the Sixth VAT Directive, the amendments of the current VAT Directive) shows that the European legislature intentionally changed the wording from "separate taxable persons" to "persons" (Opinion of Advocate General, C-85/11, paragraphs 29-31). The use of the *'ubi lex non distinguit, nec nos distinguere debemus'* principle is further sustained by the different language versions, particularly in those languages (e.g. French) in which there is a different word for taxable person (*assujetti*) and for person (*personne*). This convinces the Advocate General in Commission v. Ireland to maintain that the Commission's arguments are difficult to accept (Opinion of AG, C-85/11, paragraphs 32-34).

Given this context, the European Court of Justice decided that “the Commission has not established that the objectives of Article 11 of the VAT Directive militate in favour of an interpretation according to which non-taxable persons cannot be included in a tax group” (ECJ, C-85/11, paragraph 50). The arguments rising before the Court contradicting the European Commission’s stance showed that the presence of non-taxable persons within a VAT group contributes to administrative simplification both for the group and for tax authorities and makes it possible to avoid certain abuses (ECJ, C-85/11, paragraph 48). In this matter, we note that the Court remains faithful to the teleological interpretation it so often uses, which excedes the mere historical approach and allows to Court to give the norm the interpretation it deems fit to attain the pursued objective (Craig, de Búrca, 2017), namely administrative simplification.

Following the judgement in C-85/11, on April 25th, 2013, the ECJ ruled in 6 other similar infringement cases (C-109/11, Commission v. Czech Republic; C-95/11, Commission v. Denmark; C-86/11, Commission v. United Kingdom; C-74/11, Commission v. Finland; C-65/11, Commission v. Netherlands; C-480/10, Commission v. Sweden), reiterating the reasoning in Commission v. Ireland. However, in spite of the existence of these judgements, the remainder of Member States (that did share the interpretation of the Commission and preclude non-taxable persons from being included in VAT groups) have not changed their legislation, nor have faced subsequent infringement actions in order to achieve the desired harmonization of laws pursued by the VAT Directive. Further legal intervention seems to be necessary as these national regulations impede non-taxable persons from been part of a VAT grouping scheme; such a limitation is contrary to the simplification aim that Article 11 of the VAT Directive pursuits.

2.2 “**Any person”?**

In relation to the diversity of legal entities formed under the regulation of Member States, a secondary issue has risen as to the members of the VAT group apart from the taxable nature of each member.

The statutory provisions defining *persons* vary within the national legislations; such is the case of *partnerships*, which, according to German law, can be concluded through oral agreements (ECJ, C-868/19, M-GmbH v. Finanzamt für Körperschaften Berlin). The national fiscal authority excluded these entities from participating in a VAT group due to lack of formalism for company transformations (*e.g.* in case of transformations through oral agreements), as “oral agreements make it more difficult for the tax authorities to establish the existence of close connection in the financial dimension” (ECJ, C-868/19, paragraph 60). Filtering this position of the German tax authority through the principle of proportionality, the Court decided that the measure of systematically excluding all partnerships from VAT group scheme is disproportionate and that less restrictive conditions can be enforced by national regulations, for example, by imposing the condition of a written form for decisions regarding the company's statute.

A subsequent question arising from national provisions is that if a VAT group includes as a mandatory condition only entities with legal personality and linked to the controlling company of that group in a relationship of subordination. Such is the case of a "management holding company" with two subsidiaries established in the form of limited partnerships under a limited liability company as general partner (ECJ, Joined Cases C-108/14 and C-109/14, C-Beteiligungsgesellschaft Larentia + Minerva mbH & Co.; KG v Finanzamt Nordenham (C-108/14), and Finanzamt Hamburg-Mitte v Marenave Schiffahrts AG (C-109/14)), where as long as the holding company provides services to their subsidiaries, the first will be treated as a taxable person for VAT purposes (Merkx, 2016). The Court underlined that there is no legal reason to support the "conclusion that the EU legislature intended to reserve the benefit of the VAT group scheme only to entities in a relationship of subordination with the controlling company of the group of undertakings considered" (ECJ, Joined Cases C-108/14, C-109/14, paragraph 44). Such a restrictive filter can be imposed "only in exceptional circumstances where such a condition is, in a given national context, a measure which is both necessary and appropriate for attaining the objectives seeking to prevent abusive practices or behaviour or to combat tax evasion or tax avoidance" (ECJ, Joined Cases C-108/14, C-109/14, paragraph 45). The Court ruled that Member States can access their margin of discretion and impose certain restrictions "provided those restrictions further the objectives of Article 11 to prevent abusive practices or to combat tax evasion or tax avoidance" (Egholm Elgaard, 2017). The aim of preventing tax avoidance and tax evasion is a legitimate concern as the second paragraph of Article 11 allows national legislation to limit throughout their transposing form (Costaș, 2008).

3. LEGAL CONSEQUENCES OF FORMING A VAT GROUP – A SINGLE TAXABLE PERSON

The legal elements of VAT grouping are "quite similar in most national VAT grouping schemes (there is one taxable person, internal supplies are outside the scope of VAT, VAT deductions are made on a group basis, only one VAT return is made, etc.)" (Egholm Elgaard, 2017). In the transposition process, national legislatures included various conditions for recognizing legal consequences to the VAT group scheme in order to achieve "optimization for fiscal authorities" (Tofan, Onofrei and Vatamanu, 2020); for example, the Romanian Tax Code regulated as cumulative conditions that a taxable person may be part of only one VAT group; that the option must cover a period of at least two years and that all taxable persons in the group must apply the same tax period. We notice that these provisions are contrary to the C-85/11 jurisprudence, as they demand that the members of the VAT group are each taxable persons.

The legal consequences deriving from the registration of a VAT group can be summed to: a new entity relevant to VAT matters is formed (as fiscal legislation grants such legal relevance to informal groups that rejoice a sole fiscal regime); this new entity will be assigned a new VAT identification number and will act as fiscally autonomous with the direct obligation to declare and pay VAT. However, Member States have different approaches regarding the VAT identification number, meaning that some states do assign a new VAT identification number, through a representative of the group, whereas others maintain the different VAT identification numbers of group members, which can lead to issues in terms of economic relations (Vizoli, 2019).

A subsequent joint liability for payment of the tax is appliable to all members of the VAT grouping scheme. This provision under the Romanian Tax Code ensures an extended accountability of all members of the group for fulfilling the obligation to pay, including enforcement procedures (Țiț, 2018); “The effect of implementing the VAT grouping is to allow taxable persons … no longer to be considered as separate taxable persons for VAT purposes, but rather as a single one. Hence, on the one hand, the transaction between members of a VAT group disappeared from a VAT perspective; on the other, with respect to third parties, the VAT group represents a single taxable person” (Contrino, 2020). The fiscal autonomy of the VAT group is the main benefit of this construct; this autonomy allows the members to act as a single taxable person in their business transactions; this limited and special autonomy grants some significant benefits to the group, such as directing all the invoicing flux through one of the members, managing the VAT declaration and payment procedures through the representative, with significant financial and business benefits.

These legal consequences have a general field of application, both *ratione materiae* and *ratione personae*; “the VAT grouping scheme is not limited to specific sectors and applies as an option according to the « all-in, all-out » principle” (Contrino, 2020).

The national provisions are confirmed by the ECJ case-law (C-7/13, Skandia America Corp. (USA), filial Sverige v Skatteverket). These provisions ensure that the “treatment as a single taxable person precludes the members of the VAT group from continuing to submit VAT declarations separately and from continuing to be identified, within and outside their group, as individual taxable persons, since the single taxable person alone is authorized to submit such declarations” (ECJ, C-7/13, paragraph 29).

Consequently, any delivery of goods or supply of services made by a third party to a member of the group will be “considered, for VAT purposes, to have been made not to that member but to the actual VAT group to which that member belongs” (ECJ, C-7/13, paragraph 29). In regards to the transactions between members of the VAT group, the territorial dimension is relevant. According to the Skandia ruling, “transactions carried out between the head office and its branch, that is part of a VAT group, are within the scope of VAT" (Cortino, 2020). In such cases, "the taxable basis is determined according to the contractual condition or to the fair value of the goods and services supplied" (Cortino, 2020).

The ECJ jurisprudence confirmed the solution of a limited approach to the VAT group dynamics in the judgement brought in Case C-77/19, Kaplan International Colleges UK Ltd v The Commissioners for Her Majesty's Revenue & Customs, where the exemption under Article 132 was deemed inapplicable as long as the supply in question did not occur within a taxable group. The Court underlined that "supplies of services to persons who are not members of that independent group of persons cannot benefit from that exemption, since such supplies of services do not come within the scope of the exemption and remain subject to VAT, in accordance with Article 2 (1) of that directive" (ECJ, C-77/19, paragraph 52). Article 292 (1) q) of the Romanian Tax Code has an almost identical wording to that in Article 132 (1) f) of the VAT Directive that gave the Court the occasion to rule in Case C-77/19, which means that under Romanian provisions the same delineation must be made. Even though the 'VAT group' and the 'independent group of persons' might sound as overlapping, the two constructs are applied differently and aimed at different groups: while the VAT group is used for VAT compensation, the independent group is a cost-sharing concept designed for expense reduction in terms of VAT for supply of services (Vizoli, 2019). Furthermore, we note that the exemption regime under Article 292 (1) q) is also restricted by the condition of not being *in abstracto* likely to cause competition distorsions.

All legal consequences remain conditioned by the regulation within Article 11 of Council Directive 2006/112/EC; in regard to the effects of belonging to a VAT group constituted under Article 11 of the VAT Directive, the Court has held that such a group forms a single taxable person (ECJ, C-7/13, paragraph 28). For the intra-group transactions, the Court underlines the general rule that these transactions need be proven autonomous. A transaction is taxable "only if there exists a legal relationship between the provider of the service and the recipient in which there is reciprocal performance" (ECJ, C-165/17, Morgan Stanley & Co International, paragraph 37). The Court underlined that as a general rule, "in the absence of any legal relationship between a branch and its principal establishment, which, together, form a single taxable person, reciprocal performance between those entities constitutes non-taxable internal flows of funds, unlike taxed transactions carried out with third parties" (ECJ, C-165/17, paragraph 38).

The aforementioned legal relationship that is relevant as a taxable operation is conditioned by a reciprocal performance. In a mere transaction between a branch and its principal establishment, in order to assert the existence of a taxable operation, two aspects are under scrutiny: "whether the branch performs an independent economic activity" and "whether that branch may be regarded as independent, in particular in that it bears the economic risk arising from its business" (ECJ, C210/04, FCE Bank, paragraph 35; C165/17, paragraph 35). If these two conditions are met, we are in the presence of a taxable operation. Otherwise, the operation will be regarded as a non-taxable internal flow of funds. The Court makes use of the test of independent transactions, examining the purpose of any transaction by comparing it to transactions concluded with independent third parties.

The very wording of Article 11 contains a territorial limitation, such that a Member State may not allow a VAT group to include persons established in another Member State. This *ratione loci* aspect has the force of breaching the regulations regarding VAT groups. In the case of an intra-group supply, such as "a supply between the principal establishment of a company, situated in one Member State, and a branch of that company located in another Member State" (ECJ, C-165/17, paragraph 38), the Court has held that such a supply is a taxable transaction (ECJ, C7/13, paragraph 32).

The territorial limitation of the VAT grouping scheme derives from the aim of the regulation. At national level, both Member States and companies rejoices the VAT grouping opportunity, with its specific benefits for both parties of the taxation stream. The grouping will bring members a unified VAT course of action with advantages regarding invoicing and submitting VAT declarations or even sustaining VAT auditing. Transactions outside national territory are treated as taxable transactions; this limitation is self-explanatory as to the purpose of the regulation.

4. CONCLUSIONS

Applying the provisions of Article 11 of Directive 2006/112/EC generates a single taxable person; this remains the most important benefit of the regulation and it serves both public and private interests. Tax authorities are in the presence of a single VAT subject, thus resulting in a simpler administrative procedure. To this purpose, a stricter application of the provisions, as deriving from the C-85/11 case-law is more logical; grouping any persons regardless of their qualification as taxable persons ensures a simpler access to the VAT regime. The VAT group is autonomous in relation to VAT agencies, and it covers all administrative procedures applicable to the registration as a taxable person. Therefore, formal or informal groups can become single taxable persons, as long as the criterion of a close bond between composing entities is proven. As mentioned above, in terms of the content of this criterion, national legislatures have chosen various paths of transposing this provision. This variety of normative content is an example of the much-needed flexibility of VAT regulation in relation to the capacities of national fiscal administrations.

The autonomy of the VAT group is reflected in delimiting the VAT scope taking into account internal transactions. Intra-group transactions are internal flow of funds as long as the state dimension is limited to the territory of the same Member State. VAT group works within Member State limits.

Out-of-the-group transactions are taxable transactions and do not fall under exemption provisions.

This construct is without any doubt beneficial under the stated purposes and generating useful tools for both the business environment and VAT administration.

NOTES

[1] Council Directive 2006/112/EC
[2] ECJ, C-85/11, European Commission v. Ireland
[3] ECJ, C-109/11, Commission v. Czech Republic;
[4] ECJ, C-95/11, Commission v. Denmark;
[5] ECJ, C-86/11, Commission v. United Kingdom;
[6] ECJ, C-74/11, Commission v. Finland;
[7] ECJ, C-65/11, Commission v. Netherlands;
[8] ECJ, C-480/10, Commission v. Sweden
[9] ECJ, C-868/19, M-GmbH v. Finanzamt für Körperschaften Berlin
[10] ECJ, C-109/14, Finanzamt Hamburg-Mitte v Marenave Schiffahrts AG
[11] ECJ, C-108/14, KG v Finanzamt Nordenham
[12] ECJ, C-108/14, C-Beteiligungsgesellschaft Larentia + Minerva mbH & Co
[13] ECJ, C-7/13, Skandia America Corp. (USA), filial Sverige v Skatteverket
[14] ECJ, C-77/19, Kaplan International Colleges UK Ltd v The Commissioners for Her Majesty's Revenue & Customs
[15] ECJ, C-165/17, Morgan Stanley & Co International
[16] ECJ, C210/04, FCE Bank
[17] Opinion of Advocate General, C-85/11

References

1) Contrino, A. (2020). Italy's new VAT Group regime in front of the EU VAT grouping scheme. *Studi Tributari Europei*. 10 (1), pp. 67-80. https://doi.org/10.6092/issn.2036-3583/12301.
2) Costaș, C. F. (2018). A new perspective on the concepts of tax avoidance and tax evasion. *Cluj Tax Forum*, 4(1), pp. 1-24.
3) Craig, P. and de Búrca, G. (2017). *EU Law: Texts, Cases and Materials, 6th edition*. Bucharest: Hamangiu Publishing House.
4) Egholm Elgaards, K. K. (2017). A comparative analysis of VAT grouping schemes from a Nordic perspective - aspects of tax avoidance and fiscal competition. *Nordic Tax Journal*, 1(1), pp. 1-25. https://doi.org/10.1515/ntaxj-2017-0001.
5) Ehrke-Rabel, T. (2012). VAT grouping: the relevance of the territorial restriction of Article 11 of the VAT Directive. *World Journal of VAT/GST Law*, 1(1), pp. 61-79. https://doi.org/10.5235/WJOVL.1.1.61.

6) European Commission, (2009). *Communication from the commission to the Council and the European Parliament on the VAT group option provided for in Article 11 of Council Directive 2006/112/EC on the common system of value added tax*. [online] Available at: https://ec.europa.eu/transparency/documents-register/detail?ref=COM (2009)325&lang=en [Accessed 05.06.2021].
7) Merkx, M. (2016). VAT and Holding Companies: Position Finally Clear? *EC Tax Review*, 25, pp. 49-51.
8) Tofan M., Onofrei M. and Vatamanu A. F. (2020). Fiscal Responsibility Legal Framework-New Paradigm for Fiscal Discipline in the EU. *Risks*, 8(3), pp. 79-97, https://doi.org/10.3390/risks8030079.
9) Ţiţ, N. H. (2018), Conceptual distinctions regarding the notion of enforcement. *Journal of Public Administration, Finance and Law*, 4(1), pp. 146-153.
10) Vizoli, M. (2019). *VAT from A to Z: Practical Guide*. Bucharest: Hamangiu Publishing House.

STUDY ON THE QUALITY REVIEW OF THE FINANCIAL AUDIT ACTIVITY IN ROMANIA

MARIA GROSU
Alexandru Ioan Cuza University of Iași
Iași, Romania
maria.grosu@uaic.ro

CAMELIA CĂTĂLINA MIHALCIUC
Stefan cel Mare University
Suceava, Romania
cameliam@seap.usv.ro

Abstract
The periodic ratings given by the inspection teams to the financial auditors are influenced by how the auditors meet the requirements of the relevant International Standards on Auditing (ISA). In recent years, in Romania, as a result of inspections, it has been concluded that the degree of compliance with the objectives selected from the procedures for reviewing the quality of financial audit activity is medium. Moreover, there have been even regress compared to previous periods, although, recently, preventive measures have been issued by the competent bodies in order to increase the quality of financial audit, in general, and the statutory audit, in particular, but also to improve the professionalism of auditors, individual and legal persons. The present study highlights the issues identified as unsatisfactory and requiring remediation related to financial audit missions, both at the procedural level and at the level of reporting in the last 3 years. Specifically, based on the Reports published by the Authority for Public Supervision of the Statutory Audit Activity (APSSAA), our study presents the classification of more than 1,000 unsatisfactory aspects identified in recent years by stages of the audit to highlight the area most affected, thus contributing to a possible improvement of prevention measures.
Keywords*: financial audi; statutory audit; APSSAA.*
JEL Classification: C12, M41, M42, M48

1. INTRODUCTION

For their activity, financial auditors, both individual and legal persons, are evaluated and receive periodic ratings, depending on how they meet the requirements set out in the profile rules. In recent years, at national level, it has been found that not all auditors comply with the requirements of financial audit engagements, either at the procedural level or at the reporting level. One aspect considered negative refers to the fact that, although the competent bodies issued preventive measures in order to increase the quality of the financial audit activity, however, regressions over time were highlighted.

At European level, in order to increase the quality of the statutory audit of Public Interest Entities - PIE, the EU Regulation (EU Parliament and Council, 2014) established Committee of European Auditing Oversight Bodies - CEAOB. CEAOB has established a common approach to the procedure for periodic inspections of the work of financial auditors, which has also benefited APSSAA, adopting a Common Audit Inspection Methodology - CAIM. Clearly, a transition period was needed to adapt the Romanian financial auditors to the new requirements for approaching the statutory audit activity, the inspection teams understanding the need for adaptation time. Through all these steps, the inspection teams found that the financial auditors had adapted their work to the new requirements, and the number of unsatisfactory issues identified was decreasing.

Therefore, in Romania, APSSAA, through the Investigation, Quality Assurance, and Inspections Service - IQAIS, is responsible for ensuring the quality of the statutory audit activity (ASPAAS, 2018). Frequently, the periodic inspections contained in the Inspection Plan are carried out at least once every 6 years for auditors performing statutory audit missions or at least once every 3 years, if the audited entities are in the public interest (Romanian Parliament, 2017). The regulations also provide that when an auditor first performs a statutory audit engagement, he or she shall be included in the inspection program within 3 years of the start of the first audit. The scheduling of inspections is performed according to the risk assigned to each financial auditor by APSSAA, in accordance with the Operational Inspection Procedure. Risk factors relevant to APSSAA's risk model include a number of variables, including: type of organization and size of audit firm, number of audit engagements, size and type of audited entities, results of previous inspections, existence of previous sanctions, report between the value of the commitment and its size, the inclusion of new partners in the company, reasonable complaints received from third parties, information from the press, regarding the risks of going concern, tax and fee issues, changes in key personnel (APSSAA, 2017).

In all cases, the purpose of verifying the quality assurance of the statutory audit activity is to assess compliance with the ISA, the independence requirements, the assessment of the quality control system organized at the auditor level, and the assessment of compliance with the requirements of resources spent and audit fees perceived. All work related to quality inspections are performed by checking the audit files. The members of the inspection team have the obligation to comply with the requirements regarding the confidentiality of the information obtained (not subject to publication the audit fees charged) during the inspections, as well as the obligations of professional conduct, according to the Code of Ethics (IESBA, 2016).

2. LITERATURE REVIEW AND FORMULATING RESEARCH HYPOTHESES

The quality of the audit is generally defined as consisting of two important attributes: competence/expertise and independence/objectivity (Knechel, 2016). The quality of the audit is difficult to assess and assessing the relative success of different types of regulations can be problematic. Studies have shown that partner rotation and audit inspections could lead to increased audit quality (Moroney, 2016). The quality inspections performed by the competent bodies aim at preventing, detecting, and correcting non-compliances in the activity of financial auditors and audit firms that carry out statutory audit missions. In other words, the inspections carried out aim at obtaining a reasonable assurance that the financial auditor complies with a series of requirements, such as: it has an adequate internal quality control system for statutory audits and reviews of financial statements, in accordance with ISQC1 - *Quality Control for Firms that Perform Audits and Reviews of Financial Statements and other Assurance and Related Services Engagements* and ISA 220 - *Quality Management for an Audit of Financial Statements* (IAASB, 2018); carries out its activity in accordance with the requirements of the professional standards applicable to the statutory audit activity, as well as with other applicable regulations, including national ones; complies with the ethical requirements contained in the *Code of Ethics. Good audit quality contributes to the proper functioning of markets by improving the integrity and efficiency of financial statements* (EU Parliament and Council, 2006). Quality assurance in auditing certainly refers to the principles included in the Code of Ethics of the International Federation of Accountants-IFAC (IESBA, 2016). Research has concluded that most irregularities occur because of non-compliance with ethical principles, which is a challenge for every audit professional (Hațegan, 2020). European directives have been introduced into the legislation of the Member States of the European Union, and some studies have shown how they have been implemented (Botez, 2019). One of the requirements concerns the establishment and functioning of the audit committee within the public interest entities. The research concluded that there is a significant and positive relationship between the existence of the audit committee and the quality of the financial and audit reports (Namakavarani *et al.*, 2021).

Deficiencies or non-conformities in the activity carried out by the financial auditor, individual person, or audit firm are considered serious deviations if it falls into one of the following situations: the obligations regarding the existence of the internal quality control system are not met or it is poorly implemented ; the requirements of professional ethics are violated; there is no audit evidence to support the conclusions on which the audit opinion was issued; lack of cooperation from the financial auditor or the representatives of the audit firm with the inspection team, according to Regulation No. 537/2014 and Law No. 162/2017 (IESBA, 2016). At the end of the inspection visit, the financial auditor or the representative of the audit firm shall sign a statement for the inspection team stating that all the documentation held at that time relevant to the quality inspection has been made available to the inspection team (ASPAAS, 2020).

Research has shown that the auditor's membership in Big 4 does not guarantee the quality of the audit, but a changed opinion over time may help increase the quality of the audit in the next period (Carp and Istrate, 2021). With the introduction of the Key Audit Matters - KAM in the auditor's report, it was found that the presentation of such aspects in one period leads to an increase in the quality of the audit activity in the following period (Grosu, Robu and Istrate, 2020). In addition, KAM, identified as money laundering risk factors in one period, influence the audit opinion in the next period (Grosu and Mihalciuc, 2020). However, it was noted that there are different approaches of auditors regarding the average number of KAM described at the report level and by industry, the nature of the key issues and the disclosure of the significance threshold used in the audit process (Levanti, 2019; Fülöp, 2018). Recent studies have analyzed the importance of reporting in the financial statements the subsequent events caused by the COVID-19 pandemic (Apostol, 2020), but also other aspects that can significantly influence the continuity of companies and how these effects can cause changes in the quality of audit services (Crucean and Hațegan, 2021). Professional accounting and auditing services can improve their performance by Robotic Processes Automation - RPA, which can contribute to increasing the credibility of the accounting profession, as well as streamlining the activity, meeting the requirements of professional standards, with lower costs (Lacurezeanu, Tiron-Tudor and Bresfelean, 2020). It was found that in 300 Audit Reports out of 1,000 analyzed, the auditors introduced paragraphs highlighting some aspects, and the main element found here is, by far, the continuity of the activity (Istrate, Bunget and Popa, 2020). The quality of the audit has a significant positive effect on the performance of companies, with the results being relevant to regulators, shareholders and other stakeholders, especially in countries with emerging capital markets (Sailendra, Murwaningsari and Mayangsari, 2019). Both among practitioners and at the level of regulators, it is considered that in order to conduct a quality audit it is essential that auditors maintain professional skepticism and make appropriate professional reasoning (Chersan, 2019). In order not to destabilize the balance that the auditor brings to the corporate governance environment, it is necessary to have a motivated correlation between the role of the auditor, his deeds and the responsibility that affects him (Măgdaș, 2018). The researchers found that firms for which audit reports were issued without mentioning discontinuity issues reported losses in subsequent periods more than firms for which audit reports were issued in which such issues were reported (Kim, 2021).

Starting from the literature (Knechel, 2016; Moroney, 2016; Namakavarani *et al*., 2021), the following research hypotheses can be formulated:

1. *Based on the non-compliant aspects classified in stages of the audit process, the most defective and most frequently unsatisfactory areas can be identified, which could guide the auditors to the rigorous planning and documentation of future audit missions and to justify the audit opinion according to the requirements of professional rules.*

2. *Non-compliant aspects of the Audit Reports are generated by the Type of auditor, individual or legal person.*

3. RESEARCH METHODOLOGY: POPULATION, SAMPLE, DATA SOURCE, DATA ANALYSIS METHODS

Testing the research hypotheses proposed in the study involves the use of a statistical approach (Jaba, 2002), which involves: population identification, sample selection, choice of variables, establishing data analysis methods and proposing econometric models to analyze, data collection and processing, and obtaining the research results and interpreting them in the final part of the study.

The population analyzed in this study is represented by the inspection reports prepared in 2018-2020 for the audit missions performed in 2017-2019 and published by APSSAA and the audit reports issued in 2018-2020 for PIE. The period chosen for the study is determined by the fact that APSSAA started these quality inspections starting in 2018 for the audit missions carried out in 2017. This study is a pilot study because, at the procedural level, *the analyzed sample* considers of 66 inspection Reports published by APSSAA for the period of 3 years, and at the reporting level, *the analyzed sample* includes only the audit reports for which unsatisfactory issues published on the APSSAA website were identified, these being 22 for year 2018. Only those for 2018 have been published. Consider the pilot study, as the number of observations was 88.

For testing and validating the proposed research hypotheses, the variables considered, first, the unsatisfactory aspects identified in the audit files on ISA and domains in 2018-2020 to highlight the most affected area, but also the most frequent unsatisfactory issues that auditors need to focus more on in the future. Second, the hypothesis regarding the manifestation of the influence of the type of auditor, individual or legal person on the content of the audit report is tested.

The data were collected manually from the quality inspection reports and from the nominal declarations, published by APSSAA, which highlighted non-compliant aspects, which detract from the quality, in terms of the preparation of audit reports.

For processing, the identified variables and their description are presented in Table 1.

Table 1. List of identified variables and their description

Variable	Variable Symbol	Value
ISQC, ISA 220	Auditor's quality control system	Yes Not
ISA 300, ISA 250, ISA 315, ISA 230, ISA 330	Planning	Yes Not
ISA 500, ISA 520, ISA 530, ISA 501, ISA 505, ISA 540, ISA 230	Audit evidence, External confirmations, Audit documentation	Yes Not
ISA 550	Related parties	Yes Not
ISA 260	Communication with Those Charged with Governance	Yes Not
ISA 580	Completion of audit (Written statements)	Yes Not
ISA 700, ISA 701, ISA 706	Audit report	Yes Not
ISA 570, ISA 560	Going concern and subsequent events	Yes Not
ISA 210	Agreement on the terms of the mission	Yes Not
Other ISA	Other aspects	Yes Not
Aud_Type	Auditor Type	Individual Legal person
Reg_Off_UIC	Identification Registered Office and UIC	Yes Not
Mod_Op_Op_Type	Modified opinion - Opinion type	Yes Not
Rep_Frame	Identification Reporting Framework	Yes Not
Q_Op_Basis	Qualified opinion - Basis	Yes Not
Suff_Inf_Op	Sufficient Information-Opinion	Yes Not
Go_Conc_Decl	Going Concern Declaration	Yes Not
Pers_Body_App_Audit	Indication of the Person or Body that appointed the Audit Firm	Yes Not
Date_App_Per_Cont	Indication of the Date of Appointment and the Period of Continuous Mission	Yes Not

Variable	Variable Symbol	Value
Audit_Op_Accord_Rep_Audit_Comm	Audit opinion in accordance with the Supplementary Report to the Audit Committee	Yes
		Not
Decl_Non_Audit_Services	Declaration that the Audit Firm did not provide non-audit services	Yes
		Not

Source: own processing

The identified variables are qualitative variables, being tested their existence or not. The exception is the type of auditor, who may be a individual or legal person. The methods of cross-sectional data analysis consider the quantitative analysis, systematization, comparison, but also the use of the multivariate data analysis method (Pintilescu, 2007), respectively the Factorial Analysis of Multiple Correspondences (FAMC).

4. RESULTS AND DISCUSSIONS

For the beginning, a descriptive analysis of the unsatisfactory aspects identified following the quality inspections is presented, being analyzed their frequency of occurrence and the total weight, as can be seen from Table 2.

Table 2. Unsatisfactory issues identified because of quality inspections

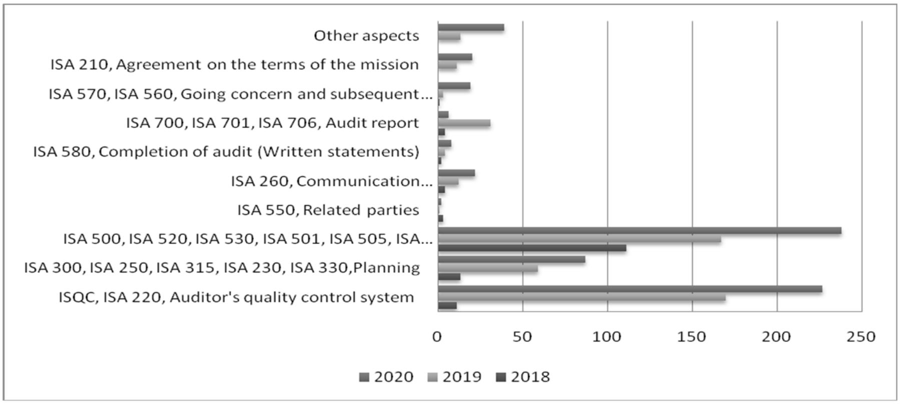
ISA and Domain	No issues identified				
	2018	2019	2020	Total	%
ISQC, ISA 220, Auditor's quality control system	11	170	227	**408**	**31.68**
ISA 300, ISA 250, ISA 315, ISA 230, ISA 330, Planning	13	59	87	**159**	**12.34**
ISA 500, ISA 520, ISA 530, ISA 501, ISA 505, ISA 540, ISA 230, Audit evidence, External confirmations, Audit documentation	111	167	238	**516**	**40.06**
ISA 550, Related parties	3	1	2	**6**	**0.47**
ISA 260, Communication with Those Charged with Governance	4	12	22	**38**	**2.95**
ISA 580, Completion of audit (Written statements)	2	4	8	**14**	**1.09**
ISA 700, ISA 701, ISA 706, Audit report	4	31	6	**41**	**3.18**
ISA 570, ISA 560, Going concern and subsequent events	1	3	19	**23**	**1.79**
ISA 210, Agreement on the terms of the mission	0	11	20	**31**	**2.41**
Other aspects	0	13	39	**52**	**4.04**

ISA and Domain	No issues identified				
	2018	**2019**	**2020**	**Total**	**%**
Total	**149**	**471**	**668**	**1288**	**-**
Număr Dosare de audit inspectate	**22**	**22**	**22**	**66**	**-**
Media aspectelor identificate pe Dosar de audit	**7**	**21**	**30**	**20**	**-**

Source: own processing

From the analysis of the data systematized in Table 2, we can see an increase in the total number of issues identified from 149 in 2018 to 668 in 2020. If for each of the three periods analyzed, the number of inspections was 22, we can see that the unsatisfactory issues identified have increased on average from 7 in 2018 to 30 in 2020. This can be considered worrying, given that more and more measures have been put in place to ensure the quality of financial audit missions in general and statutory, in particular. If we analyze the share of unsatisfactory issues in total, we find that the largest share of unsatisfactory issues identified following quality inspections performed on the audit missions included in the sample, over 40%, is held by the areas: audit evidence and documentation in audit in all three periods analyzed, as can be seen in Figure 1. In other words, gathering sufficient and thorough audit evidence is a stage with the most shortcomings.

Figure 1. Unsatisfactory issues identified on ISA and areas

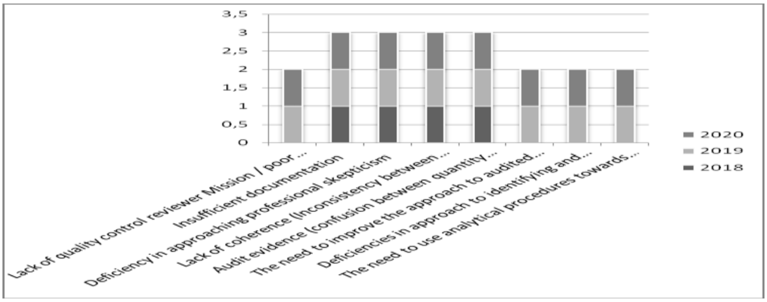


Source: own processing

An analysis of the detailed aspects of the Inspection Reports published by APPSSA, finds that the most common unsatisfactory aspects refer to: insufficient documentation, deficiencies in the approach of professional skepticism, lack of coherence between the chosen internal control procedures and their application, and confusion between the quantity and quality of audit evidence. Graphically, the presentation of the results can be viewed in Figure 2.

Consequently, starting from the first hypothesis stated, it can be found that depending on the unsatisfactory aspects identified in the last 3 years in stages of the audit, the most defective field is that of collecting audit evidence, and among the most common unsatisfactory aspects to which auditors need to turn more attention in the future is the confusion between the quantity and quality of audit evidence to be collected. In all these respects, financial auditors need to focus more in the future on planning, documenting and justifying the audit opinion in accordance with the requirements of professional standards.

Figure 2. Unsatisfactory aspects frequently identified

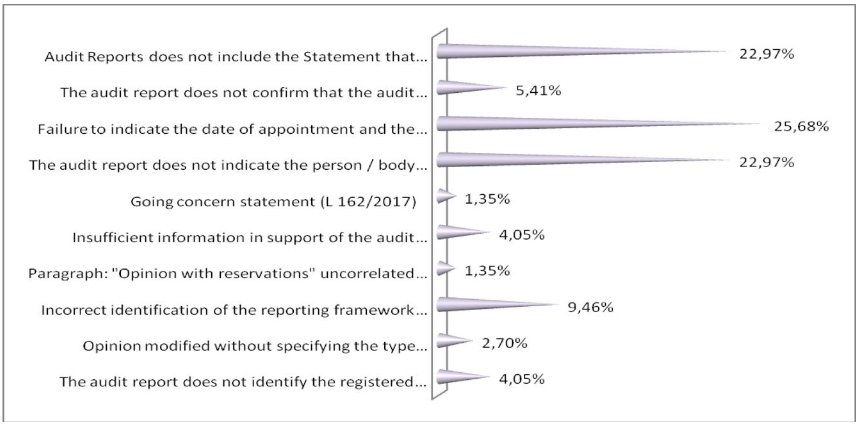


Source: own processing

To test the second research hypothesis - *non-compliant aspects of the Audit Reports are generated by the Type of auditor, individual or legal person* - a series of audit reports published in 2018 were analyzed for which APSSAA prepared a number of 22 declarations of non-compliance. In an analysis of their content, it was found that approximately 26% of the auditors analyzed do not mention in the Audit Report the date of appointment and the period of continuous engagement, including previous renewals and renaming of the audit firm. In the next place, with a percentage of 23% each, are the auditors who do not indicate in the Audit Report the person or body that appointed the auditor or do not mention the fact that the audit firm did not provide non-audit services and that the firm remained independent of the audited entity during the audit, as can be seen in Figure 3. The following are in descending order: incorrect identification of the reporting framework applied to prepare the annual financial statements (9.46%), the audit report does not confirm that the audit opinion is in line with the supplementary report to the audit committee (5.41%), insufficient information in support of the audit opinion expressed (4.05%), non-identification of the registered office and CUI of the audited entity (4.05%), modified opinion without specifying the type of opinion (2.70%), non-existence of the statement on business continuity (1.35%), paragraph: "Opinion with reservations" uncorrelated with Paragraph: "Basis for Opinion with reservations" (1.35%), according to the requirements of

Regulation (EU) No. 537/2014, Law No. 162/2017 or ISA 705 (Revised) “Modifications to the Opinion in the Independent Auditor’s Report” (IAASB, 2018).

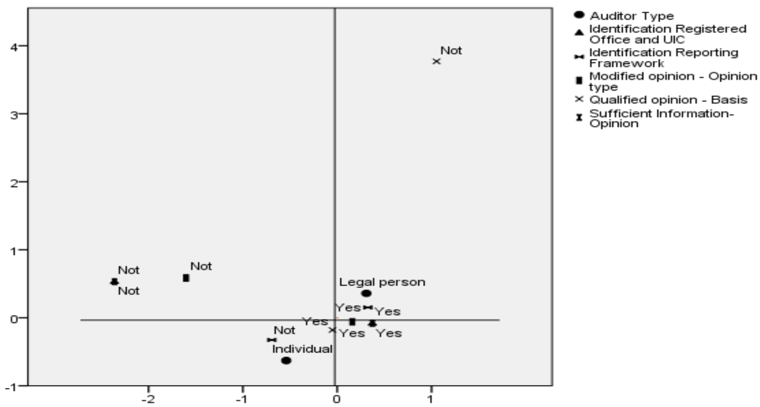
Figure 3. Non-compliant issues identified in the Audit Reports published in 2018 (IAASB, 2018)



Source: own processing

In an analysis of the associations between the type of auditor and the issues not mentioned in the Audit Reports analyzed, the work performed highlighted the results presented in Figures 4 and 5.

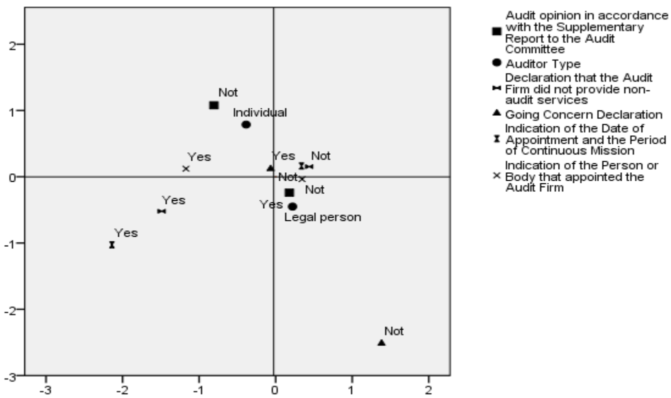
Figure 4. The association between the type of auditor and reporting requirements (I)



Source: own processing in SPSS 23.0, using FACM

From Figure 4, it can be seen that the auditor, individual person, does not mention, often, in the Audit Report, for the studied sample, the following aspects: identification of the registered office and UIC of the audited entity, correct identification of the reporting framework applied for preparation annual financial statements, the type of audit opinion when it is amended, sufficient information to support the audit opinion expressed. Instead, when the audit opinion is changed, the auditor, individual person correlates this paragraph with the paragraph: "Basis for the modified opinion". At the opposite pole is the auditor, a legal entity.

Figure 5. The association between the type of auditor and reporting requirements (II)



Source: own processing in SPSS 23.0, using FACM

If Figure 5 is analyzed, it can be seen that the auditor, legal entity, for the analyzed sample, is more tempted not to mention in the Audit Report the following aspects: appointment date and continuous engagement period, including renewals and previous renaming of the audit firm , the audit firm did not provide non-audit services and remained independent from the audited entity during the audit, the person or body that appointed the auditor. However, the auditor, a legal entity, usually mentions in the Audit Report that the audit opinion is in line with the supplementary report to the audit committee. Instead, in the Audit Report of an auditor, individual person, the mentioned aspects are in opposition to those of the auditor, legal person, for the analyzed sample.

5. CONCLUSIONS

This study, considered a pilot, aimed to identify as rigorously as possible the issues considered unsatisfactory and that require remediation related to statutory audit missions, *both at the level of the entire audit process and at the level of* *reporting.* The finding is that over time there has been an increase in the number and type of issues identified as unsatisfactory in the audit process. Moreover, there have even been setbacks. Following the analysis of the sample under study, it was found that the most affected area is the collection of sufficient and thorough audit evidence, the financial auditors receiving weaknesses in this category. Regarding the frequency of unsatisfactory issues identified, there are: *insufficient documentation, deficiency in addressing professional skepticism, inconsistencies between the chosen control procedures and their application, as well as confusion between the quantity and quality of audit evidence,* which confirms the results of other studies. *At the reporting level,* more than 20% of the Audit Reports included in the analyzed sample discount the quality, because: *it does not indicate the date of appointment and the period of continuous mission, including renewals and previous renaming of the audit firm, it does not indicate the person / body named the audit firm, do not include the Statement that the audit firm did not provide non-audit services and that the firm remained independent of the audited entity during the audit.* Therefore, the present study highlights the issues identified as unsatisfactory and that require remediation related to financial (statutory) audit missions, both at the level of the entire audit process and at the level of reporting. The study presents the classification of the over 1,000 unsatisfactory aspects identified in the last 3 years by stages of the audit approach and highlights the area most affected, thus contributing to a possible improvement of prevention measures. Clearly, APPSSA did not remain indifferent to these inconsistencies, and the sanctions imposed on the financial auditors were not long in coming. These were: disciplinary sanctions (an 18-month suspension sanction was issued for a financial auditor during 2020) and warnings. No sanctions were imposed.

In conclusion, these first inspections carried out in the period 2018-2020 had as main purpose the information, awareness, correction of control procedures, as well as the approach of the audit in general, with the intention to align the statutory audit procedures at European level and, implicitly, the increase of the quality of the statutory audit in Romania.

The main limitation of the study is that the sample was small, the study being considered as a pilot study. If the research on the Inspection Reports is limited due to the fact that APPSSAA carries out these inspections, in turn, on a sample and only they are published, the research on the reporting part can be extended to the level of the Audit Reports issued by the companies subject to statutory audit in Romania and beyond.

References

1) Apostol, C. (2020). Coronavirus – a new International Economic Crisis? In: *European Finance, Business and Regulation, EUFIRE 2020,* pp. 641-655. Iasi: Alexandru Ioan Cuza Publishing House.
2) APSSAA, (2017). *Regulamentul de organizare și funcționare (Rules of organization and functioning)*. [online] Available at: https://www.aspaas.gov.ro/regulament-de-organizare-si-functionare/ [Accessed 19.04.2021].
3) ASPAAS, (2018). *Order no. 166/16.10.2018 for the approval of the Norms regarding the performance of inspections at financial auditors and audit firms that carry out statutory audit activities.* [online] Available at: https://www.lege-online.ro/lr-ORDIN-166%20-2018-(206356)-(1).html [Accessed 21.05.2021].
4) ASPAAS, (2020). *Order no. 260/09.06.2020 for the amendment and completion of the Order of the President of the ASPAAS no. 166/2018 for the approval of the Norms regarding the performance of inspections at financial auditors and audit firms carrying out statutory audit activities.* [online] Available at: https://www.aspaas.gov.ro/wp-content/uploads/2020/07/Ordin-260-09-06-2020.pdf [Accessed 24.06.2021].
5) Botez, D. (2019). Comparative Study at European Level on the Criteria that Determine the Obligation to Audit the Financial Statements and the Organizational Structure of the Statutory Audit Oversight Body. *Audit Financiar*, XVII(4/156), pp. 619-627. DOI: 10.20869/AUDITF/2019/156/022.
6) Carp, M. and Istrate. I. (2021). Audit Quality under Influences of Audit Firm and Auditee Characteristics: Evidence from the Romanian Regulated Market. *Sustainability*, 13(12), pp. 6924. DOI https://doi.org/10.3390/su13126924.
7) Chersan, I-C. (2019). Audit Quality and Several of Its Determinants. *Audit Financiar*, XVII(1/153), pp. 93-105. DOI: 10.20869/AUDITF/2019/153/002.
8) Crucean, A. C. and Haţegan, C. D. (2021). Effects of the Covid-19 Pandemic Estimated in the Financial Statements and the Auditor's Report. *Audit Financiar*, XIX(1/161), pp. 105-118. DOI: 10.20869/AUDITF/2021/161/001.
9) EU Parliament and Council, (2006). *Directive No. 43/17.05.2006 of the on the statutory audit of annual accounts and consolidated accounts.* [online] Available at: https://www.aspaas.gov.ro/wp-content/uploads/2018/03/DIRECTIVA-43_2006-actualizata-2014-1.pdf [Accessed 21.05.2021].
10) EU Parliament and Council, (2014). *Regulation (EU) No 537/16.04.2014 of the on specific requirements regarding the statutory audit of public interest entities*. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0537 [Accessed 13.04.2021].
11) Fülöp, M. T. (2018). New tendencies in audit reporting, examples of good practices BVB. *Audit Financiar*, XVI(2/150), pp. 249-260, DOI: 10.20869/AUDITF/2018/150/010.
12) Grosu, M. and Mihalciuc, C. C. (2020). Assessment of risck of Money Laudering and Terrorist Finnacing and Influence on Financial Audit Opinion. *The USV Annals of Economics and Public Administration*, 20(2/32), pp. 103-114.

13) Grosu, M., Robu, I-B. and Istrate, C. (2020). The Quality of Financial Audit Missions by Reporting the Key Audit Matters. *Audit Financiar*, XVIII(1/157), pp. 182-195. DOI: 10.20869/AUDITF/2020/157/005.
14) Haţegan, C-D. (2020). „Auditing" the Auditors – Oversight: Necessity or Compulsoriness? *Audit Financiar*, XVIII(1/157), pp. 128-144. DOI: 10.20869/AUDITF/2020/157/002.
15) IAASB, (2018). *Manual de Reglementări Internaționale de Control al Calității, Audit, revizuire, Alte Servicii de Asigurare și Servicii Conexe (International Quality Control, Audit, Review, Other Insurance and Related Services)*. Bucharest: CFAR Publishing House.
16) IESBA, (2016). *Manualul Codului Etic al Profesioniștilor Contabili (The Handbook of the Code of Ethics for Professional Accountants)*. Bucharest: CFAR Publishing House.
17) Istrate, C., Bunget, O. C. and Popa, I. E. (2020). Justifications for the Modified Opinions and for Other Observations in the Audit Reports. *Audit Financiar*, vol. XVIII(4/160), pp. 785-800. DOI: 10.20869/AUDITF/2020/160/026.
18) Jaba, E. (2002). *Statistica*. Bucharest: Economic Publishing House.
19) Kim, T. (2021). Does a Manager Respond to a Going-Concern Audit Opinion with an Asymmetry in Gain and Loss? *Sustainability,* 13(4425). DOI https://doi.org/10.3390/su13084425.
20) Knechel, W. R. (2016). Audit quality and regulation. *International Journal of Auditing*. 20(1), pp. 215–223.
21) Lacurezeanu, R., Tiron-Tudor, A. and Bresfelean, V. P. (2020). Robotic Process Automation in Audit and Accounting. *Audit Financiar*, XVIII(4(160)), pp. 752-770. DOI: 10.20869/AUDITF/2020/160/024.
22) Law no. 162/2017 of July 6, 2017 on the statutory audit of annual financial statements and annual financial statements consolidated and amending regulatory acts. Published in: Official Gazette No. 548 of July 12, 2017. [online] Available at: https://static.anaf.ro/static/10/Anaf/legislatie/L_162_2017.pdf [Accessed 21.05.2021].
23) Levanti, D. A. (2019). Aspects Regarding the Changes to the Independent Auditor‟s Report. The Case of Public Interest Entities. *Audit Financiar*, XVII(3/155), pp. 486-495. DOI: 10.20869/AUDITF/2019/155/018.
24) Măgdaș, N. (2018). Auditor's Liability and Methods for its Limitation, *Audit Financiar*, XVI(2/150), pp. 261-269, DOI: 10.20869/AUDITF/2018/150/011.
25) Moroney, R. (2016). Regulating Audit Quality-Ramifications and Research Opportunities. *International Journal of Auditing*, 20, pp. 105–107.
26) Namakavarani, O., M., Daryaei, A., A., Askarany, D. and Askary, S. (2021). Audit Committee Characteristics and Quality of Financial Information: The Role of the Internal Information Environment and Political Connections. *Journal of Risk Financial Management*, 14(6), pp. 273. https://doi.org/10.3390/jrfm14060273.
27) Pintilescu, C. (2007). *Analiză statistică multivariată (Multivariate Statistical Analysis).* Iasi: Alexandru Ioan Cuza University Publishing House.
28) Regulation (EU) No 537/2014 of the European Parliament and of the Council of 16 April 2014 on specific requirements regarding statutory audit of public-interest entities and repealing Commission Decision 2005/909/EC Text with EEA relevance

[online] Available at: http://data.europa.eu/eli/reg/2014/537/oj [Accessed 21.05.2021].

29) Romanian Parliament, (2017). *Law no. 162/06.07.2017 regarding the statutory audit of the annual financial statements and of the consolidated annual financial statements and of the modification of some normative acts*, [online] Available at: https://www.aspaas.gov.ro/wp-content/uploads/2018/03/LEGE-Nr-162-din-2017-2.pdf [Accessed 21.05.2021].

30) Sailendra, S., Murwaningsari, E. and Mayangsari, S. (2019). The Influence of Free Float Shares and Audit Quality on Company Performance: Evidence from Indonesia. *Audit Financiar*, XVII(2/154), pp. 274-282, DOI: 10.20869/AUDITF/2019/154/010.

DIVERGENT EVOLUTIONS IN THE ACCOUNTING FIGURES OF SOME ROMANIAN LISTED COMPANIES, IN THE CONTEXT OF THE COVID-19 HEALTH CRISIS

COSTEL ISTRATE
Alexandru Ioan Cuza University of Iași
Iași, România
istrate@uaic.ro

Abstract
COVID-19 has significant effects on the economic activities, including on the financial indicators reported by the Romanian listed companies for the financial year 2020. We expect that the tourism sector to be very negatively influenced by the pandemic situation and, on the contrary, the pharma/medical sector to be positively influenced. Analysing some indicators reported by four listed companies in each sector, we found that the tourism sector was severely affected, but the pharma/medical sector providing good indicators, but not in very big proportions.
Keywords: *COVID-19; Romania listed companies; revenues; net income.*
JEL Classification: M41

1. INTRODUCTION

The COVID-19 pandemic was an extraordinary opportunity for studies, analyses and reports on the causes, consequences, measures taken by authorities and individuals (companies, individuals, other organizations), short-term effects, medium- and long-term effects, on the changes generated in the individual or collective behaviours, etc. In a period of just over a year since the quarantine and the daily count of the positive cases, the intensive care cases, the dead and the protesters against the restrictions imposed by the authorities, google scholar shows us (on April 14, 2021 , the date of sending the abstract to the conference organizer) 3,840,000 search results with the keyword COVID-19; at the date of the paper (May 14, 2021), the number of works related to COVID-19 dropped, in the same search on google scholar, to 3,710,000, but on July 3, 2021 – the date of the final version of the paper, the number go to 4.200.000! Undoubtedly, there is much to be said about the pandemic and ways to reach it through credible messages, they are often found in official reports, but also in research articles published in more or less visible journals. Confirmation of interest in this topic and the concerns of extremely diverse authors as professional profiles for describing and analysing aspects of all kinds of the COVID-19 pandemic is also confirmed by the large number of references indexed in Web of Knowledge: 101,611, at the time of the search (April 14, 2021), almost all being published in 2020 and 2021 (only 16 in

2019, the rest being published in 2020 and 2021). At the time of the conference (May 14, 2021), the number of references in the WOS is already 111,101 (of which 18 come from years prior to 2020), while at the date of completion of the text for publication (July 3, 2021), the situation was as follows: 134,583 entries, from which 19 from years prior to 2020. It is clear that the writing of those articles was done very quickly, that the peer-review process was also very fast, probably mobilizing a huge number of researchers both on the drafting side and on the verification/editing of those articles. The scientific interest is great in knowing as much as possible about COVID-19 and its collateral aspects, but we cannot fail to notice the training effect generated by such a topic and which stimulates opportunism, often positively, of authors who have thus found a topic with great potential in producing visible articles. It remains to be read as well as to capitalize on their results.

The economic, financial, commercial, logistical aspects could not be missing from the topics approached in the context of COVID-19. Among them, the data reported by listed companies and which have been one of the main sources of quantitative research in finance, accounting, auditing and other fields take place in the specific analysis of the effects of COVID -19. Of course, in the case of companies that close on December 31, the analyses began with the first interim reports (quarterly or half-yearly) for 2020 or referred to the financial statements for 2019 that will be treated COVID-19 as an event after the closing the reporting period, which it was mandatory to mention in the notes. If the closure was made on dates other than December 31, for example March 31, June 30, or September 30 (to mention a few more common times as the reporting date), then the analyses could be based on more financial information. directly affected by the special medical situation. Another line of analysis refers to the effects of the pandemic on the stock exchange prices of the shares of different types of companies or on the representative stock market indices.

As for us, we collected the numbers reported by Romanian companies listed on the regulated market of the Bucharest Stock Exchange for the year 2020 (all close on December 31) and we analysed the indicators reported by companies from two sectors for which the effects of the pandemic were complete divergent: tourism companies, with extremely high difficulties in activity, due to the significant restriction of the mobility of people during COVID-19, which was opposed by companies in the pharmaceutical sector (production and trade of medicines), from which we expect particularly good financial performance compared to previous periods. Even if the number of companies analysed is limited, we believe that highlighting their evolution and options for some accounting techniques is of interest to users of accounting information, but also to other categories of stakeholders.

The COVID-19 pandemic is not the first health crisis to significantly affect tourism: He *et al.* (2020) cite studies analysing the effects of the SARS epidemic

(2003) on the Chinese economy, especially on tourism, transport and catering; we recall this information, although Fernandes (2020) warns us that it is not productive to compare SARS (whose total costs have been estimated by the World Bank at around $ 54 billion) with COVID-19, at least because China's share of world trade is much higher in 2020 than in 2003.

In the following sections, we will review the literature on the impact of COVID-19 on the accounting figures reported by some companies (section 2), we will present the data and methodology (section 3), the results of the analysis (section 4), the conclusions and the references.

2. LITERATURE REVIEW

The declaration of the COVID-19 pandemic in March 2020 had the immediate effect of significantly lowering the indices of the world's major stock exchanges (Akhtaruzzaman, Boubaker and Sensoy, 2021), although the effects on stock indices appear to be influenced by the degree of freedom associated with each country (Erdem, 2020). Financial measures were immediately taken by governments and regional or global institutions to provide financial support to economies, businesses and people affected by the pandemic. Following the official declaration of the pandemic and the establishment of procedures for measuring and reporting infections and related daily deaths, the effects of these reports on stock market indices were also measured: Al-Awadhi *et al.* (2020) find clear evidence of the negative effects of reporting on cases of infection and deaths on stock indices specific to some Chinese financial markets, with the particular impact on different measures of certain sectors of activity. Likewise, McKibbin and Fernando (2020) report impressive falls in stock indices. But the effects on the capital market not only had aspects strictly related to the effects of the pandemic, but also the measures taken by governments and/or regional or global organizations to fight the effects of the pandemic. These measures have influenced capital market indices in different ways: Ashraf (2020) analyses a series of 77 stock market indices around the world (including the Bucharest Stock Exchange - BSE) and concludes that government measures of quarantine and social distancing have had an effect. immediately negative on stock market indices - although the decrease in COVID-19 cases that followed these measures was positively appreciated - and measures of government financial support, increased testing, improved health policies had positive effects on financial markets.

The effects on financial markets are also due to the significant decrease in activity in some important sectors of the world's economies. One of the most affected sectors is tourism, with all it includes: transport, intermediation, accommodation, restaurants, spectacles. Another important feature of the COVID-19 crisis is the extraordinary speed with which the virus has spread, but also its effects. economic and financial.

The shock suffered by tourism is also highlighted by statistical figures: Song, Yeon and Lee (2021) cite statistics that show a decrease of between 70% and 90% of travel in the world, which severely affected the hospitality industry, with differences generated by variables such as leverage, ownership, managerial strategies. Fernandes (2020) even advances a figure of more than 90% decrease in tourism business. At European level, the European Parliament (2020) estimated unrealized revenues at 1 billion euros per month due to the effects of COVID-19 on tourism. Worldwide, Canhoto and Wei (2021) cite a statistic that advances the figure of 800 billion USD as a decrease in tourism sales in 2020. Statistical data published by Eurostat confirm this trend and show us the largest declines in GDP in 2020 appeared for countries with significant exposure to tourism: -10.8% in Spain, -8.9% in Italy, -8.2% in Greece, -8.1% in France, -8.0% in Croatia, -7.6% in Portugal, for an EU average of -6.1%.

In addition to tourism, Bartik *et al.* (2020) identify other sectors severely affected by the pandemic (in the case of US SMEs): some trade activities, arts and entertainment, personal services; at the same time, the effects of COVID-19 have not been as negative in sectors such as finance, professional services, real estate. Mazur, Dang and Vega (2021) identify strong negative effects of COVID-19 on the oil, real estate, entertainment and hospitality sectors. Another sector affected by the pandemic is energy production.

The immediate impact of the pandemic on the financial situation of some companies was also measured due to the interim reporting obligations (very frequently, quarterly) that listed companies have. A model for identifying winners and losers from events such as COVID-19, a model based on quarterly data, is provided by Hassan *et al.* (2020) which find an important feature of COVID-19: this pandemic affects all companies in the world, increases uncertainty and worsens the business environment in the vast majority of companies, affects both the demand and supply side, as well as aspects related to financing; on the other hand, for the first three quarters of 2020, Hassan *et al.* (2020) identify major differences in impact depending on the geographical region or type of activity. Takahashi and Yamada (2021) show that, although the number of infections in one country (Japan) was lower than in other countries (China and USA), the effects on financial markets are similar, due to shareholder structure, trade exposure to countries more affected by the pandemic.

An indicator of the appreciation of the way companies react to the pandemic is also represented by the cash held: Qin *et al.* (2020) conclude that the COVID-19 pandemic had a positive impact in the first quarter of 2020 on the cash held by listed Chinese companies that were most affected by the pandemic.

Regarding the companies listed on BSE, Hațegan Curea-Pitorac and Hațegan. (2020) analyse their response to the onset of the pandemic and the state of emergency, in terms of corporate communication, concluding that the pandemic period has led to increased levels of social responsibility towards people within organizations, in order to protect them.

Beyond the financial aspects - which we are interested in this study - the effects of the pandemic on the tourism sector are also analysed from a human rights perspective: authors concerned about the restriction of the right to movement wonder to what extent of the effects of the pandemic. Thus, Baum and Hai (2020), considering the right to tourism as falling into the broader category of human rights, along with the right to work for example, find that the authorities' reaction to the pandemic has seriously affected this right and expresses the hope that, after the pandemic, even if in slightly different and adapted forms, tourism will recover and even expand.

Another direction of reflection - at the academic level, but also at the levels of political decision - proposed by Voth (2020) refers to how desirable is the mobility without any restriction of people in all parts of the world, mobility that gives meaning to development without precedent of the tourism industries (transport, hotels, places to visit, intermediaries) as part of globalization in recent decades.

The pandemic also raised questions about the ability of companies to cope with unforeseen crises and to adapt these companies to better resilience (Duarte Alonso *et al.,* 2020), which requires creativity, innovation, dynamics. At the same time, the duration of the pandemic crisis makes it necessary to address resilience procedures not only after the crisis, but also during the crisis (Canhoto and Wei, 2021).

Exposure to COVID-19 and other point-to-point pandemics with immediate impact and persistent media coverage should not make us forget that other diseases create costs, even if the manifestations of these diseases do not depend on human-to-human transmission and do not immediately affect economic activities on such an important scale as COVID-19. Thus, before COVID-19, Fan, Jamison and Summers (2018), in a plea to increase pandemic preparedness, estimated the expected losses from pandemic risks at $ 500 billion per year, or 0.6% of global revenue.

3. METHODOLOGY AND DATA

The data we analyse are, first of all, from the financial year 2020, which was fully affected by the pandemic. By way of comparison, we have data from previous years: 2011 to 2019. We started with 2011 because it is the first year for which the financial statements are presented in accordance with IFRS, in the individual financial statements of Romanian companies listed on the regulated market, which allows us to have comparative information throughout the period, reported according to the same accounting framework. The 8-year comparative period seems to be sufficient to determine whether 2020 is out of the usual medium-term trend in terms of financial indicators; Akhtaruzzaman, Boubaker and Sensoy (2021) compare 2020 with a similar period 2013-2019: the arguments relate to overcoming the financial crises started in 2008. On the other hand, the quarterly data analysed in other studies, although they may show a more immediate evolution and adaptation to the crisis, must supplemented by the analysis of annual data, which has the advantage of taking into account the efforts of a year, with the necessary adjustments and the exceeding of periodic thresholds that depend heavily on short-term economic factors and the possibility to see the first effects of macroeconomic level, of states or international / regional organizations or at microeconomic level, by companies or groups of companies.

The companies we analyse - selected from those listed on the BVB regulated market - have completely different activities in terms of exposure to the consequences of the pandemic: tourism, respectively companies involved in the pharmaceutical sector (production and/or trade in medicines or medical services). From the first category, we found 4 companies, all of which have as majority shareholder a financial investment company (SIF). From the second category, we identified 6 companies, of which 4 have a shareholder holding more than 50% (one of the companies being majority controlled by a state institution). Of these six companies, we gave up two, because in 2016 they were forced to split, separating the retail activity from the wholesale trade and, even if later this legal obligation was waived, the data related to the two companies do not they are still comparable throughout.

The data come from the financial statements as part of the annual reports published on the companies' websites or on the stock exchange's website. For 2020, we used the data presented to shareholders on the companies' websites, for analysis and approval by the general meeting.

We expect financial performance indicators of companies to have divergent developments - tourism companies to report significant decreases in sales and profit, as well as the average number of employees, while companies in the pharmaceutical/medical sectors have indicators that attests to a significant increase in sales and profits. The indicators actually retained are sales, net income and average number of employees. We compared the values from 2020 with the average value from the previous 8 years, but also with the indicator from the immediately preceding year (2019).

4. RESULTS

The two categories of companies analysed reported, indeed, divergent performances in 2020, a situation that can be attributed to the health crisis. In tables 1, 2 and 3, we put the values of sales, net income for 2020 and the average number of employees, compared to the average over the previous 8 years, but also with the value in 2019, for companies in the tourism field (we have identified them by the stock symbol).

Table 1. Sales in 2020 compared to previous years, in the case of tourism companies listed on BSE

Symbol	BCM	CAOR	EFO	TUFE
Sales 2020	3,618,006	8,331,086	23,101,785	53,825,460
Sales 2019	9,962,804	26,574,659	48,663,596	93,085,092
Average sales 2011-2019	7,178,788	15,440,304	34,793,567	60,437,483
Evolution 2020 to 2019	-63.68%	-68.65%	-52.53%	-42.18%
Evolution 2020 to the 2011-2019 average	-49.60%	-46.04%	-33.60%	-10.94%

Source: own processing, based on data from the financial statements of the companies

Table 1 shows that the situation of tourism companies was significantly affected by the pandemic, being recorded in all cases significant decreases in sales in 2020 compared to 2019 and compared to the average of previous years reported in IFRS. In the case of the net income, 2020 is weaker than 2019, without exception, but a company records a higher income than the average of the previous 9 years.

Table 2. Net income 2020 compared to previous years, in the case of tourism companies listed on BSE

Symbol	BCM	CAOR	EFO	TUFE
Net income 2020	-1,971,774	-13,358,642	4,579,522	462,885
Net income 2019	2,847,039	1,510,606	5,592,062	14,211,525
Average net income 2011-2019	851,523	-1,898,993	3,647,141	6,170,018
Evolution 2020 to 2019	-169.26%	-984.32%	-18.11%	-96.74%
Evolution 2020 to 2011-2019 average	-331.56%	-603.46%	25.56%	-92.50%

Source: own processing, based on data from the financial statements of the companies

Lack of activity or a significant decrease in it often leads to more or less forced dismissal. We expect that the average number of employees reported by the companies negatively affected by the pandemic will be lower in 2020 compared to the benchmarks from the previous period/periods. In the case of the four tourism companies analysed, this type of evolution is confirmed (Table 3), with significant percentages, except in the case of TUFE, where the decrease 2020 compared to 2019 is accompanied by an increase 2020 compared to the previous 8 years: explanations here it could be related to the investments made by the company in previous years. We have analysed here only the average number of employees and not the wage expenditures, in order to avoid the effects generated by the national policies regarding the minimum wage. To better see the situation of these companies, we also calculated the differences in productivity (sales/average number of employees): in all cases, for tourism companies there are significant decreases in productivity in 2020, both compared to the average of the previous nine years and, especially compared to 2019 (from -30% to -52%). These results show that firms did not lay off as their business dwindled, probably as a result of the authorities' support programs for retaining employees through various subsidies.

The crisis in tourism materialized by the decrease in the average number of employees in this field is worrying, but we must not forget that the pandemic also had the effect of significant staff transfers from the affected sectors to those that have seen a visible development: online trade, courier, home food production, some IT activities, some medical activities (Barrero, Bloom and Davis, 2020).

Table 3. Average number of employees 2020 compared to the previous years, for tourism companies listed on BSE

Symbol	BCM	CAOR	EFO	TUFE
Average number of employees 2020	61	97	247	727
Average number of employees 2019	81	173	366	756
Average number of employees 2011-2019	72	140	353	692
Evolution 2020 to 2019	-24.69%	-43.93%	-32.51%	-3.84%
Evolution 2020 to 2011-2019 average	-15.28%	-30.71%	-30.03%	5.06%

Source: own processing, based on data from the financial statements of the companies

Tables 4, 5 and 6 present the evolutions of companies in the pharmaceutical/medical fields. Despite the possible expectations for better financial performance in 2020, we note from Table 4, that sales did not increase dramatically in 2020 compared to 2019, they even decreased for one of the companies. Instead, we can see an increase compared to the average 2011-2019, an increase that we can not only blame the pandemic but can be the natural result of the activity of those companies during the analysed period.

Table 4. Sales in 2020 compared to previous years, in the case of pharma companies listed on BSE

Symbol	ATB	BIO	M (din 2014)	SCD
Sales 2020	340,424,276	216,419,696	508,823,190	559,007,373
Sales 2019	389,710,740	202,755,811	456,165,019	557,960,940
Average sales 2011-2019	330,466,692	144,734,843	356,586,480	378,419,293

Symbol	ATB	BIO	M (din 2014)	SCD
Evolution 2020 to 2019	-12.65%	6.74	11.54	0.19
Evolution 2020 to 2011-2019 average	3.01%	49.53	42.69	47.72

Source: own processing, based on data from the financial statements of the companies

Unlike the situation of tourism companies, in which the expectations are confirmed, for companies in the pharmaceutical/medical field, the expected growth of sales is not one that can be qualified as significant for all companies analysed. The results are quite clear in the sense of a slight increase, on average, in sales from 2020 compared to 2019 and a slightly more pronounced increase in 2020 compared to the average of previous years.

In terms of net income, developments seem contradictory, especially after comparing 2020 with the average of previous years: two decreases of just over 10% and two extremely visible increases. It is possible that in the case of M and SCD, the increases will be generated by the pandemic, but we do not have certainties in this regard.

Table 5. Net income 2020 compared to previous years, in the case of pharma companies listed on BSE

Symbol	ATB	BIO	M (din 2014)	SCD
Net income 2020	26,388,049	54,264,580	41,842,280	65,635,439
Net income 2019	30,823,278	50,881,818	5,022,439	43,750,672
Average net income 2011-2019	29,562,433	29,937,404	3,325,238	75,187,855
Evolution 2020 to 2019	-14.39	6.65	733.11	50.02
Evolution 2020 to 2011-2019 average	-10.74	81.26	1.158.32	-12.70

Source: own processing, based on data from the financial statements of the companies

The results reported in Table 6, regarding the evolution of the average number of employees are not such as to allow us to identify any trend generated by the pandemic, for the companies in the pharmaceutical/ medical field. The same conclusion applies to the evolution of productivity, calculated as the ratio between turnover and average number of employees.

Table 6. Average number of employees 2020 compared to the previous years, for pharma companies listed on BSE

Symbol	ATB	BIO	M (din 2014)	SCD
Average number of employees 2020	1,415	331	1,881	772
Average number of employees 2019	1,415	356	2,200	620
Average number of employees 2011-2019	1,445	373	1,737	521
Evolution 2020 to 2019	0.00%	-7.02%	-14.50%	24.52%
Evolution 2020 to 2011-2019 average	-2.08%	-11.26%	8.29%	48.18%

Source: own processing, based on data from the financial statements of the companies

5. CONCLUSIONS

The literature on COVID-19 is experiencing a rapid evolution in 2020 and 2021, proposing over 100,000 articles indexed WOS and over 4,200,000 references on google scholar. Of course, this literature comes mainly from the medical area - extremely prolific even in the absence of this pandemic, but there are also economic and financial aspects analysed in the context of COVID-19.

Restrictions imposed in efforts to overcome the difficult medical situation have created serious economic difficulties for some areas of activity, but also at least as serious opportunities for other areas. Thus, on the one hand, we expect that limiting the national and international mobility of people will significantly affect businesses in the tourism area, while, on the other hand, companies producing drugs and providing medical services will benefit.

We analysed four companies from each category, companies chosen from those listed on the regulated market of BSE. We compared the sales and net income from 2020 with those from 2019, but also with the average of those from 2011-2019 (except for one company, for which data are available only from 2014). We started with 2011 for comparability reasons: starting with this exercise, IFRS data are available.

As expected, the sales and net income of tourism companies decreased significantly in 2020, both compared to 2019 and compared to the average of 2011-2019. On the contrary, for companies in the medical field, the evolution in 2020 does not confirm any significant difference compared to 2019 or compared to the average from 2011-2019.

The main limits consist in the very few companies analysed, which does not allow in any way the generalization of the results. Also, the analysis refers to only three indicators - sales, net income and average number of employees. On the other hand, although the COVID-19 pandemic appears to be unprecedented in terms of economic impact and the measures taken by the authorities, it may have been useful to compare its effects with the effects of other similar events over the history.

References

1) Akhtaruzzaman, M., Boubaker, S. and Sensoy, A. (2021), Financial contagion during COVID–19 crisis. *Finance Research Letters*, 38, 101604.
2) Al-Awadhi, A. M. Alsaifi, K., Al-Awadhi, A. and Alhammadi, S. (2020). Death and contagious infectious diseases: Impact of the COVID-19. *Journal of Behavioral and Experimental Finance*, 27, 100326.
3) Ashraf, B. N. (2020). Economic impact of government interventions during the COVID-19 pandemic: International evidence from financial markets. *Journal of Behavioral and Experimental Finance*, 27, 100371.
4) Barrero, J. M., Bloom, N. and Davis, S. J. (2020). COVID-19 is also a reallocation shock. National Bureau Of Economic Research (NBER) Working Papers no. 27137. [online] Available at: http://www.nber.org/papers/w27137 [Accessed 08.04.2020].
5) Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M. and Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations, *Proceedings of the National Academy of Sciences*, 117(30), 17655-17766.
6) Baum, T. and Hai, N. T. T. (2020). Hospitality, tourism, human rights and the impact of COVID-19. *International Journal of Contemporary Hospitality Management*, 32(7), pp. 2397-2407.
7) Canhoto, A. I. and Wei, L. (2021), Stakeholders of the world, unite!: Hospitality in the time of COVID-19. *International Journal of Hospitality Management*, 95, 102922.
8) Duarte Alonso, A., Kok, S. K., O'Shea, M., Sakellarios, N., Koresis, A. and Buitrago Solis, M. A. (2020). COVID-19, aftermath, impacts, and hospitality firms: An international perspective, *International Journal of Hospitality Management*, 91, 102654.
9) Erdem, O. (2020). Freedom and stock market performance during COVID-19 outbreak. *Finance Research Letters*, 36, 101671.
10) European Parliament, (2020). COVID-19 and the Tourism Sector. [online] Available at: https://www.europarl.europa.eu/RegData/etudes/ATAG/2020/649368/EPRS_ATA (2020)649368_EN.pdf [Accessed 13.05.2021].
11) Fan, V. Y. Jamison, D. T. and Summers, L. H. (2018). Pandemic risk: how large are the expected losses? *Bulletin of the World Health Organization*, 96(2), pp. 129-134.
12) Fernandes, N. (2020). Economic Effects of Coronavirus Outbreak (COVID-19) on the World Economy. *IESE Business School Working Paper No. WP-1240-E*. [online] Available at SSRN: https://ssrn.com/abstract=3557504 or http://dx.doi.org/10.2139/ssrn=3557504 [Accessed 08.04.2021].
13) Hassan, T. A., Hollander, S., van Lent, L., Schwedeler, M. and Tahoun, A. (2020). Firm-level exposure to epidemic diseases: COVID-19, SARS, and H1N1. *NBER*

Working Paper No. 26971. [online] Available at: http://www.nber.org/papers/w26971 [Accessed 06.04.2021].

14) Hațegan C. D., Curea-Pitorac, R. I., Hațegan and V. P. (2020). Responsible Communication of Romanian Companies for Ensuring Public Health in a COVID-19 Pandemic Context. *International Journal of Environmental Research and Public Health*, 17(22), 8526.
15) He, P., Niu, H., Sun, Z. and Li, L. (2020). Accounting Index of COVID-19 Impact on Chinese Industries: A Case Study Using Big Data Portrait Analysis. *Emerging Markets Finance and Trade*, 56(10), pp. 2332-2349.
16) Mazur, M., Dang, M. and Vega, M. (2021). COVID-19 ant the March 2020 stock market crash. Evidence from S&P 1.500. *Fiannce Research Letters*, 38, 101690.
17) McKibbin, W. and Fernando, R. (2020) The economic impact of COVID-19. In: R. Baldwin and B. Weder di Mauro, eds., *Economics in the time of COVID-19*. London: CEPR Press, pp. 45-51.
18) Qin, X., Huang, G., Shen, H. and Fu, M. (2020). COVID-19 Pandemic and Firm-level Cash Holding—Moderating Effect of Goodwill and Goodwill Impairment. *Emerging Markets Finance and Trade*, 56(10), pp. 2243-2258.
19) Song, H. J., Yeon, J. and Lee, S. (2021). Impact of the COVID-19 pandemic: Evidence from the U.S. restaurant industry. *International Journal of Hospitality Management*, 92, 102702.
20) Takahashi, H. and Yamada, K. (2021). When the Japanese stock market meets COVID-19: Impact of ownership, China and US exposure, and ESG channels. *International Review of Financial Analysis*, 74(C), 101670.
21) Voth, H. J. (2020). Trade and travel in time of epidemics. In: R. Baldwin and B. Weder di Mauro, eds., *Economics in the time of COVID-19*. London: CEPR Press, pp. 93-96.

AN ANALYSIS OF THE EVOLUTION OF THE VAT RATES IN ROMANIA, IN RELATION TO THE EFFICIENCY OF THIS TAX

COSTEL ISTRATE
Alexandru Ioan Cuza University of Iași
Iași, Romania
istrate@uaic.ro

Abstract
Value added tax (VAT) is the tax with the largest contribution to the realization of revenues of the state budget of Romania, currently reaching over 6% of GDP, but also going through percentages that have often exceeded 8%, a situation comparable to that of most former communist states in Eastern Europe. However, unlike these other states, Romania seems more dependent on VAT. VAT is a tax that has undergone many legislative changes, especially in the last decade. The two increases in the standard rate, which occurred during periods of financial crisis (1998 and 2010), immediately increased the share of VAT revenues in GDP, but did not contribute significantly to the change in the efficiency of collection, calculated by indicators such as VAT C- efficiency or VAT Revenue Ratio. On the contrary, the first decrease in the standard rate (from 22% to 19%) immediately led to an increase in collection efficiency, without a decrease in the share of VAT in GDP. The second decrease in the VAT rate (2016) does not change the efficiency of collection at all, but leads to a decrease in the share of VAT in GDP. Comparing the situation of Romania with that of some former communist states in Central and Eastern Europe, we find that we have a rather low collection efficiency, in this case, below average.
Keywords: *VAT efficiency; VAT rates; fiscal revenues; Romanian fiscal system.*
JEL Classification: H20, E62

1. INTRODUCTION

The official history of VAT in Romania begins with Government Ordinance no. 3 of 27 July 1992 (GO 3/1992), which entered into force on 1 July 1993. Of course, the specific VAT mechanisms to be applied from July 1993 were not original but were based on European experience in the field. Adhikari (2019) considers that the decision to adopt VAT is one influenced by exogenous factors, such as membership in some multi-state organizations or the intention to join such organizations; the most cited examples are the European Union and the International Monetary Fund; Ufier (2014) considers that international pressures play probably the most important role in the adoption of VAT in a country. In turn, Bannock (2001) names the International Monetary Fund and the World Bank among the actors that, outside the EU, have influence in the adoption of VAT as part of efforts to improve the public finances of emerging countries. Also, the adoption of VAT can be justified by aligning with the fiscal policies of states in the same geographical area, in a kind of mimetic isomorphism (Ufier, 2014, Cizek, Lei and Ligthart, 2017).

Le (2003) found that the idea of such a tax appeared in 1920, being proposed by a German businessman but also, independently of him, by an American academic. However, the effective application of VAT had to wait until 1954. Following the introduction of this type of tax in France, the European Economic Community decided to extend VAT to all Member States. Thus, the first EEC Council Directive (Directive 67/227/EEC) stipulates that the Member States of the Community will replace the turnover taxation system with a value added tax and that this replacement must take place at the latest on 1 January 1972. The concrete details for the application of VAT mechanisms in Europe were effectively established by the Sixth European Directive (Directive 7/388/EEC) published in 1977 and entered into force on 1 January 1979. The development and spread of VAT are in line, in fact, with the broader current of targeting budget revenue collection toward indirect taxes, specific to the 1970s (Atkinson, 1981). Also, the orientation of the tax structure towards that specific to developed countries leads to an increase in the performance of the tax systems of developing countries, even if this improvement is conditioned by other factors, such as the opening of foreign trade (Gnangnon and Brun, 2019). It is even appreciated that consumption taxes and, in particular, VAT are very suitable for tax systems adapted to the current technological revolution (Setyowati *et al.,* 2020). After 1990, Romania did nothing but align with European indirect taxation practices. This alignment, begun in 1993, continued later in a much more insistent manner, as Romania's accession to the European Union was foreseen. The OECD (2020) identifies 170 countries where VAT is applied in 2018.

As in the case of most taxes levied by the Romanian state, the rules on VAT have been changed very frequently, both in the initial phase of applying this tax and after our accession to the EU. The changes were mainly justified by the adaptation of the legislation to economic developments, electoral promises, corrections, clarifications, details brought to some provisions, but also by the fight against national or regional/international tax evasion.

VAT receives special attention from the European authorities, with national VAT regulations comprising many common elements established at Union level. The European Council Directive 2006/112/EC on the common system of value added tax, currently in force, was amended by 23 other directives: one from the year of its publication (2006), another from 2007, one from 2008, three from 2009, four from 2010, 3 from 2013, two from 2016, one from 2017, five from 2018 and one from 2020. The pace of changes is one that can console us, to some extent, seeing the changes brought to Romanian law.

Table 2. Shares in the Romanian GDP of some important taxes

Year	Percentage in GDP (%)				
	Taxes and other fiscal contribution as percentages to GDP	Corporate income tax	Personal income tax (from 2001)	VAT	Excise duties
1994	n.a.	3.83	n.a.	**4.56**	1.56
1995	27.8	3.65	n.a.	**4.93**	1.38
1996	25.7	3.07	n.a.	**6.24**	0.95
1997	26.2	4.14	n.a.	**6.06**	1.13
1998	28.8	2.91	n.a.	**7.97**	1.91
1999	31.7	3.00	n.a.	**8.07**	2.70
2000	30.6	2.45	3.00	**8.26**	2.30
2001	28.9	1.86	3.11	**7.98**	2.31
2002	28.5	1.96	2.71	**8.87**	2.12
2003	28.1	2.20	2.68	**9.23**	3.04
2004	27.7	2.59	2.86	**7.30**	3.20
2005	28.7	2.24	2.30	**6.61**	3.13
2006	29.2	2.28	2.81	**8.00**	2.87
2007	29.0	2.52	3.31	**7.47**	2.68
2008	28.8	2.49	3.51	**7.79**	2.36
2009	27.7	2.08	3.63	**6.72**	2.80
2010	27.1	1.89	3.34	**7.35**	3.04
2011	28.3	1.82	3.34	**8.48**	3.15
2012	27.9	1.82	3.48	**8.48**	3.18
2013	27.4	1.71	3.53	**8.13**	3.11
2014	27.5	1.83	3.51	**7.62**	3.41
2015	28.1	1.93	3.70	**8.02**	3.46
2016	26.7	2.02	3.60	**6.78**	3.35
2017	25.8	1.71	3.49	**6.24**	2.93
2018	26.8	1.64	2.37	**6.26**	2.84
2019	26.8	1.67	2.19	**6.17**	2.97

Source: own processing based on data from budget executions taken from the 2020 edition of the Statistical Yearbook of Romania, supplemented by some data provided by the Romanian Ministry of Public Finances and with data from Eurostat (2020)

The interest of VAT in Romania is all the higher as it represents, from the beginning, the tax with the largest contribution to the public revenues. In Table 1, we centralized and processed data from the 2020 edition of the Statistical

Yearbook, supplemented with data provided by the Romanian Ministry of Finance (for the financial year 2019), so as to obtain information on the share in GDP of state budget revenues from four main taxes and we note that, since 1994, VAT brings in almost every year more than double than any other tax that fuels the state budget. We started the data series with 1994, because this is the first complete budget year in which VAT was levied in Romania.

Regarding the data in Table 1, it must be said that, starting with 2002, the corporate income tax is supplemented with the on revenues of the micro-enterprises, and from 2017 the specific tax for HORECA companies also appears; these taxes add very little to the corporate income tax, on average about 0.13 percentage points, for a maximum of 0.28 percentage points in 2018 and a minimum of 0.01 percentage points in 2010.

The weights reported in Table 1 justify the importance that national authorities attach to VAT, both in terms of regulation and in terms of implementing, verifying and monitoring compliance. We do not necessarily expect Romania's situation to be generalized at EU level: in many countries, corporate tax rates are (much) higher and it is possible that the revenues collected by states from this direct tax or its equivalents represent a higher share in GDP than in Romania.

Even if the electronic databases, such as google scholar, are not perfect in terms of searching for references on a research topic, we cannot fail to notice that, when searching for VAT, 3,620,000 results are returned, while searching on corporate income tax, the number of results is only 2,580,000 (as of January 19, 2021). In the Web of Science portal, the same kind of search, on the same date, gives us 1,938 results for VAT and 1,817 for corporate income tax. With all the limitations of such searches, we can understand from here that the discussions, reports, books, articles, comments about VAT are more numerous than those about the corporate income tax, although, at the level of academic journals, the number of appearances is quite close for the two themes.

The importance of VAT for the budget revenues in many countries of the world is confirmed by Adhikari (2019) who shows us that in less than 60 years since the introduction of VAT in France, this tax has replaced sales taxes in more than 160 countries and that the revenue it brings to budgets is more than 7% of world GDP. Some data on the share of VAT in tax revenues or GDP:

- Le (2003) reports that in OECD countries, the share of VAT in total budget revenues has steadily increased, from 12% in 1965 to 18% in 2000;
- Keen and Lockwood (2006) find that the share of VAT in state tax revenues is substantial - around 7% of GDP - but that there are considerable variations from one country to another: from over 12% in Iceland, to about 2.5% in Japan;
- Aizenman and Jinjarak (2008) cite a statistic according to which VAT brings about a quarter of the tax revenues of the world's states;

- Keen and Lockwood (2010) identify almost 130 countries that apply VAT and finds a 20% share in tax revenues;
- OECD (2020) reports that VAT is the largest source of consumption taxes in 2018, with a share of 20.4% in tax revenues and a share of GDP ranging from 3.3% in Australia to 9.7% in Denmark and New Zealand;
- Cevik *et al.* (2019) processes data that allow them to state that the share of VAT in GDP is 7.2% for 27 developed countries and 7.0% for 91 developing countries;
- with more recent data, in the case of Germany, Sultan (2020) reveals a VAT share of 30% of budget revenues;
- Benzarti *et al.* (2020) notes that, across the EU, VAT brings in 30% of budget revenue, i.e., 12% of GDP.

A comparison between Romania and other former communist states appears in Table 2: the years presented are those reported by the OECD (2020).

Table 3. Comparisons of the ratio of the VAT revenues in the GDP and in the total tax revenues in some countries

Country/ organisation	2005		2010		2015		2018	
	% in GDP	% in fiscal revenues	% in GDP	% in fiscal revenues	% in GDP	% in fiscal revenues	% in GDP	% in fiscal revenues
OCDE average	6.50	20.20	6.40	20.50	6.70	20.30	6.80	20.40
Czechia	6.50	19.10	6.60	20.50	7.20	21.70	7.60	21.60
Estonia	8.00	26.90	8.50	25.70	9.00	27.20	9.00	27.30
Hungary	8.20	22.50	8.50	22.90	9.50	24.50	9.70	25.80
Latvia	7.40	26.40	6.70	23.30	7.70	25.60	8.40	27.00
Lithuania	7.10	24.30	7.80	27.50	7.70	27.00	7.80	25.80
Poland	7.70	23.20	7.60	24.20	7.00	21.50	8.10	23.10
Slovakia	7.70	24.60	6.10	21.80	6.80	20.80	7.10	20.50
Slovenia	8.50	21.60	8.10	21.30	8.30	22.20	8.20	22.00
Romania	6.61	28.95	7.35	28.67	8.02	28.78	6.26	24.26

Source: OECD (2020), 2020 edition of the Statistical Yearbook of Romania, Romanian Ministry of Public Finances, Eurostat (2020)

The dependence of VAT revenues on the performance of the tax system is underlined by Setyowati *et al.* (2020) which calculate a share of around 3.5% VAT in GDP (at a single generalized share of 10%), for Indonesia, in the period 2014-2017.

Bird and Gendron (2005) believe that for emerging or transition countries in need of better tax systems, consumption taxation is a matter of the utmost importance and that VAT is the best form of taxation.

In the following, we aim to highlight the evolution of VAT rates in Romania, but also to calculate and interpret indicators to measure the efficiency of VAT collection.

The structure of the study will further include a review of the literature, the presentation of the methodology, the results, the conclusions and the references.

2. LITERATURE REVIEW

One of the main reasons for adopting VAT in the countries of the world is the belief that it is an efficient taxation system, provided it is well built and well applied (Adhikari, 2019). Other reasons justifying the implementation of VAT (Le, 2003): sales taxes that do not meet the needs of fairness and efficiency are replaced, the VAT deduction mechanism related to purchases is efficient (including in the case of exports), does not influence the decisions of consumers, savings and investments, VAT rates can be set so that social policy objectives can also be pursued (reduced rates for basic goods, necessary for those with lower incomes). It is accepted that VAT is also adopted as a result of historical and geographical considerations, such as belonging to the former colonial empires. Ufier (2014) finds in the literature many studies that show that a tax such as VAT is better than income/profit taxes, in terms of the distortions it can create. Bannock (2001) considers that the VAT yield is important and justifies the creation and operation of control mechanisms by the authorities and that these controls can ensure, to a certain extent, the compliance of taxpayers with other taxes they have to bear. In the case of five Central and Eastern European countries (including Romania), Simionescu and Albu (2016) identify a positive influence of VAT rates on economic growth.

We must not focus only on the aspects considered positive in the implementation and operation of VAT. Keen and Lockwood (2010) also review some weaknesses of VAT mechanisms: breaking the VAT chain (collection - deduction) can lead to inefficiencies in production; VAT is subject to fraud - especially the first carousel method, in intra-Community transactions - deficiencies in the deduction system and of the reimbursement, exceptions and exemptions, increasing the size of the informal economy. Sharma (2020) states that the adoption of VAT has a significant negative effect on the exports of low-income countries, in the case of industries that rely heavily on intermediate consumption, probably due to deficiencies in VAT refund mechanisms to exporters requesting this is due to the underperforming tax systems in these countries. Keen and Lockwood (2006) and Lee, Kim and Borcherding (2013) highlight an aspect of VAT related to its efficiency - the money that this tax easily brings to the budget could lead to an increase in the size of government, an increase in the size of state intervention (although the reverse hypothesis is to be tested, that is, the one according to which the increase in the size of the state apparatus leads to an increase in the need for tax revenues); also, this characteristic attributed to VAT is considered responsible for the fact that, despite some attempts, the USA did not adopt it. If we intended to apply this methodology to the case of Romania, we would not have comparative data, because the period before VAT is either insignificant or corresponds to a completely different economic system, in which the role and place of taxes is not comparable to what happens after 1990, with the return to a market economy.

The efficiency of VAT depends, on a large extent, on the degree of development of the country that applies it (Le, 2003; Adhikari, 2019). We can also expect the efficiency of VAT collection to increase with the resources spent on the implementation of specific mechanisms, the efficiency of control, collection and processing of information (Aizenman and Jinjarak, 2008) and depend on factors such as the productive structure of the country, the structure by age of the population, geographical position, and dimensions of internal/external trade. Factors such as industrial concentration, financial and fiscal education, public sector size, administrative capacity (Bird and Gendron, 2005) can also be invoked, to which is added the increase of the share of services in GDP (Cevik *et al.,* 2019). In Romania, VAT brings the most money to the budget (see Table 1), but it is also the tax for which the largest difference in the EU is calculated between what it could bring as tax revenue and what it actually brings (tax gap): Poniatowski *et al.* (2018) calculate, for 2016, a VAT gap in Romania of 35.88%, compared to the following ranked - Greece and Italy - by 29.22%, respectively, 25.90% and compared to an EU average of 12.3%! In 2018 (European Commission, 2020b), Romania remains with the largest VAT gap in the union, but the level decreased to 33.8%, compared to the next ranked - Greece and Lithuania - by 30.1% and 25, respectively, and compared to a Union average of 11.0%.

The question is often whether VAT is a regressive tax, i.e., whether it affects people with high incomes less than people with low incomes (Le, 2003). The authorities' response depends on their approach to indirect taxation: does it rather pursue an objective of equity or one of fiscal efficiency? Along the same lines, models have been proposed to establish the extent to which VAT, along with other tax mechanisms, can lead to the achievement of social support objectives for those on low incomes (Van Oordt, 2018). Ballard, Scholz and Shoven (1987) show that reducing the regressivity of VAT is done by adopting reduced rates for certain categories of goods and services. Ufier (2014) finds in the literature evidence that VAT, even if it produces less distortions, is less suitable for achieving the redistribution objectives of public finances.

Another very frequent discussion in the literature refers to the impact of the country's level of development on the efficiency of VAT collection and on other aspects that characterize the functioning of the mechanisms specific to this tax (Aizenman and Jinjarak, 2008, Adhikari, 2019).

The impact of changes in VAT rates is studied in the literature and, for the situation in which rates have decreased, Sultan (2020) identifies effects such as:

- the significant decrease in the VAT rate for certain services in Finland has led to a significant increase in the profits of providers, who have accounted for a large part of the reduction proposed by the authorities;
- the reduction of the VAT rate on restaurants and food service industry in France, from the normal rate to a super-reduced one, also led to the increase of the profits of the suppliers, the final consumers benefiting only to a small extent;
- a decrease in the VAT rate for food products, in Norway, led to the adjustment of prices by exactly as low as the tax;
- in Sweden, the decrease in the VAT rate for restaurant and catering services has led to an improvement in the financial indicators of companies in the industry.

Changes in VAT rates can be in two ways: Benzarti *et al.* (2020) notes that the prices of goods and services - directly affected by changes in VAT rates - react differently, as increases or decreases in those rates occur; an increase in the rate is twice as fast in prices as a decrease in rates. The analysis of Benzarti *et al.* (2020) refers to the changes regarding VAT in the European Union, in the period 1996-2015. Establishing the optimal VAT rate is a difficult task and the econometric models used for this purpose can only offer suggestions which, subject to the economic reality test, are only partially confirmed.

In the VAT literature, an important place is reserved for tax evasion related to this tax, with proposals for fraud identification techniques and technologies (Vanhoeyveld, Martens and Peeters, 2020).

The complexity of VAT and the involvement of all actors who sell/buy in the VAT settlement in relation to the state budget create significant compliance costs. Given the fact that VAT is usually borne by the final consumer (but also by other entities that do not have the right to deduct), it was proposed that the only trader to settle VAT with the budget be the one who sells to a person without the deduction right and that all other transactions be subject to simplification measures, which do not, in principle, result in VAT to be settled with the budget (Bannock, 2001). The European Union is studying such a mechanism and allows states where VAT collection is difficult to apply such simplification measures, called the General Reverse Taxation Mechanism. However, the conditions for applying this mechanism are quite harsh and it is unlikely that Romania will be able to adopt it (Aparaschivei, 2018).

The efficiency of VAT collection in Romania is also analyzed in Bostan *et al*. (2017), using indicators slightly different from those retained in this study; Bostan *et al.* (2017) aim to establish a link between the efficiency of VAT collection and the introduction of tax cash registers in Romania, without finding any significant increase in efficiency for this reason. In turn, Mureșan *et al.* (2014) notes a low efficiency of VAT collection in Romania and propose a model for establishing optimal VAT rates. Ogneru, Popescu, and Stancu (2019) focus on the link between VAT fiscal revenues and intermediate consumption, finding that there is no direct link between these variables, VAT tax revenues tend to have a relatively constant growth rate, regardless of the meaning and size of changes in the VAT base.

An important source of VAT data (as consumption tax) is the OECD reports, called Consumption tax trends, the first edition of which is available on the OECD website since 1999 (https://www.oecd-ilibrary.org/ taxation / consumption-tax-trends-1999_ctt-1999-en), the last being from 2020 (OECD, 2020).

3. METHODOLOGY AND DATA

Aizenman and Jinjarak (2008), but also other authors, use two indicators to measure the efficiency of VAT collection:

- the first is the ratio between VAT tax revenues and final consumption, divided by the standard VAT rate; the indicator is called VAT C-efficiency;
- the second indicator is the ratio between tax revenues from VAT and GDP, compared to the standard VAT rate: VAT productivity (Bird and Gendron, 2005).

As final consumption also includes VAT, the OECD proposes (since 2006) an adjusted VRR (VAT Revenue Ratio) indicator, calculated in the same way as VAT C-efficiency, only that at the denominator, instead of final consumption, final consumption minus tax revenue from VAT. The latter formula is more useful in making VAT policy decisions; As for us, given that we intend to make cross-sectional comparisons, but also in space, we will calculate both VAT C-efficiency and VRR, in order to be able to compare them with what the OECD reports, including for former countries communists.

Ueda (2017) assures us that the C-efficiency ratio (in its pure version or in the VRR version) is the most used indicator to evaluate the performance of the VAT collection system and the efficiency of VAT mechanisms, in general.

Cuceu and Văidean (2014) calculate the VAT C-efficiency for the EU member states, for 2013 and find, in the case of Romania, percentages of 44.7% (net VAT efficiency) and 51.2% (gross VAT efficiency) and they believe that this indicator is better than VAT productivity.

The closer these indicators are to 1, the more efficient the collection of VAT in a state is considered. Among the factors influencing the efficiency of VAT collection we find in the literature: political stability, urbanization, freedom of trade, the share of agriculture in GDP, GDP per capita (Aizenman and Jinjarak, 2008). We intend to calculate both indicators on Romania's data (where available) and to compare the indicators, if we find data, with those established for other states or groups of states. If, in the same year, two standard VAT rates were valid, we calculated a weighted rate, depending on the number of months in the year for which each individual standard rate was valid (see also OECD, 2020). This weighting method was necessary in two years: 1999, with a standard rate month of 18% for a month and 22% for the remaining 11 months; but also in 2010, the year in which the standard rate applied for the first six months was 19%, in the other six month the rate of 24% is valid.

VAT rates have evolved in Romania in line with developments in the EU and, beyond the change in the standard rate (see Table 3), the constant expansion of the list of goods and services to which reduced rates apply has also been significant. Bird and Gendron (2005, p. 10) find that, at the level of EU Member States, the implicit rate - set by weighting budget revenues on different rates - is, in most cases, lower - sometimes even much lower - than standard rates; the differences between the two rates can go up to five percentage points.

4. RESULTS

The efficiency of VAT may depend not only on non-fiscal factors, but also on elements specific to tax rules, such as exemptions from VAT, the application of reduced rates to large categories of goods and services, etc. (Aizenman and Jinjarak, 2008).

The evolution of VAT rates in Romania shows us that, with a few exceptions (1993, 1994, 2000, 2001, 2002, 2003), at least two VAT rates worked. The decision of the authorities to allow the operation of two or more VAT rates takes into account, in particular, political aspects and refers, in particular, to a certain decrease in the cost of living for some categories of citizens, but also to the stimulation of some businesses. Also, the adoption of reduced rates was done in an effort to align the Romanian situation with what is happening in other EU countries. Political and social considerations - more or less populist - are a priority over the rational approach which says that a single rate has clear advantages, both administrative and economic (Bird and Gendron, 2005); in fact, in many emerging countries, the differentiation of VAT rates seems to distort, rather than correct, resource allocation decisions. The contribution of VAT to the budget is affected by the expansion of the categories of goods and services subject to reduced rates, and a return to higher rates is politically and electorally costly. Thus, the transition from 18% to 22% (in 1998) and from 19% to 24% (in 2010), even if they were justified by the very serious financial problems of the Romanian governments, generated by internal or external financial crises, have led to the loss of the next elections by the parties that formed the governments during which these decisions were made. Of course, the increase in VAT (and taxation in general) was not the only reason why the elections were lost. However, it is noted that, in conditions of financial crisis, the Romanian state has increased the VAT rate, along with appealing to the support of international financial bodies.

It should also be noted that another measure that could have significant electoral costs would be to bring back to the standard rate some goods and services to which reduced rates now apply. It is very easy to lower taxes, in the hope that the driving effect on the economy will bring at least as much money to the budget, but this conjecture is not verified in times of crisis, such as the health crisis generated by covid-19. Maybe policymakers will learn to listen more to professionals and adopt more cautious behaviours. For example, short-term rates reductions could be set, as the UK did for a 13-month period ending on 31.12.2009, with a change from 17.5% to 15% (Crossley, Low and Wakefields, 2009) or Germany (19% to 16%) and Ireland (23% to 21%) in 2020, in the context of the covid-19 crisis (OECD, 2020). Or, in connection with taxes and contributions other than VAT, as decided by the Romanian government through the famous GEO 114/2018 to grant fiscal facilities to the buildings sector for a period limited to 10 years; if such a time limit had been introduced for the personal income tax exemption of salaries in the IT area, perhaps the principle of fiscal equity would be better ensured in its conflict with the desire to stimulate certain activities.

The increases in VAT rates in Romania (Table 3), i.e., the change in 1998 from 18% to 22% and the change in 2010 from 19% to 24% were followed by almost immediate increases in the share of VAT in GDP, as follows:

- for the first increase: from 6.06% of GDP in 1997 to 7.97% and 8.26% respectively in the following years;
- for the second increase in the standard rate in 2010, the share of VAT in GDP rose from 6.72% in 2009 to 7.35% in 2010 and 8.48% in the following years (2011 and 2012), remaining around 8% by 2015.

These two increases in the standard rate were safe ways to bring extra money to the budget, much needed, given that both events took place in times of deep financial crisis in Romania: the first was a local crisis, generated of the partial and not very solid economic reforms necessary for the transition to a market economy, after until then the political power did not have very serious intentions in this respect. The second-rate increase was the effect of the global crisis that began in 2008.

The economic effects of rate changes are highlighted by the NBR (2016), which calculates that the increase in the VAT rate from 19% to 24% (since July 2010) added two percentage points to the inflation rate, while the reduction of the reduced rate and the decrease standard rate in 2015 negatively affected the inflation rate by 4 percentage points.

Table 4. VAT rates in Romania and VAT collection efficiency

Year	Laws changing the VAT rates	Standard VAT rate (%)	Reduced rates (%)	Zero rate*	VAT C-efficiency	VAT productivity	VRR
1993	GO 3/1992	18	n.a.	yes	n.a	0.20	
1994		18	n.a.	yes	n.a	0.25	
1995	GO 33/1994	18	9	yes	0.34	0.27	0.36

Year	Laws changing the VAT rates	Standard VAT rate (%)	Reduced rates (%)	Zero rate*	VAT C-efficiency	VAT productivity	VRR
1996		18	9	yes	0.41	0.35	0.44
1997		18	9	yes	0.40	0.34	0.43
1998	GO 2/1998	22	11	yes	0.41	0.37	0.45
1999		22	11	yes	0.41	0.37	0.46
2000	GEO 215/1999, GEO 17/2000	19	n.a.	yes	0.51	0.43	0.56
2001		19	n.a.	yes	0.50	0.42	0.55
2002		19	n.a.	yes	0.56	0.47	0.63
	L 345/2002, form 1st june 2002	19	n.a.	SDD			
2003		19	n.a.	SDD	0.60	0.49	0.67
2004	L 571/2003	19	9	SDD	0.46	0.38	0.50
2005		19	9	SDD	0.40	0.35	0.44
2006		19	9	SDD	0.50	0.42	0.56
2007	L 343/2006	19	9	SDD	0.47	0.39	0.51
2008		19	9	SDD	0.50	0.41	0.55
2009	GEO 200/2008	19	9 and 5	SDD	0.43	0.35	0.47
2010		19	9 and 5	SDD	0.44	0.34	0.48
	GEO 58/2010	24	9 and 5	SDD	0.46		
2011		24	9 and 5	SDD	0.45	0.35	0.52
2012		24	9 and 5	SDD	0.45	0.35	0.51
2013		24	9 and 5	SDD	0.45	0.34	0.51
2014		24	9 and 5	SDD	0.42	0.32	0.47
2015		24	9 and 5	SDD	0.44	0.33	0.50
2016	L 227/2015	20	9 and 5	SDD	0.44	0.34	0.48
2017		19	9 and 5	SDD	0.42	0.33	0.45
2018		19	9 and 5	SDD	0.41	0.33	0.45
2019		19	9 and 5	SDD	0.43	0.32	0.46

* SDD means exemption with the right of deduction.

Source: own processing, based on data from the specified laws, data from the 2020 edition of the Statistical Yearbook of Romania, those from the European Commission (2020a) and data provided by the Ministry of Public Finances, for 2019

Although the increase in standard VAT rates has generated higher contributions of this tax-to-tax revenues, we must note that the efficiency of tax collection has not been greatly influenced by these events. On the contrary, in the case of the first decrease in the standard rate, from 22% to 19% (in 2000), the share of VAT in GDP increased or remained at the level before the decrease, with a significant increase in collection efficiency indicators, reached up to the maximum levels of C-efficiency (0.60 in 2003) and VRR (0.67, also in 2003). The abandonment of the standard quota of 24% (since 2016) has changed significantly only the share of VAT in GDP (decrease to just over 6%), the efficiency of collection being at about the same level, even a little lower after the transition to 20% then at 19%. These results - from the last period - can also be explained by the massive increase in the number of goods and services to which reduced rates are applied: as if it were a kind of competition between politicians, which would give more reductions.

The zero VAT rate (not collecting for sale, but deducting for purchases) was valid until 2002, when the exemption with the right of deduction was formulated, representing about the same thing. In addition to this exemption, the Romanian law has, like all EU regulations, specifications on the exemption without right of deduction, with an ever-changing list of goods, services and special situations that enter here.

Although the arithmetic mean for the whole period of the data reported on the VAT columns C-efficiency and VAT productivity is not the most appropriate way to aggregate the multiannual information, given the economic developments in the period taken into account, we can also show this information, to better position ourselves in international comparisons, but also to better interpret the evolution over time. Thus, the average VAT C-efficiency for the 25 years of the time series is 0.45, while the average VAT productivity amounts to 0.36 (for the period of 26 years - we did not take into account 1993, due to entry into force of VAT in the middle of this year).

The decrease of VAT C-efficiency is very slightly in the data series regarding Romania. Internationally, Cevik *et al.* (2019) note a decrease in this indicator and attribute it to the increase in the share of services in GDP, with more marked effects in developed countries than in developing ones.

The arithmetic mean of the annual indicators is also made by Cevik *et al.* (2019) for a sample of 134 countries (27 developed countries and 107 developing countries, including Romania in this category) and covering the period 1970-2014; the average results reported by Cevik *et al.* (2019) are very close to what we found on the situation in Romania: 0.36 VAT productivity and 0.47 VAT C-efficency.

Ferreira-Lopes, Martins and Espanhol (2020), estimating the maximum tax rates for VAT, profit tax and wage contributions, find very different levels for Western European countries, compared to Eastern ones.

If we refer to VRR, in OECD countries (OECD, 2020), this indicator was relatively stable in the period 2016-2018 (0.55 in 2016, 0.56 in 2017 and 2018), which makes the OECD average remain somewhere at 0.55 in 2010, following a serious decline generated by the crisis of 2008: from 0.59 in 2007, to 0.56 in 2008 and to 0.53 in 2009. If we look at the same periods, in Romania, VRR was 0.56 in

2006, 0.51 in 2007, 0.55 in 2008, to decrease to 0.47 and 0.48 in 2009 and 2010, recovering slightly in 2011 (0, 52), but remaining at an average of 0.48 for the period 2011 - 2019 (0.49 for the period 2005-2019), with slightly lower figures in the last part: 0.45 in 2017 and in 2018 and 0.46 in 2019. The comparison with the averages reported by the OECD is useful, to see where Romania is in relation to developed economies and to be aware that the potential for VAT collection in Romania is much higher than what is added to the budget today. However, from the OECD (2020) tables, we can retain only the former communist countries, because they started from somewhat similar bases after 1990. The data provided by the OECD in this regard, to which we add the data on Romania are presented in Table 4.

Table 5. Some comparative data on the VAT collection efficiency

Country	VRR average 2005-2018	VRR in 2007	VRR in2009	VRR average 2010-2018
Czechia	0.57	0.54	0.55	0.58
Estonia	0.72	0.81	0.73	0.70
Hungary	0.55	0.58	0.61	0.55
Latvia	0.51	0.61	0.38	0.50
Lithuania	0.52	0.61	0.47	0.51
Poland	0.47	0.53	0.45	0.46
Slovakia	0.51	0.53	0.47	0.49
Slovenia	0.61	0.69	0.59	0.59
Romania	**0.49**	**0.51**	**0.47**	**0.48**

Source: OECD (2020), 2020 edition of the Statistical Yearbook of Romania, Eurostat

In Table 4, we see that Romania is quite low in terms of VAT collection efficiency - only Poland has a lower average than Romania, both for the period 2005-2018 and for 2010-2018. The effects of the crisis of 2008 materialized in decreases of the VRR, in all the former communist states, with the exception of Hungary, which significantly increased the standard rate.

For a number of developing countries, Bird and Gendron (2005) provide data showing that VAT productivity was, on average, 0.36, well above the average calculated in Table 2, in the case of Romania.

5. CONCLUSIONS

The introduction and application of VAT mechanisms in Romania were closely related to what has been practiced in European countries that have been applying this tax for a long time and which have generalized it to the European Economic Communities and, later, to the European Union. Since the beginning of VAT operation in Romania, this tax has been the main source of fiscal revenue, compared to corporate taxes and assimilated to it or to the personal income tax and excise duties.

The adjustment of VAT regulations has followed a very fast pace. From the data on the cdep.ro portal (http://www.cdep.ro/pls/legis/legis_pck.frame), I counted:

- 14 amendments to Government Ordinance 3/1992, in 7 years;
- 6 amendments to GO 17/2000 in 2 years;
- 4 amendments to Law 345/2002, in less than two years;
- 85 amendments to Law 571/2002, in 12 years;
- 72 amendments to Law 227/2015, in 5 years.

Some of these changes had the role of adopting in Romania the European changes in the field.

Limiting ourselves only to the VAT rates and the effects of their change on the efficiency of VAT collection, it is observed that the effects of the increase of the standard rate (both occurred during a serious budgetary crisis: 1998 and 2010) are immediately found in an increase of the VAT share in GDP, without the efficiency of collection changing significantly. The first decrease in the standard rate (in 2000, from 22% to 19%) immediately translated into increased collection efficiency, without a significant decrease in the share of VAT in GDP. The second decrease in the standard rate (in 2016/2017, from 24% to 20% and then to 19%) decreased the share of VAT in GDP, without effects on collection efficiency, especially since this decrease in the standard rate was immediately accompanied by or shifted by an extension of the scope of reduced rates.

At the level of the former communist countries, the OECD statistics to which we add the data specific to Romania, show us that - from the point of view of the efficiency of VAT collection - only Poland has a lower average than Romania, both for the period 2005-2018 and for 2010- 2018. The effects of the crisis of 2008 materialized in decreases of the VRR, in all the former communist states, with the exception of Hungary, which significantly increased the standard rate.

Romania's comparison with other developing countries shows us relatively close percentages in terms of the share of VAT in GDP or collection efficiency.

The main limits of the research consist in its essentially descriptive character, i.e., in the absence of correlation of some variables that describe the evolution of VAT in Romania and/or in the EU or in the former communist countries. These limits can be found in as many future research directions.

References

1) Adhikari, B. (2019). Does a value-added tax increase economic efficiency? *Economic Inquiry*, 58(1), pp. 496-517.
2) Aizenman, J. and Jinjarak, Y. (2008). The collection efficiency of the Value Added Tax: Theory and international evidence. *The Journal of International Trade & Economic Development*, 17(3), pp. 391-410.
3) Aparaschivei, A. (2018). *Taxarea inversă generalizată: Obiectiv, România are șanse reduse să aplice mecanismul*. [online] Available at: https://www2.deloitte.com/ro/ro/pages/tax/articles/taxarea-inversa-generalizata-

obiectiv-romania-are-sanse-reduse-sa-aplice-mecanismul.html [Accessed 23.01.2021].

4) Atkinson, A. B. (1981). On the switch to indirect taxation. *Fiscal Studies*, 2(2), pp. 1-8.
5) Ballard, C. L., Scholz, J. K. and Shoven, J. B. (1987), The value-added tax: a general equilibrium look at its efficiency and incidence. In: M. Feldstein, ed., *Ehe effects of taxation on capital accumulation*. University of Chicago Press, pp. 445-480.
6) Bannock, G. (2001). Reforming value-added tax. *Economic Affairs*, 21(2), pp. 33-39.
7) Benzarti, Y., Carloni,D., Harju, J. and Kosonen, T. (2020). What Goes Up May Not Come Down: Asymmetric Incidence of Value-Added Taxes. *Journal of Political Economy*, 128(12), pp. 4438-4474.
8) Bird, R. M. and Gendron, P. P. (2005). *The VAT revisited – a new look at the value added tax in developing and transitional countries*. [online] Available at: https://pdf.usaid.gov/pdf_docs/pnadh103.pdf [Accessed 26.01.2021].
9) Bostan, I., Popescu, C. C., Istrate, C. and Robu, I.-B. (2017). The impact of taxation of the domestic economic transactions on the VAT collection through electronic fiscal devices. *Amfiteatru Economic Journal*, 19(45), pp. 581-594.
10) Cevik, S., Gottschalk, J., Hutton, E., Jaramillo, L., Karnane, P. and Sow, M. (2019). Structural transformation and tax efficiency. *International Finance*, 22(3), pp. 341–379.
11) Cizek, P., Lei, J. and Ligthart, J. E. (2017). Do neighbours influence value-added-tax introduction? A spatial duration analysis. *Oxford Bulletin of Economics and Statistics*, 79(1), pp. 25-54.
12) Crossley, T. F., Low, H. and Wakefields, M. (2009). The economics of a temporary VAT cut. *Fiscal Studies*, 30(1), pp. 3-16.
13) Cuceu, I. C. and Văidean, V. L. (2014). Considerations on VAT Efficiency and VAT Evasion. *"Ovidius" University Annals, Economic Sciences Series*, 14(2), pp. 474-478.
14) Directive 67/227/CEE (1967) – First Council Directive of 11 April 1967 on the harmonisation of the legislation of Member States concerning turnover taxes [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri= CELEX: 01967L0227-19770523&from=EN [Accessed 18.01.2021].
15) Directive 7/388/EEC (1977), Sixth Council Directive 77/388/EEC of 17 May 1977 on the harmonization of the laws of the Member States relating to turnover taxes - Common system of value added tax: uniform basis of assessment [online] Available at: https://eur-lex.europa.eu/legal-content/en/TXT/HTML/?uri=CELEX: 31977L0388&from=EN [Accessed 26.01.2021].
16) Directive 2006/112/EC (2006) –Council Directive of 28 November 2006 on the comon system of value added tax [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006L0112-20201126&from=FR [Accessed 18.01.2021].
17) European Commission, (2020a). *VAT rates applied in the Member States of the European Union, situation at 1st January 2020*. [online] Available at https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/vat/how_vat_works/rates/vat_rates_en.pdf [Accessed 26.01.2021].

18) European Commission, (2020b). *Study and Reports on the VAT Gap in the EU-28 Member States – 2020 Final Report*. [online] Available at: https://ec.europa.eu/taxation_customs/sites/taxation/files/vat-gap-full-report-2020_en.pdf [Accessed 31.01.2021].
19) Eurostat, (2020). *Taxation in 2019, tax-to-GDP ratio at 41.1% in EU: a one-to-two ratio across Member States*. [online] Available at: https://ec.europa.eu/eurostat/documents/2995521/11469100/2-29102020-BP-EN.pdf/059a7672-ed6d-f12c-2b0e-10ab4b34ed07 [Accessed 29.01.2021].
20) Ferreira-Lopes, A., Martins, L. F. and Espanhol, R. (2020). The relationship between tax rates and tax revenues in eurozone member countries - exploring the Laffer curve. *Bulletin of Economic Research*, 72(2), pp. 121-145.
21) Government Emergency Ordinance (GEO) no. 215/1999 on amending and supplementing some regulations regarding the value-added tax, published in the *Official Gazette of Romania* no. 649/30.12.1999.
22) Government Emergency Ordinance (GEO) no. 17/2000 regarding the value-added tax, published in the *Official Gazette of Romania* no.113/15.03.2000.
23) Government Emergency Ordinance (GEO) no. 114/2018 on the establishment of measures in the field of public investment and fiscal-budgetary measures, amendment and completion of normative acts and extension of deadlines, published in the *Official Gazette of Romania* no. 1116/29.12.2018.
24) Government Emergency Ordinance (GEO) no. 200/2008 for the amendment and completion of Law no. 571/2002 regarding the Fiscal Code, published in the *Official Gazette of Romania* no. 815/04.12.2008.
25) Government Emergency Ordinance (GEO) no. 58/2010 for the amendment and completion of Law no. 571/2002 regarding the Fiscal Code, and other financial and fiscal measures, published in the *Official Gazette of Romania* no. 431/28.06.2010.
26) Gnangnon, S. K. and Brun, J.-F. (2019). Trade openness, tax reform and tax revenue in developing countries. *The World Economy*, 42(2), pp. 3515-3536.
27) Keen, M. and Lockwood, B. (2006), Is the VAT a money machine?, *National Tax Journal*, 59(4), pp. 905-928.
28) Keen, M. and Lockwood, B. (2010). The value added tax: Its causes and consequences. *Journal of Development Economics*, 92(2), pp. 138–151.
29) Le, T. M. (2003). Value added tax: mechanism, design, and policy issues. Paper prepared for the World Bank course on *Practical Issues of Tax Policy in Developing Countries* [online] Available at: https://www.semanticscholar.org/ paper/Value-Added-Taxation-%3A-Mechanism-%2C-Design-%2C-and-Le/82999e12b5369c6239bed2b0421896ee33221690 [Accessed 20.01.2021].
30) Lee, D., Kim, D. and Borcherding, T. E. (2013), Tax structure and government spending: does the value-added tax increase the size of government. *National Tax Journal*, 66(3), pp. 541-570.
31) Law no. 345/2002 regarding the value-added tax, published in the *Official Gazette of Romania* no. 371/01.06.2002.
32) Law no. 571/2003 regarding the Fiscal Code, published in the *Official Gazette of Romania* no. 927/23.12.2003.
33) Law no. 343/2006 on completing Law no. 571/2003 regarding the Fiscal Code, published in the *Official Gazette of Romania* no. 662/01.08.2006.

34) Law no. 227/2015 regarding the Fiscal Code, published in the *Official Gazette of Romania* no. 688/10.09.2015.
35) Mureșan, M., David, D., Elek, L. and Dumiter, F. (2014). Value-added tax impact on economic activity: importance, implication and assessment – the Romanian perspective. *Transylvanian Review of Administrative Sciences*, Special Issue, pp. 131-151.
36) NBR, (2016). *Raport anual 2015 (Annual Report 2015).* [online] Available at: https://www.bnr.ro/Publicatii-periodice-204.aspx [Accessed 22.01.2021].
37) OECD, (2020). *Consumption Tax Trends 2020: VAT/GST and Excise Rates, Trends and Policy Issues.* [online] Available at: https://www.oecd-ilibrary.org/sites/152def2d-en/index.html?itemId=/content/publication/152def2d-en [Accessed 30.01.2021].
38) Ogneru, V., Popescu, O. M. and Stancu, S. (2019). Relationship between VAT revenue and intermediate consumption – a VAR approach. *Proceedings of the 13th International Conference on Applied Statistics*, 1(1), pp. 355 – 373.
39) Poniatowski, G., Bonch-Osmolovskiy, M., Durán-Cabré, J. M., Esteller-Moré, A. and Śmietanka, A. (2018). Study and Reports on the VAT Gap in the EU-28 Member States: 2018 Final Report. *CASE Report* nr. 496/2018.
40) Romanian Government Ordinance (GO) no. 3/1992 on value-added tax, published in the *Official Gazette of Romania* no. 288/12.12.1992.
41) Romanian Government Ordinance (GO) no. 33/1994 regarding the improvement of some regulations regarding the value-added tax, published in the *Official Gazette of Romania* no. 217/.08.1994.
42) Romanian Government Ordinance (GO) no. 2/1998 regarding the amendment of the Government Ordinance no. 3/1992 on value-added tax, published in the *Official Gazette of Romania* no. 31/28.01.1998.
43) Setyowati, M. S., Utami, N. D., Saragih, A. H. and Hendrawan, A. (2020). Blockchain Technology Application for Value-Added Tax Systems. *Journal of Open Innovation: Technology, Market, and Complexity,* 6(4), 156 doi:10.3390/joitmc6040156.
44) Sharma, R. R. (2020). Does the VAT exports? *Economic Inquiry*, 58(1), pp. 225-240.
45) Simionescu, M. and Albu, L.-L. (2016), The impact of standard value added tax on economic growth in CEE-5 countries: econometric analysis and simulations, *Technological and Economic Development of Economy*, 22(6), pp. 850-866.
46) Sultan, S. (2020). Who Carries the Burden of the Value-Added Tax? Evidence from Germany. *CESifo Working Paper No. 8803* [online] Available at: https://ideas.repec.org/p/ces/ceswps/_8803.html [Accessed 23.01.2021].
47) Ueda, J. (2017). The Evolution of Potential VAT Revenues and C-Efficiency in Advanced Economies. *IMF Working Paper WP/17/158* [online] Available at: https://www.imf.org/en/Publications/WP/Issues/2017/07/11/The-Evolution-of-Potential-VAT-Revenues-and-C-Efficiency-in-Advanced-Economies-45015 [Accessed 31.01.2021].
48) Ufier, A. (2014). Quasi-experimental analysis on the effects of adoption of a value added tax. *Economic Inquiry*, 52(4), pp. 1364-1379.

49) Van Oordt, M. (2018). Zero-Rating versus Cash Transfers under the VAT. *Fiscal Studies*, 39(3), pp. 489-515.

50) Vanhoeyveld, J. Martens, D. and Peeters, B. (2020). Value-added tax fraud detection with scalable anomaly detection techniques. *Applied Soft Computing Journal*, 86:105895, doi. https://doi.org/10.1016/j.asoc.2019.105895.

PROFIT MAXIMIZATION AND/OR ANIMUS DONANDI: *DODGE V. FORD* REVISITED

CODRIN MACOVEI
Alexandru Ioan Cuza University of Iași
Iași, Romania
mcodrin@uaic.ro

Abstract
The activity of companies presents nowadays complex problems generated by the specificity of modern economic activity, the changes in mentality, the way in which technology influences the way in which legal acts are concluded, in which new products and services are created or obligations are executed. More and more, the role, conscience and social responsibility of societies is being talked about. In the well-known Case Dodge v. Ford Motor Co. - 204 Mich. 459, 170 N.W. 668 (1919) - the court wanted to make clear why a corporation exists: `There should be no confusion... A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of the directors is to be exercised in the choice of means to attain that end and does not extend to... other purposes`. Our article wishes to ascertain the present relevance of this particular Case to corporate law and practice and to the question whether companies can have `animus donandi`.

Keywords: *corporate law and practice; donation; profit maximization.*
JEL Classification: K12, K15, L21, M10

1. INTRODUCTION. THE *DODGE V. FORD* COURT CASE HELPS EXPLAIN HOW CORPORATIONS WORK TODAY

Recently in SUA, in response to the massive corporate tax cut passed by the U.S. Congress, major companies have said they are handing out relatively small bonuses to workers, thereby attempting to prove that they have a social consciousness. It could be misleading PR, because corporations seem to exist to maximize profit, and a case involving Henry Ford from a century ago can help explain how that idea evolved. A case taught widely in corporate law classrooms, the story of *Dodge v. Ford* hits head-on on the notion of why corporations exist. There's strong dissent among some academics over the relevance of the case (Stout, 2008), but the outcome of it still echoes today. Back in the mid-1910s, Ford Motor Company was sitting on a surplus of $60 million, thanks in no small part to the success of the Model T. The automaker's president, Henry Ford, had a novel idea of what he would like to do with that extra crash: restrict dividend payments to shareholders and, instead, build more affordable cars and pay higher wages. This move upset a pair of minority investors, John and Horace Dodge, and a civil lawsuit was ensued, with very captivating account of the characters and the trial proceedings (Henderson, 2007).

About the past, it should be noted that until a few centuries ago, the concept of 'legal person' and the idea of a distinct legal personality created based on legal fiction were instruments known in a practical rather than legally defined way. The difference and separation between the personality and the assets of the natural person and the legal person in which he was acting was often difficult to assess. This lack of regulation on the distinct personality of companies has been replaced in the past by other legal institutions, such as cooperative organisations, commercial partnerships, multilateral contracts, agency contracts, trusts, through which a group of natural persons could entrust a few persons with the possession of assets and actions relating to those assets, in order to ensure that their administration is carried out in a coordinated manner, on the basis of a contract or agreement of all members. After the crystallization of the conception of the distinct legal personality of societies, these legal structures have over time undergone mutations generated by the needs of the participants in the economic environment, arising in specific contexts. The evolution of the economic concepts of the company activity exceeds this study, therefore we will focus only on the ability of companies to make donations.

The regulation based on the Romanian Civil Code of 1864 presented the dilemma concerning the ability of the legal person to receive donations – thus this entity, whatever its purpose, was subject to the limitation known in the doctrine as a principle of the speciality of the capacity to use. However, there was also no shortage of questioning in the literature concerning the legal person's ability to make donations (Ţuca, 1998). In the Romanian Civil Code in force from 2009, the content of this principle derives from the provisions of Article 206 para. (2), which establishes its applicability only in matters of non-profit-making legal persons. In this legislative context, in practice the ability of the for-profit legal person to make donations was called into question, which I shall refer to below.

2. THE ABILITY OF THE FOR-PROFIT LEGAL PERSON TO MAKE DONATIONS. A ROMANIAN PERSPECTIVE

According to art. 187 of the Civil Code, the legal person is the entity which has a self-contained organization and its own patrimony, affected by the achievement of a certain legal and moral purpose, in accordance with the general interest. In accordance with the Company Law no 31/1990, republished in the Official Gazette no. 1066 of November 17, 2004, with subsequent amendments and additions; for the purpose of carrying out activities for profit, natural persons and legal persons may associate and form companies with legal personality, in compliance with the provisions of this law, respectively art. 1 para. 1.

The purpose of setting up a legal person is the motivation for its establishment (Dominte, 2009). In the case of legal persons governed by company law, the purpose is profit-making. Based on this premise, the legal literature examined whether the pursuit of profit by the legal person could constitute an impediment to making donations, other than those established by the law on sponsorship.

But first, we must differentiate between donations and sponsorship. Sponsorship is in accordance with the Romanian Law no 32/1994 on sponsorship, published in the Official Gazette no. 129 of May 25, 1994, with subsequent amendments and additions, the legal act by which two persons agree on the transfer of ownership of material goods or financial means to support non-profit activities carried out by one of the parties, called the beneficiary of sponsorship, according to art. 1 para. 1. Sponsorship may be granted by a natural or legal person to another natural or legal person, but only if it is a non-profit organization, based on art. 4, point a. Therefore, for-profit legal entities cannot benefit from sponsorships. The same normative act also regulates the civil act of the patronage. Thus, patronage is an act of liberality by which a natural or legal person, called a patron, transfers, without obligation of direct or indirect consideration, his property right over material goods or financial means to a natural person, as a philanthropic activity of humanitarian character, for the development activities in the fields: cultural, artistic, medical, or scientific - fundamental and applied research, according to art. 1 para. 3. Thus, the patronage can be made by a natural or legal person, but the beneficiary can only be a natural person.

Deepening theoretical concepts can prove useful for our research. Free deeds comprise in their structure two subdivisions, disinterested deeds, or so-called free deeds - loan, warrant or free deposit - which in principle does not diminish the assets of the disposer and the liberalities - among which, together with the bequest contained in the will, there is also the donation, a contract by which a person disposes of his goods free of charge in favour of another person. The donation differs from the disinterested contracts in that the effect of diminishing the alienator's patrimony has as its sole motivation the intention to gratify *animus donandi*, both representing the cause of this special contract (Codrea, 2016). The cause is the justifying principle of any legal activity capable of explaining the transfer of values from one patrimony to another, but only in the donation contract the cause is represented by *animus donandi* (Macovei, 2006).

The main objection regarding the qualification as a donation of the legal operation we are analysing is the fact that the disposer - legal person - lacks the intention to gratify, *animus donandi*, a defining element for this type of contract.

The Romanian Civil Code of 1864 and the current Civil Code do not contain special rules on the interpretation of the donation contract, so to qualify it is admitted that, in case of doubt about the liberal intention that determined the alienator to be bound, the contract must be considered having onerous title; this represents the criterion for delimiting the donation from operations such as the execution of an imperfect natural or civil obligation or the public promise of reward made for advertising purposes (Codrea, 2016).

In the legal literature it has rightly been pointed out that in assessing the gratuitous nature of an act of disposition, account must be taken, in addition to the objective factor consisting in the patrimonial sacrifice on the part of the possessor, and the criterion of the psychic factor, of the intention to make a liberality (Deak, 2001, p.118). Thus, Domat observes that donations have their cause and the obligation of the donor is based on just and reasonable reasons, such as the return of a service, or other merits of the donee or even the simple pleasure of doing good to another; and these reasons take the place of the cause for the one who receives and gives nothing (Domat, 1777, p. 28). Pothier, for his part, stated that in the case of charity contracts, the desire to pardon takes the place of the cause (Pothier, 1821, p. 107).

The representatives of the subjective conception on *animus donandi* show that the intention to gratify finds its subjective reasons in each disposer, being necessary that this one does not have a material interest or, according to some, not even a moral one to do the respective act. The representatives of the objective conception on *animus donandi* show that the intention to gratify without receiving an equivalent subsists in the consciousness of the disposer regardless of the subjective reasons (altruism, philanthropy, ostentation, religious considerations,) that would underlie such a decision (Codrea, 2016).

Finally, what interests the present study is the general conclusion that emerges: the intention to gratify specific to the donation is characterized by the conscience and the will to make a material sacrifice in favour of another.

In dealing with the issue of the capacity of legal persons to make liberalities, it was considered that a proper liberality, characterized by the intention to gratify, is a strictly specific act to individuals, which is why, in principle, which is why, in principle, it could not be done by a legal person as a donor. However, if the act in question is one that benefits the activity of the enterprise, without pursuing the gratification of another person (such as aid granted to a company in which it holds shares / shares or with which it is in a lasting business relationship, or activities promoting the company's image), its validity cannot be questioned (Reghini, Diaconescu and Vasilescu, 2013, p. 322).

In another opinion it is accepted that occasionally even for-profit legal persons may also validly conclude related acts, accessories or adjacent to the object of activity, since they may also be necessary to fulfil the purpose of the company. Included in this category - together with treasury operations within the group, guarantees contracts, collateral guarantees for own or third-party debts, cambial gyrations, joint ventures, participation in the formation of other companies, loans within the group of companies - are civil legal acts free of charge, such as a donation or the conclusion of an act of sponsorship or patronage, some of which are mandatory for good promotion of the company or its products (Piperea, 2012, p. 89, 114). The companies will not be able to have as main or exclusive object the commission of acts free of charge, these being, in principle, of the domain of associations and foundations, called NGOs. It is thus pointed out that the for-profit legal person may carry out acts free of charge and may benefit from such acts made in his favour by other persons if both relate to the statutory purpose and serve to carry it out. Certain acts are thus accepted, even necessary for the start-up of a company, like the agreement given by the company to a subsidiary to establish its registered office in an immovable property belonging to the company.

In another opinion, which in our opinion manages to modulate the two previous points of view from a civil law perspective, it is considered that the so-called *commercial liberalities* (donation included in the category of quasi-liberalities, together with sponsorship and patronage) would, at first glance, be foreign to commercial activity, due to its essence: profit-making. Although any commercial legal transaction is subject to a presumption of onerosity, however, the idea of liberality cannot be totally excluded, since the free will of traders, supported by the legal instruments at their disposal, cannot be without the possibility of concluding liberalities. What is excluded from the sphere of trade, however, is the donation itself as it is governed by the Civil Code, although it is accepted that some commercial goods can form the derivative object of a donation itself. However, *animus donandi* - of civil substance - is incompatible with both the purpose of the business and their purpose: to obtain profit. The intention to gratify, in a commercial sense, is a means of attracting (more or less sincere) customers, a way to capture the buyer's interest in a particular product or service (*animus captivo*); therefore, from an intellectual point of view, trade liberalities are foreign to *animus donandi*, being characterized by an *animus captivo*. In material terms, even if some of those legal acts do not involve a desisting of the trader of a property value (involving either a profitable price reduction or a commercial promotion technique) they are nevertheless the result of a calculation aimed at increasing profit or avoiding losses (Vasilescu, 2012, pp. 267).

The strictly legal approach has to start from the principle that, in matters of civil legal acts, capacity is the rule and incapacity is the exception. So, the latter must be strictly regulated by law. As a result, it was held that not only natural traders, but also legal persons have the right to legitimately conclude legal acts free of charge, either in the form of disinterested acts or free services, or even in the form of liberalities, but with the observation of requirements, the retention of limits and the taking of legal risks. These could be summarized by two sets of conditions as follows. First, the right to dispose by donations shall be enshrined in the instrument of company establishment or, in the absence of such consecration, granted by a decision, taken by unanimous vote, of the statutory management bodies or of those under whose authority the trader concerned operates. Secondly, such acts should be of an occasional, ancillary and limited character, in terms of patrimonial value (Prescure, 2005).

In addition to the legal analysis, two more particular limits must be considered, since if a generic inability of the legal person to dispose is not regulated, the Romanian legal system acknowledges two legal limitations. The first legal limitation concerns the insolvent legal person, as the Romanian Civil Code stipulates that no one can dispose free of charge if he is insolvent, based on art. 12 para. 2. In the same sense there is a special regulation contained in the Romanian Law no. 85/2014 on insolvency prevention and insolvency proceedings, published in the Official Gazette no. 466 of June 25, 2014, with subsequent amendments and additions, as subsequently amended and supplemented, which provides that free transfer deeds, performed in the 2 years prior to the opening of the procedure may be annulled other services performed; humanitarian sponsorships are exempt, according to art. 117, para. 2, lit. a. Therefore, a donation, including sponsorship or patronage, may be cancelled if it was made for a purpose other than humanitarian purposes. Secondly, an authority or public institution, an autonomous company, a national company, a company regulated by the Romanian Law no. 31/1990, or credit institution with full or majority state capital, as well as a trade union or a religious cult, regardless of their nature are unable to dispose by donation to political parties; even more, legal persons who, at the date of the donation, have due debts older than 60 days to the state budget, social security budget or local budgets are prohibited from making donations to political parties, unless they have to recover amounts greater than the debt own, as stated in Romanian Law No. 334/2006 on the financing of the activity of political parties and election campaigns, republished in the Official Gazette no. 446 of June 23, 2015, with subsequent amendments and additions.

On the other hand, as we have pointed out earlier, because donation is not a common act for a company with a patrimonial purpose, it can only be drawn up if the special formalities of empowerment on the part of the deliberative bodies of the legal person are fulfilled. Thus, the legal person exercises his rights and fulfils his obligations through his administrative bodies from the date of their formation. The status of administrative bodies shall be natural or legal persons who, by law, the act of incorporation or statute, are designated to act, in relation to third parties, individually or collectively, on behalf of and on behalf of the legal person. The legal acts made by the administrative bodies of the legal person, within the limits of the powers conferred on them, are the acts of the legal person itself. In relations with third parties, the legal person is engaged by the acts of his bodies, even if those acts exceed the power of representation conferred by the act of incorporation or statute, unless it is proved that the third parties knew it at the time of the conclusion of the act, based on Romanian Civil Code, art. 218, para. 1 and 2. However, the administrative bodies and in particular the administrator is in principle prohibited from making provision free of charge; in scope of this interdiction, we include not only the donations themselves, but also the indirect ones, i.e. stipulation for another, remission of debt and waiver of a right. Thus, the administrator will not be able to dispose free of charge of the assets or rights entrusted to him, unless the interest of good administration so requires, based on Romanian Civil Code, art. 809.

We stress that the historical thinking exercise in Romania, which had as its central pillar the idea that for-profit persons, is allowed to donate if this does not violate the purpose for which they were established, is supplemented by the rule that if there is an interest in good administration, the body that administers the legal person can conclude acts free of charge.

Moreover, Law no. 31/1990 stipulates that the company is engaged in relations with third parties through the acts of its bodies even if they exceed the object of activity of the company; therefore, from the interpretation of this text it is admitted that the company may occasionally conclude acts that do not agree with its lucrative purpose, therefore including donations, based on art. 55. On the other hand, the justification by the interest of good administration can be achieved in the conditions of the same law under the conditions of Art. 78: exceeding by a legal act the limits of the company's ordinary operations make it necessary for the direct intervention of the members called upon to decide, by decision of the general meeting, whether it is necessary and appropriate to conclude the act.

In conclusion, the consideration of a company's profit-making purpose is necessary, first, to determine the limits of the powers that directors/administrators must engage the legal person in dealings with third parties. Thus, if an administrator is empowered with full powers, he will be able to make acts of disposition if they are for consideration, for they usually relate to administration; however, special acts which do not fall within the scope of those normally concluded by the company may be considered unenforceable to third parties in good faith, according to Romanian Civil Code, art. 218 para. 3, and if the legal person is subsequently subject to insolvency proceedings, they shall be subject to annulment if they are concluded within a period of 2 years prior to the opening of insolvency proceedings.

Donation is not an ordinary act for a for-profit company. The conclusion of a donation in such circumstances will not be done unless the special empowerment formalities are fulfilled by the deliberative bodies of the legal person. Thus, it is wise to remain at the discretion of the general assembly to determine whether the conclusion of the act is required in the interest of good administration. In general, an act of donation is not of an urgent nature; maybe, at most, sponsorship, and patronage, but not donation. For this reason, even if the director deems it appropriate, the one who has the right to dispose should be the general meeting of shareholders.

Unfortunately, these conclusions resemble more wishful thinking because the Romanian Law on Companies no. 31/1990 does not have specific norms for the conclusion of a donation. At this point it could prove useful to look for answers in the jurisprudence. We have decided already for the common law jurisprudence, as you have read already, because this jurisprudence is more intimate linked with the principles of law.

3. THE PLACE OF CONJUNCTION BETWEEN PRIVATE LAW AND COMPANY LAW

Brothers John and Horace Dodge are two of the most important names in the history of car industry. Because of their court case with Henry Ford their names are held important in the history of commercial law as well. But the Dodge Brothers were not always so welcome in courteous society. Both Horace and John were incredibly prolific drunks and public menaces. The brothers came up from working class roots, the sons of a machinist and seamstress, but became incredibly wealthy men with the second most successful car company in America in their own name and a 10 percent stake in the Ford Motor Company.

The brothers started a machinist shop in Detroit in 1900. Their first major job was building transmissions for Ransom Olds, founder of Oldsmobile. Then in 1903 John and Horace took a chance on a well-known engineer, industrialist, and failure at both named Henry Ford. The press of the time had marked Ford as a disappointment and a loser. In that year, the Dodges they were the only ones willing to do business with Ford at all. It was a risky deal, nobody else would make it, but nobody else succeeded like they did, either. Every single component of the original, early 1900s Model A was made by the Dodges, while Ford assembled the cars at his plant. The Dodges gave up all their other contracts to focus solely on the Ford business. The brothers made sure Ford paid greatly for their time and energy. They were granted a 10 percent stake in Ford Motor Company and would be the proud owners of the entirety of its assets should the company fail.

The venture paid off almost immediately. Ford had made $3 million by the time the second year of the partnership rounded out in 1905, with the Dodge Brothers already making back their investment. And this was still years before the Model T even made its debut. The Dodges had become incredibly wealthy men with a significant stake in one of the most successful companies in the world. They were already well on their way to challenging Ford's supremacy in the auto market.

Ford's first masterpiece, the Model T, arrived in 1909; his second, the waking assembly line arrived in 1913. The latter helped increase production by over 700 percent in two years. Production soared from less than 2000 cars per year in 1905 to over 2 million by 1923. Currently, more than half of the vehicles on the roads were Fords. This was in part because the economies of scale from the new production methodology allowed Ford to reduce the price of the Model T by almost half in the period of a few years, all while adding more features and better materials to its construction (Ford, 1997, p. 17).

At the same time, Henry Ford wanted to be recognized for his social ideas and commitment. Perhaps the most famous example of this is when Ford doubled employee wages creating the so-called "Five-Dollar Day" in 1914 under the guise of having the interests of workers above all else. Ford characterized it as a `sort of dividend` to workers to share the wealth that the workers helped create (New York Times, 1914). But the `dividends` were paid from the company`s profit and at the expense of shareholders. Donation would be the more adequate qualification of the manoeuvre as Henry Ford declared: `It is not higher wages we are going to pay our employees, but profits` (Henderson, 2007). The workers were not shareholders, so they were not intitled to sharing the profit.

In 1916, Henry Ford announced his intent to indefinitely suspend distribution of nearly all company profits to the shareholders, as well as continue cutting prices and expanding production on his wildly popular automobile. He claimed that his primary goals were to build ever-cheaper cars and employ more people, with profits being incidental to his plans (Hodak, 2007).

This announcement touched off a battle between Ford, the company's controlling shareholder, and the minority shareholders, who would soon see their returns severely reduced. Namely, the Dodges had begun building their own cars under the Dodge Brothers Motor Company name three years previously and saw Ford's move as stifling their income and undercutting the automotive market. In 1913, the Dodge Brothers sold around 250 cars during its first year in existence. It sold 45,000 the next year. The year the brothers brought the lawsuit, Dodge was the second-largest automaker in the U.S. behind only Ford. And they were respected machines. The Dodge brand had a reputation for durability, which led to Dodge becoming the official truck of the U.S. during World War I (Hyde, 2005, p. 33).

The complaint filed by the Dodges on November 2, 1916, asked the trial court to do two things. First, to require the Ford Motor Company to establish a dividend policy that required the firm to `distribute all the earnings of the company except such as may be reasonably required for emergency purposes in the conduct of the business`, including the immediate issue of dividends amounting to 75 percent of retained earnings and cash revenue was about $60 million. Second, to enter an injunction forbidding the proposed construction of a new manufacturing facility on the River Rouge near Detroit (Supreme Court of Michigan, 1919).

Judgment was rendered on December 5, 1917. The lower court admitted the injunction that prohibited the Ford Motor Company from building the factory. In addition, it ordered the payment of a special dividend of about $19 million, of which the Dodges would get only $1.9 million. Despite a rather small sum for them, especially considering their intended use of the funds, the Dodges did not appeal. They were satisfied with the injunction. For Ford, both outcomes were big losses. First because although he received approximately 70% of the dividends tax rates at that time meant that the government would tax over two thirds of their dividends in taxes. Second because the injunction interfered dramatically with the expansion plans that Ford had for his car factories. He appealed and so the Supreme Court of Michigan was called upon to have the last word on the affair.

The parties waited 18 months for the decision of the Supreme Court. When it came it appeared to deliver triumph for both parties: The Dodges got their special dividend, which the Court said was arbitrary for the company to deny them and Ford got to build his factory. So, the injunction was refuted.

The Court directed its argument throughout the business judgment rule: `Courts of equity will not interfere in the management of the directors unless it is clearly made to appear that they are guilty of fraud or misappropriation of the corporate funds, or refuse to declare a dividend when the corporation has a surplus of net profits which it can, without detriment to its business, divide among its stockholders, and when a refusal to do so would amount to such an abuse of discretion as would constitute a fraud, or breach of that good faith which they are bound to exercise towards the stockholders` (Supreme Court of Michigan, 1919). Levying this to Henry Ford's decision to refuse to pay a special dividend after the firm's most profitable year, the consequence of which was to increase retained earnings to well over $60 million, the Court conducted that the refusal was arbitrary. A board might decide to withhold distributions to shareholders, but only if it was based on a clear plan to increase shareholder profits. So long as the board's decision could reasonably be tied to a rational business purpose, it would be spared from judicial review. The Court debated that it was not the case because the Ford Motor Company was run by Henry Ford as `a semi-eleemosynary institution and not as a business institution` (Supreme Court of Michigan, 1919). To decide this the court analysed the business plan set out by Ford's defence. The Court simply multiplied the initial capacity increase from the proposed factory by the planned selling price and determined that the net profits in the future would be less than in the current year. So, it was easy to conclude: `In short, the plan does not call for and is not intended to produce immediately a more profitable business, but a less profitable one; not only less profitable than formerly, but less profitable than it is admitted it might be made` (Supreme Court of Michigan, 1919). To decide this the court also considered the `attitude and to the expressions of Mr. Henry Ford`, quoting Ford's testimony: `My ambition […] is to employ still more men, to spread the benefits of this industrial system to the greatest possible number, to help them build up their lives and their homes. To do this we are putting the greatest share of our profits back in the business`. The Court continued by noticing that Henry Ford overshadowed the firm and had the belief that `shareholders […] should be content to take what he chooses to give` and that his `sentiments, philanthropic and altruistic […] had large influence in determining the policy to be pursued` (Supreme Court of Michigan, 1919).

The Court stated that it is acceptable for a firm to donate to charitable causes but highlighted that this must be secondary to the main purpose which is making profits for stockholders: `A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end and does not extend to a change in the end itself, to the reduction of profits, or to the non-distribution of profits among stockholders in order to devote them to other purposes` (Supreme Court of Michigan, 1919).

The injunction matter was, in contrast to the dividend ruling, not a situation where the Court could afford to make a policy statement, since the costs of its decision were much higher here. Starting with two indisputable truths, that `judges are not business experts` and `the experience of the Ford Motor Company is evidence of capable management of its affairs` (Supreme Court of Michigan, 1919), the Court accepted to the board's decision to expand capacity through building a new factory. This was warranted for two justifications. The uncertainty of the inquiry into what would be best for the firm and the concern that shareholders, like the Dodges, might be focused on short-term rather than long-term profits.

Though the legal verdict turned against him in part, Ford once again emerged successful. He was praised as establishing a new, enlightened business philosophy. Although his testimony about looking out for workers pushed the courts to hand him a partial legal defeat and an admonishment, he won the `hearts of ordinary American citizens` (Watts, 2006, p. 258). This augmented the Ford legend and therefore increased the market for `Ford` cars.

Ford resigned as president of the Ford Motor Company in December 1918, allowing his son Edsel Ford to take up the family responsibility. Using astute tactics, Henry Ford systematically forced out everyone who could oppose him. He announced he would start a new business apart from Ford and make an even better car than the Model T. Ford shareholders, realizing their shares would be worthless should this occur, sold all their standings in the company back to Ford and his family. By July 1919, the Ford Motor Company was completely in Ford family control. The Dodge brothers' shares were also bought out by Ford, but they were far too busy to worry about Ford's consolidation of power. They were looking up to new business opportunities. Unfortunately, their economic ambitions were soon put to rest by the… Spanish flu that they caught during a motoring event, i.e. New York Automobile Show, in 1919.

As required by the Court's decision, the Ford Motor Company paid the $19 million dividend. And, as authorized by it, went on to build the River Rouge factory, which the firm still operates today. A two square-mile facility that would eventually employ over 100,000 workers and produce about 4000 cars per day, the River Rouge factory would be the largest manufacturing facility built until then or since (Henderson, 2007).

The Ford Motor Company remained private, and family owned from 1920 to 1956, when Henry Ford's grandson, Henry II, took it public. Even then, and until now, the Ford family retained effective voting control by holding preferred shares with super-voting rights and by using sophisticated corporate finance contracts to separate economic ownership (which is declining to less than 40%) from voting control. Thus, the problems that the founder of the company faced are (for the time being) solved.

4. CONCLUSIONS

Paraphrasing the expression `searching high and low` perhaps we have been searching a little too high for an answer to our quest. Company law is a matter already overly complicated, and a 100-year case may be inadequate. But we stick to our findings.

Dodge v. Ford is noteworthy not because it establishes the scheme that directors/administrators should maximize shareholder wealth as a matter of law, but rather as a normative discourse on what many believe the proper purpose of a well-functioning corporation should be. For this point of view, the Michigan Supreme Court has not innovated much in the world of corporate governance. The court certainly cannot rightly be credited for inventing the idea that the purpose of the for-profit legal person is to maximize value for shareholders because the corporation is a contract-based form of business organization, maximizing shareholder gain is only a default rule. Shareholders could opt out of this goal if they so desired.

The fact is that shareholder wealth maximization is widely accepted at the level of rhetoric but largely ignored as a matter of policy implementation. The law is clear, the problem is not the lack of clarity of the rule. The problem is lack of enforceability. The enforceability problem is aggravated by perception prejudice. When a company disappoints, it will certainly appear that managers were not acting in the shareholders' interests, even if they were. Moreover, *Ford v. Dodge* reveals how corporate litigation often is one battle in a broader business battle between the parties. Neither party comes with clean hands or pure motives: for the Dodges it was a maneuver in their ongoing attempt to start a rival auto company to Ford but was also an attempt to prevent a majority shareholder from diverting firm profits for seemingly personal ends; for Ford it was about refuting potential rivals' cash and avoiding taxes, but it was also about following what was at least plausibly a clever and profit-maximizing business strategy.

To the scope that Dodge v. Ford is articulating a default rule, I believe that the decision was and still is today correct. It goes to show that this kind of cases put courts in a difficult position. First, because looking well over the complaint and the defense, they will see a complicated battle in which the litigation is a small part. If the court will not strive to do so it will equal with permitting to have the law serving instrumental ends of opportunistic parties and establishing legal rules that allow other parties to exploit the law in ways unanticipated by the parties at the time of contracting. Second, a highly circumstantial decision may not translate easily to other cases, and therefore may create inefficiencies in contracting or dispute resolution.

All these conclusions we believe can be hold true to any donation made by any for-profit legal person. This goes to prove that *in absentia lucis, tenebrae vincunt* (otherwise this is my faculty motto, that I am proud about). The legislator has two ways of acting: stating that for-profit legal persons are to express their generous deeds only through sponsorship or patronage or complete the company law with provisions especially dedicated to the legal regime applicable to the consent of donations.

Finally, let me put this in a different way. Noting that most organizations are simply legal fictions which serve as a nexus for a set of contracting relationships among individuals, we must remember a Roman Law very particular lesson. Fictions are not to be trusted and enriched. It is true that all that mankind builds must follow the creator's model, but maybe it is not wise to believe that the Golem is capable of the same emotions as its creator.

References

1) Codrea, C. (2016). *Donația în dreptul european. Aspecte de drept comparat*. Bucharest: Universul Juridic.
2) Deak, Fr. (2001). *Tratat de drept civil. Contracte speciale*. Bucharest: Universul Juridic.
3) Domat, J. (1777). *Les Loix civiles dans leur ordre naturel*. Vol I. Paris: Nyon ainé Libraire.
4) Dominte, N. R. (2009). *Organizarea si functionarea societatilor comerciale.* Bucharest: C.H. Beck.
5) Ford, R. B. (1997). *Beyond the Model T: The Other Ventures of Henry Ford*. Detroit: Wayne State University Press.
6) Henderson, M. T. (2007). *Everything Old Is New Again: Lessons from Dodge v. Ford Motor Company*. [online] Available at: https://chicagounbound.uchicago.edu/law_and_economics [Accessed 08.04.2021].
7) Hodak, M. (2007). *The Ford Squeeze-Out*. http://dx.doi.org/10.2139/ssrn.1011924 [online] Available at: https://ssrn.com/abstract=1011924 [Accessed 08.04.2021].
8) Hyde, Ch. K. (2005). *The Dodge Brothers: The Men, The Motor Cars, And The Legacy*. Detroit: Wayne State University Press.
9) Law no 31/1990 on Companies, republished in the Official Gazette no. 1066 of November 17, 2004.
10) Law no. 85/2014 on insolvency prevention and insolvency proceedings, published in the Official Gazette no. 466 of June 25, 2014.
11) Law No. 334/2006 on the financing of the activity of political parties and election campaigns, republished in the Official Gazette no. 446 of June 23, 2015.
12) Macovei, C. (2006). *Contracte civile*. Bucharest Hamagiu.

13) New York Times, (1914). *Henry Ford Explains Why He Gives Away $10,000,000*, [online] Available at: https://www.nytimes.com/1914/01/11/archives/henry-ford-explains-why-he-gives-away-10000000-declares-that-he-is.html [Accessed 14.04.2021]
14) Piperea, Gh. (2012). *Drept comercial. Întreprinderea*. Bucharest: C. H. Beck.
15) Pothier, R. J. (1821). *Traité des obligations.* Vol I. Paris: L'imprimerie de P. Didot l'Ainé.
16) Prescure, T. (2005). Despre admisibilitatea titlului gratuit în actele juridice ale comercianților. *Curierul judiciar*, 10(1), pp. 80-85.
17) Reghini, I., Diaconescu, Ș and Vasilescu, P. (2013). *Introducere în dreptul civil*. Bucharest: Hamangiu.
18) Romanian Civil Code (2009).
19) Supreme Court of Michigan, (1919). *DODGE et al. v. FORD MOTOR CO. et al., 204 Mich. 459, 170 N.W. 668, 3 A.L.R. 413.* [online] Available at: https://edisciplinas.usp.br/pluginfile.php/357204/mod_resource/content/0/Dodge%20et%20al%20v.%20Ford%20Motor%20Company%20et.%20al%2C%20204%20Mich.%20459%2C%20170%20N.W%20668%20%281919%29.pdf [Accessed 08.04.2021].
20) Stout, L. A. (2008). *Why We Should Stop Teaching Dodge v. Ford*. [online] Available at: https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1826&context=facpub [Accessed 08.04.2021].
21) Țuca, Fl. (1998). Donație, sponsorizare, mecenat. *Revista de drept comercial*, 9(1), pp. 95-111.
22) Vasilescu, P. (2012). *Drept civil. Obligații*. Bucharest: Hamangiu.
23) Watts, S., (2006). *The People's Tycoon: Henry Ford and the American Century*. New York: Vintage Books.

IMPACT OF PARTIAL COST ANALYSIS ON THE ENTIRE DECISION-MAKING PROCESS

CAMELIA CĂTĂLINA MIHALCIUC
Stefan cel Mare University of Suceava
Suceava, Romania
cameliam@seap.usv.ro

MARIA GROSU
Alexandru Ioan Cuza University of Iași
Iași, Romania
maria_lia24@yahoo.com

Abstract
The financial information that managers receive in their internal reports mainly refers to costs and this relevant information is important in the decisional alternatives. Within these internal reports intended for direct beneficiaries who are managers, there are presented methods and approaches related to the calculation and delimitation of costs, this calculation considered by the managerial accounting. This cost information is used by managers to exercise managerial functions, namely planning, control, decision-making and administrative responsibility. As regards the calculation of costs, in terms of costing, it is very important the purpose for which a cost element should be determined, in which it is necessary to choose different approaches and calculation methods. Starting from these aspects, the overall objective of this paper focuses on knowing the behavior of costs and cost calculation by using the specific procedures and methods, based on the application of certain stages, which separates the total expenses that form a cost element into fixed and variable ones. Another important point to be highlighted is that these procedures are useful tools in the predictive calculation. The information on costs represents the resource regarding the database related to the productive process, thus forming the support of the decision-making system.

Keywords: *managerial accounting; cost; partial costs.*
JEL Classification: M41

1. INTRODUCTION

The use of the cost of managing the economic entities by managers is an action of primary interest. Given the current economy, marked by globalization, and increasing competition using modern technologies, knowledge of management techniques through the use of cost information is a necessity. To optimize the link between management accounting and business management, managers need to develop their conceptual and methodological costs. Management may influence the size of a cost only if it manages to have accurate and timely information on the cause, value, and consequences of its recording. The control of economic operations, economic processes, and business sectors and implicitly of costs is a management priority; the latter being a desideratum pursued by managers at all levels of the hierarchy pyramid. Based on these considerations, the objective of the paper starts from the link between accounting and management, management accounting progressively evolving from the role of recording information on costing to informational support in management decision-making. Thus, providing cost information in the shortest possible time to substantiate managerial decisions allows the establishment of medium and long-term strategies that have as their starting point management accounting reports. This information represents the resource for the production process database and forms the support of the decision-making system, providing managers with cost-based options for setting the objectives, resources and resources needed to conduct the business.

2. LITERATURE REVIEW

The specialized literature attempts in many ways to highlight the importance of managerial accounting, using the cost as the important tool in managing the economic entities by managers. Thus, the authors of the paper considered it appropriate to make a brief analysis, with which to highlight the most important concepts and their evolution.

Managerial accounting can play an important role in supporting management, systematically providing appropriate reports to support decision-making in the field of health and safety at work, in order to prevent risks, the beneficiaries of such information being both internal stakeholders and the external ones. (Ibarrondo-Dávila, Lopez-Alonso and Rubio-Gámez, 2015, pp. 116-125). According to Rikhardsson, managerial accounting as an information system for management is called to play an active role in project evaluation, strategic planning and stakeholder relations, thus expanding the impact and scope of methods and techniques applied in this field. provide valuable information for internal user decision-making and stakeholder relationship management (Rikhardsson, 2005).

In the main studies analyzed, taking into account the evolution over time of the concepts related to managerial accounting, we will present in the following the important aspects targeted in the works in the field. Thus, Edgeworth and Clark presents a series of information and concepts related to costs, accounting, approaches to issues in production companies, showing through a mature presentation of costs their impact on the entire activity of a company (Edgeworth and Clark, 1925). A little later, Johnson presents concepts of costs and processes, information related to strategic management at General Motors and within the duPont de Nemours Powder Company, as well as developments in managerial accounting (Johnson, 1975; Johnson 1925).

An important step in the study of managerial accounting was also presenting concepts and developments in managerial accounting, addressing information related to strategic management (Chandler, 1977; Kaplan, 1984).

The concepts related to quality, costs and solutions for their efficiency were addressed (John *et al.,* 1995). Roman and Maher approach the sphere of production cost management, emphasizing their correct recognition in the production activity (Roman and Maher, 2005). A successful managerial accounting is the product of the evolution over time of the methods used by business owners, managers, and accountants, by processing information from companies, to become competitive and leaders in the field (Swain *et al.,* 2004).

The issue of cost accounting and the impact on managerial decisions is addressed in numerous studies by authors (Bhimani *et al.,* 2008; Zimmerman, 2014; Vijay and Keah, 2005), who presents how the Just-In-Time Manufacturing method can impact managerial decisions; others demonstrate that managerial accounting is a real support for strategic management (Atrill and McLaney, 2014, p. 70).

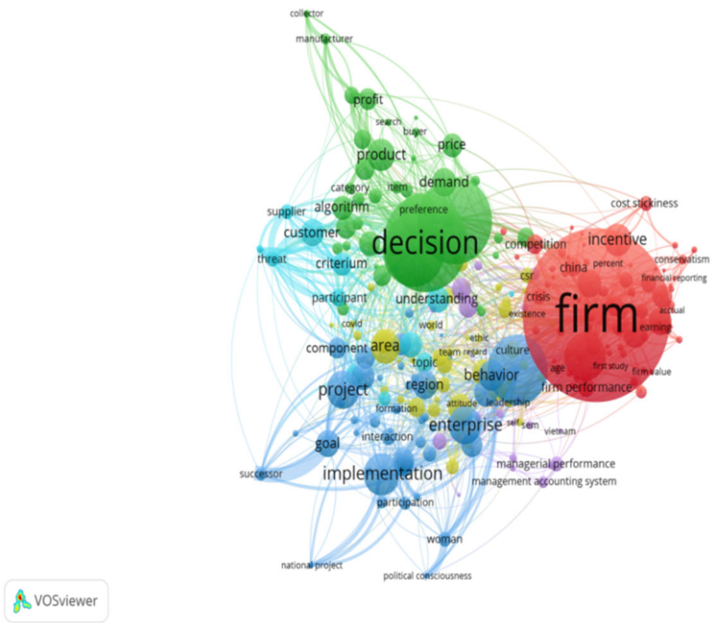
Concepts about smart enterprise, complex accounting systems, new industrial technologies implemented in industrial production are presented and analyzed (Vivek, 2016; Alasdair, 2016; Gronwald, 2017).

Approaches about managerial control, as an additive to managerial accounting, aim at the financial and non-financial information that underlies managerial control (Popkova, Ragulina and Bogoviz, 2019).

In this paper, the authors aim to present the current research trends in the field of managerial accounting with the help of the VOSviewer program. VOSviewer is the support program in generating graphical representations that is part of the class of applications specialized in building and viewing bibliometric maps (Van Eck and Waltman, 2010). Considering the aspects that the authors have proposed in this paper, an analysis was made on scientific papers published in the period 2011-2021, having as topic the term managerial accounting or fixed costs and variable costs, using data also extracted from the Isi Web of knowledge database, on July 3, 2021. Thus, the topic on managerial accounting or fixed and variable costs returned a result of 3,565 articles, and after the filtering corresponding to the keywords, elected, according to the relevant score 253 terms out of the 422 terms that reached the threshold.

The map created by the VOSviewer software is synoptically mapped in Figure no. 1, being able to observe the groups created in the 6 clusters represented by the keywords captured in Figure no. 2. We must mention that to create maps in Vosviewer, the keyword must have a minimum number of 10 occurrences, and in the case of our search, out of the 13,705 terms, 422 meet this condition. Thus, because of the investigation, the keywords that appeared most often in the published articles were words such as "decision" which had the highest number of appearances, namely 202 appearances, followed by "cost" with 166 appearances, and the rest of the items also have a significant number of appearances.

Figure 1. Map on the links between the topics covered in the field of managerial accounting or fixed and the variable costs in the last ten years



Source: own processing using VOSviewer

Analyzing the map from figure no. 1, we observe that in the result of the investigation, 6 interdependent research groups were obtained, focused on managerial accounting, or fixed costs and variable costs, which address different items revealed in Figure no. 2.

Figure 2. Approaches regarding the topic managerial accounting or fixed and variable costs in the most relevant scientific papers published between 2011-2021

Formed clusters on topic managerial accounting or fixed and variable costs	
	Cluster 1 (79 items) is created taking into account items such as: accounting conservatism,. accounting firm, accrual, age, association, audit quality, auditor, bank, board, cash holding, ceo, ceo compensation, china, compensation,, consequence, conservatism, contrast, corporate governance, cost stikness, cises, dea, determinant, director, discretionary accrual, earnings, earnings management, empirical results, endogeneity, equity, expertise, finance, financial performance, financial reporting, financial statement, firm, firm performance, firm value, first study, gender, high level, hypothesis, ifrs, incentive, india, islamic bank, italy, laverage, likehood, link, managerial ability, managerial discretion, managerial efficienty, management enterchme, managerial ownership, managerial summary, negative effect, negative impact, observation, owenership, owenership structure, parent university, percent, policymaker, positive effect, positive relationship, present study, product market, proxy, regulate, research summary, sample, shareholder, teheran stock excgange, united state.
	Cluster 2 (46 items), treats issues related to: algorithm, applicability, buyer, carbon emission, case, category, collector, consideration, consumer, cost, decision, decision maker, demand, environmental impact, environmental performance, example, experiment, facility, intention, item, managerial insight, manufacturer, network, payment, planning, platform, preference, price, problem, product, production, profile, profit, property, reduction, retaier, return, revenue, sale, scenario, search, solution, supply chain, sustainable development, tendency, trade.
	Cluster 3 (46 items) is drawn around items as wel: accounting, application, assesment, basis, behavior, commnunication, component, content, digital, sovereighty, enterprise, expert, formation, future, goal, group, identification, implementation, intelectual capital, interaction, interest, latter, management accounting, management decision, managerial accounting, national project, object, participation, posibility, principle, project, public audit, region, social sustainability, stage, state, subject, succesor, gtransformation, transition, trust, ukraine, variety, womwn.
	Cluster 4 (45 items) includes as research topics: agent, area, child, competency, complexity, corporate social responsability, covid, csr, culture, degree, education, element, emphasis, establishment, ethic, .existence, foundation, institution, lack, leadership, motivation, need, pandemic, paradox, parent, personality type, positive impact, productivity, regard, resilience, school, service innovation, situation, skill, smes, social implication, spain, stability, stakeholder, student, team, university, variance, world.
	Cluster 5 (22 items) it is oriented towards the folowing terms:. atitude, diversity, driver, engagement, estimate, hospital, indonesia, investigation, management accounting, management style, managerial performance, mas, nurse, pattern, procedure, questionaire, reform, scale, self, sem, service, vietnam.
	Cluster 6 (15 items) adressed items related to: criterium, customer, decision making, emotion, field, future research, hand, interview, participant, person, previous study, suppllier, threat, topic, understanding

Source: own processing based on information from VOSviewer

An analysis of Figure no. 2 shows us that the topic managerial accounting or fixed and variable costs is presented in numerous specialized studies from the Web of Science database, and the results of mapping the terms of interest for this paper are: cost, decision, decision making process, managerial performance, earnings management, CEO, price, project, management accounting system, However, this analysis does not identify at the level of each cluster terms such as fixed costs and variable costs which will lead to the opinion that the issues concerning these concepts should be published in a significant number on the Web of Science platform, as found on Google Scholar.

3. SPECIFIC MANAGERIAL ACCOUNTING TECHNIQUES

The way in which a company chooses to highlight its costs in accounting is correlated with the level of performance achieved from the point of view of organizational management, which implicitly affects the performance of the company in general. Usually, the way of recognizing costs in accounting gives the board of managers of a company the opportunity to check a series of clues or indications on how to set prices, manage stocks, achieve future budgets, and even identify and develop organizational objectives.

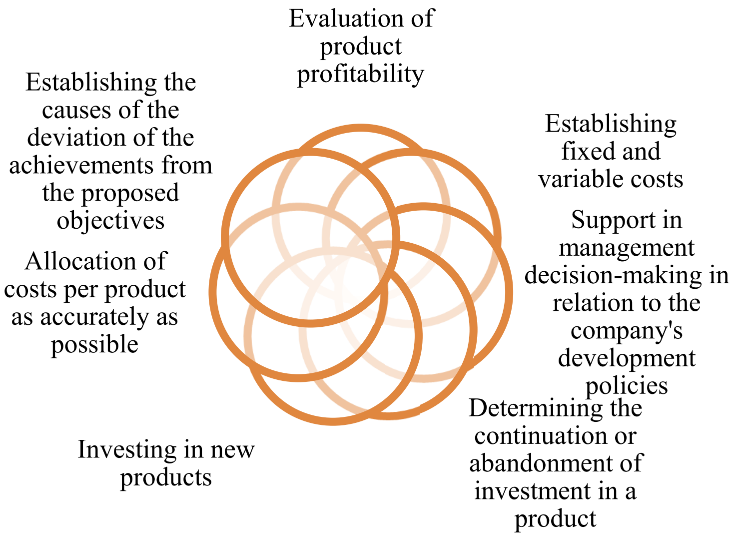
Thus, costing methods are an important benchmark in terms of organizational performance, as they actively contribute to substantiating the decisions of the management board. The existence of a cost information system allows any company to collect certain information that contributes to the management procedure, in terms of calculation, forecasting, analysis, accounting and reporting of organizational costs. In this regard, there are several universally valid methods that can be used for the proper organization and management of this cost information system.

Managers have a personalized approach to the decisions involved in an action, which are based on quantitative and qualitative analysis (Bhimani *et al.,* 2008, p. 310).

Decision making related to the production process aimed at *streamlining issues, planning, and budgeting, capital expenditure justification and processing and improving productivity* (Cokins, Căpuşneanu and Briciu, 2012, pp. 28-42). By rationalization we mean the management's awareness of the products, services, customers, stored units, which are good or need improvement, but also which of them should be abandoned. About planning and budgeting, we know that they are based on forecasts of future demands, being influenced by the volume, or mix of products or services, combined with possible future assumptions. This occurs when we have a predictive view of costs. By justifying the capital expenditures, the company analyzes, if obtained results are justified, and finally follows the orientation of the future improvement of the productivity.

Around the 1960s, the literature captures several techniques used in economic processes, such as linear and non-linear programming, probability theory, hypothesis testing, and so on. These were used for various actions, which can be seen in Figure no. 3. (Womack and Jones, 2007):

Figure 3. Quantitative analyzes of managerial accounting techniques



Source: own processing

Thus, these quantitative analyzes come to continue the studies related to managerial accounting techniques developed in the previous decades. Starting from these techniques, in the applicative approach of this paper the authors proposed to investigate by descriptive analysis of the marginal calculation, the procedures and methods of calculating costs based on the delimitation of expenses in variables and fixed, the determination of the result taking into account the evaluation in variable costs, the break-even point and the differential highlighting of the differential profit and loss account, all these tools used helping managers at all levels to make the most relevant decisions related to their product portfolio.

4. THE ROLE OF VARIABLE AND FIXED COSTS IN THE DECISION-MAKING PROCESS

The tools used to streamline the entire decision-making process of all types of organizations are specially designed to increase the efficiency of important decisions, these tools proving their usefulness over time (Mihalciuc and Grosu, 2019).

Cost management and the total cost division of the firm into fixed and variable cost components as part of improving cost management is also an excellent tool for developing and justifying many different management decisions, which can be associated not only with reducing, optimizing costs or product prices, but also with the company's production program and, in some cases, with the organizational management structure of it (Dyakova, 2020).

At the level of any company, managers ask questions about production reaching the following needs (Dumitrana and Caraiani, 2010, pp.185-195): *establishing the minimum price of the order, after which profit is obtained; the balance of limiting factors that determine the mismatch between demand and production capacity; continuity and discontinuity in production, to buy or produce, the decision being influenced by whether or not to limit resources; the decision of the product mix, which helps to maximize profit by maximizing contribution and minimizing cost.*

Costs have a contribution in substantiating the decisions that are reflected in (Fotoche, 2005, pp. 135-137): *determining the volume of activity; choosing the optimal production variant; comparing the cost of own products with those of similar products, manufactured by the competition, by determining the differences resulting from the organization of work, the organization of activity and the use of time; creating the possibility to exercise all the functions of the management activity; obtaining an internal planning tool, by using the pre-calculation, being able to realize programs regarding the evolution of the company's indicators.*

To obtain economic and financial results at maximum capacity, it is necessary to optimize the price-cost-volume correlation of the production realized, respectively sold. This correlation is reproduced with the help of indicators such as: the equilibrium point, which is also known as the break-even point or the dead center; coverage factor; the dynamic safety factor, and the safety interval (Căpușneanu, 2013, pp. 195-196).

Cost management is an excellent tool for developing and justifying many diverse management decisions, which can be associated not only with reducing, optimizing costs or product prices, but also with the company's production schedule and, in some cases, with the organizational management structure of it (Dyakova, 2020).

The costs incurred by an entity classified in fixed and variable items study the behavior of expenses in relation to changes in the volume of activity. Thus, fixed costs remain the same if there are changes in the volume of activity and the variable ones vary depending on the volume of activity. If fixed costs do not change in proportion to output, there are still factors that could influence them, such as inflation or the exchange rate. If the rent, a typical fixed cost, increases due to inflation, it will generate a change in the final selling price, thus noting that these fixed costs are almost always based on time, i.e. they vary according to the duration of time involved (Atrill and McLaney, 2014, p. 54).

Knowing the behavior of costs, one can deduce the operational leverage and the break-even point, relevant indicators of the cost-volume-profit triad, necessary in fact to substantiate decisions on activity and pricing (Mihalciuc, 2019). Thus, the operational leverage (operational leverage) is determined as a ratio between fixed costs and total costs, this ratio depends very much on the nature of the activity. The higher the value of the operating leverage, the more sensitive the company's profits will be to the change in sales volume, and an increase in sales volume will result in a more pronounced increase in the result in a company whose operational leverage is higher, than in a firm where variable expenses are predominant.

The large contribution of fixed costs to total costs may be appropriate for the company because it demonstrates the ability to reach a high level of activity, but also inconvenient because high costs involve major settlements.

Managers need to pay attention to the value of operational leverage. Thus, the result of companies those have a higher level of operational leverage decreases faster than in the case of companies that produce with a lower level of operational leverage. So, in the case of a large operational leverage, the sensitivity of the result to the variation of the activity is higher, and with an increase in sales volume, the increase in the result will be rapid. Similarly, if sales fall, the result will fall just as quickly. On the other hand, firms with lower operational leverage are characterized by greater stability.

The break-even point, also called the break-even point or break-even point, is when an economic entity reaches the stage where expenses are equal to the revenue generated, recognized as that value of sales from which the firm begins to make a profit or, conversely, that value of sales below which the firm incurs losses (Mihalciuc, Grosu and Musteata, 2018). If a company has high fixed costs, then it must produce more products to cover them. Thus, the increase in fixed costs in the cost structure leads to an increase in the break-even point. A structure with more fixed costs generates a higher break-even point, namely a safety interval and a safety factor with lower values. Therefore, structures in which fixed costs predominate have a higher risk than those in which variable costs predominate (Mihalciuc and Pintescu, 2019).

The break-even point can be calculated in three ways: quantitative, value or number of days. Each of the three values is useful in decision making (Table 1).

The notions of variable costs and fixed costs are the ones that substantiate the contribution, another very important element in the decision-making process. The contribution is the difference between the revenue from sales and the variable costs and can also be determined as the difference between the revenue from the sale of a single product and the variable cost of that product (Bâtcă-Dumitru, Calu and Ponorîcă, 2018, pp. 37-72). The result obtained from this difference is intended to cover fixed costs, and the remaining amount represents the company's profit. Underlying managerial decisions is the variable cost method.

Table 1. Break even. Features and calculation formula

Break even (Bev)		
quantitative	value	temporal
$= \frac{Fixed\ costs}{Variable\ cost\ margin\ expressed\ as\ a\ unit}$	$= \frac{Fixed\ costs}{Variable\ cost\ margin\ expressed\ as\ a\ percentage}$	$= \frac{Break-even\ value}{Turnover}$ x *12(months) or x 365 (days)*
shows the minimum quantity that must be produced and sold to make a profit	shows the minimum value that must be produced and sold to make a profit	allows the approximate identification of the calendar date that corresponds to reaching the break-even point and is based on a hypothesis of linearity of sales over a calendar interval

Source: own processing

The method is based on the distribution of variable costs (direct and indirect) on each product, while the total fixed costs are not allocated, these being considered costs of the period. The method consists in the fact that each product contributes with a margin on variable costs to cover the total fixed expenses. The profitability of each product is assessed by the existence of a positive margin.

5. THE INFLUENCE OF ACCOUNTING INFORMATION ON MANAGERIAL DECISIONS

In the decision-making process of a company, a very important role is played by the information obtained from managerial accounting, which emphasizes details and presents concretely the costs corresponding to each product regarding the production. To highlight the importance of the information provided by managerial accounting in the decision-making process, we will analyze the components and the way of determining the cost for a company SC Gama in the field of footwear production. Thus, in this part of the paper, the authors present the main processes and specific methods of cost calculation, considering the delimitation of the fixed and variable costs, which have a significant impact on decision making.

Variable cost analysis is a method by which important information can be obtained in decision making. In this sense, it is necessary, to highlight the expenses at SC GAMA, the delimitation of the expenses in fixed and variable expenses, according to the information structured in Table 2.

Table 2. Delimitation of expenses in fixed and variable expenses at SC GAMA

ELEMENTS	Product A	Product B	Product C	TOTAL
Turnover (T)	67000	181000	252000	500000
Expenditure on raw materials	24000	38000	68000	130000
Direct salary expenses	30000	39000	45000	114000
Variable expenses	54000	77000	113000	244000
CONTRIBUTION MARGIN	13000	104000	139000	256000
Indirect production costs	18000	24000	18000	60000
General administration expenses	7800	11700	6500	26000
Sales expenses	6825	4875	7800	19500
Fixed expenses	32625	40575	32300	105500
Result	-19625	63425	106700	150500
Profitability (Profit / T)		35.04%	42.34%	30.10%

Source: own processing using data from SC Gama

Knowing the value of fixed and variable expenses we can determine the quantitative break-even point [Bev = Fixed costs / (Unit selling price - Variable costs per unit)] to determine the minimum number of pairs of shoes to be sold to ensure covering expenses (Table 3).

Table 3. Determining the quantitative break-even point

Fixed costs (FC)	32625	40575	32300
Unit selling price	480	710	1050
Variable costs per unit (VC)	154.75	457.6	518.76
Quantitative break-even point	100.3075	160.7567	60.80114

Source: own processing using data from SC Gama

Fixed costs are fully included in the cost of production only when the production capacity is used at a normal level. If the actual level of production capacity is lower than the normal level, that cost of activity appears. In this regard, we will consider the hypothetical situation in which the normal level of production capacity is presented in Table 4.

Table 4. Determination of fixed overhead incorporation in cost

Normal level of activity	190	290	280	760
Effective level	140	255	240	635
% FC overhead incorporation in cost	73.68%	87.93%	85.71%	83.55%
Total fixed costs	32625	40575	32300	105500
Total incorporable fixed expenses	24039.47	35678.02	27685.71	87403.21
Expenses of the period	8585.526	4896.983	4614.286	18096.79

Source: own processing using data from SC Gama

In the situation presented above, the calculation of the cost and the determination of the result are presented in Table 5:

Table 5. Determination of the result taking into account the normal production capacity

ELEMENTE	Product A	Product B	Product C	TOTAL
Turnover	67000	181000	252000	500000
Expenditure on raw materials	24000	38000	68000	130000
Direct salary expenses	30000	39000	45000	114000
Variable expenses	54000	77000	113000	244000
CONTRIBUTION MARGIN	13000	104000	139000	256000
Indirect production costs	13263.1579	21103.448	15428.57	49795.18
General administration expenses	5747.36842	10287.931	5571.429	21606.73
Sales expenses	5028.94737	4286.6379	6685.714	16001.3
Fixed expenses	24039.4737	35678.017	27685.71	87403.21
Result	-11039.474	68321.983	111314.3	168596.8
Profitability (Profit / T)	-16.48%	37.75%	44.17%	33.72%

Source: own processing using data from SC Gama

Based on the data presented in Table 5, we can see that Product A generates a loss. This situation raises the issue of making decisions regarding continuity or discontinuity in production. Thus, we consider it necessary to analyze the consequences of stopping the non-performing product and establish an optimal alternative.

Table 6. Determination of the result in the situation of continuity in production

ELEMENTS	Product A	Product B	Product C	Total
Sales	67000	181000	252000	500000
Variable costs	54000	77000	113000	244000
Contribution on variable costs	13000	104000	139000	256000
Fixed costs	32625	40575	32300	105500
Result	-19625	63425	106700	150500

Source: own processing using data from SC Gama

At the analyzed company it is observed that the loss corresponding to product A has a high level, the variable costs also having a high weight, which makes us identify costs that could be reduced and used to cover other expenses.

Table 7. Determination of the consequences in case of abandonment of product A

ELEMENTS	Product A	Product B	Product C	Total
Sales	0	181.000	252.000	433.000
Variable costs	0	77.000	113.000	190.000
Contribution on variable costs	0	104.000	139.000	243.000
Fixed costs	32.625	40.575	32.300	105.500
Result	-32.625	63.425	106.700	137.500

Source: own processing using data from SC Gama

From the calculations from Table 7 we notice that for SC Gama the consequence of giving up product A is represented by the reduction of the result by 13.000 lei, which requires the search for a favorable alternative (Table 8).

We can conclude that opting to replace product $A_1$with product A_2 may be a variant, but the result is much smaller compared to the reduction achieved, which makes us choose and think of an alternative variant for product A.

Table 8. Determination of the consequences of replacing product A_1 with another product A_2

ELEMENTS	Product A_2	Product A_1	Product B	Product C	Total
Sales	67000	0	181000	252000	500000
Variable costs	54000	0	77000	113000	244000
Contribution on variable costs	13000	0	104000	139000	256000
Fixed costs	3500	32625	40575	32300	109000
Result	9500	-32625	63425	106700	156600

Source: own processing using data from SC Gama

The goal of any company is to maximize its profit, which is why management accounting has a very important role in the decision-making process. There is a situation where the entity has the opportunity to purchase a particular component, which requires an analysis of the possible cost savings and the relevant cost (Table 9).

Table 9. Determining the relevant cost

	Elements	Product A	Product B	Product C	Total
1	Annual production	140	255	240	635
2	Variable unit cost	165	370	510	1045
2.1	Direct materials	60	140	190	390
2.2	Direct salaries	50	150	200	400
2.3	Variable indirect costs	55	80	120	255
3	Direct fixed costs	3850	7100	6255	17205
4	Indirect fixed costs				79950
5	Variable unit cost of production	165	370	510	
6	Variable purchase cost	250	375	400	
7	Variable cost difference (6 - 5)	85	5	-110	
8	Total difference on variable costs (1 * 7)	11900	1275	-26400	
9	Fixed costs saved by purchase	-4275	-6840	-5985	
10	The total difference (8 + 9)	7625	-5565	-32385	

Source: own processing using data from SC Gama

The purchase of products B and C will save a total of 37,950 um, but this will result in insufficient use of production capacity and labor, so there is another decision-making issue related to the efficient use of remaining resources available, because otherwise a purchase loss could be incurred instead of manufacturing.

There are situations in which resources are limited and the company must determine which components it will produce and which components it will buy so that the economy per unit of limited resources is as large as possible.

ERL = (Purchase price-variable cost of production) / Amount of limited resources used for each product

It is known that the company has 520 m2 of leather, the company having to decide how much of each product it will produce and how much it must buy. The detached calculations can be seen in Table 10.

Table 10. Calculation of the economy per unit of limited resources

No. crt.	ELEMENTS	Product A	Product B	Product C
1	Production (pairs)	140	255	240
2	Variable production cost (lei /pair)	165	370	510
3	Purchase price (lei /pair)	350	475	850
4	Consumption of materials per unit of product (m2 /pair)	0.6	1.5	2
5	ERL	308.33	70	170
6	Production order	1	3	2
7	The quantity of leather material available	520 m2		
8	The quantity produced	140	250	190
9	Resource consumed	84	60	380
10	The quantity purchased	0	5	50

Source: own processing using data from SC Gama

According to Table 10 it can be seen that the company under study has a limited amount of leather, which makes us reach the threshold of achieving maximum production capacity, being necessary only the purchase of 5 pairs of product B and 50 pairs of products C. Due to the use of a larger amount of resources for product C, the company decides to purchase the other necessary quantities.

The determination of margins is of particular importance in cost analysis. The differential profit and loss account aims to present the result with the highlighting of the margins for each stage of the production cycle. Based on the data mentioned in Table no. 11 we will present the differential Profit and Loss Account at SC Gama SRL in the Table no. 12.

Table 11. Situation of balances at SC Gama

Initial stock of raw materials	15.000
Final stock of raw materials	7.000
Initial stock of finished products	39.000
Final stock of finished products	15.000
Procurement of raw materials	145.000
Turnover	500.000
Variable supply costs	3.000
Variable production costs	3.500
Variable distribution costs	1.000
Fixed expenses	105.500

Source: data from SC Gama

Table 12. Differential profit and loss account

	Specification	Calculation	Absolute values	% T
I	**Turnover**		**500000**	**100%**
II	Variable acquisition cost	A+B	156000	31.20%
A	Consumption of raw materials	1+2-3	153000	30.60%
1	Procurement of raw materials		145000	29.00%
2	Initial stock of raw materials		15000	3.00%
3	Final stock of raw materials		7000	1.40%
B	Variable supply costs		3000	0.60%
III	**Margin on variable acquisition costs**	**I-II**	**344000**	**68.80%**
IV	Variable production costs	C+D	28500	5.70%
C	Variation of the stock of finished products		25000	5.00%
4	Initial stock of finished products		39000	7.80%
5	Final stock of finished products		15000	3.00%
D	Variable production costs		3500	0.70%
V	**Margin on variable production costs**	**III-IV**	**315500**	**63.10%**
VI	Variable distribution costs	E	1000	0.20%
E	Variable distribution expenses		1000	0.20%
VII	**Margin on variable distribution cost**	**V-VI**	**314500**	**62.90%**
VIII	Total variable costs	II+IV+VI	185500	37.10%
IX	**Margin on variable costs**	**I-VIII**	**314500**	**62.90%**
X	Fixed costs	F + G+ H	105500	21.10%

	Specification	Calculation	Absolute values	% T
F	Fixed indirect production costs		60000	12.00%
G	Distribution expenses		19500	3.90%
H	Administration expenses		26000	5.20%
XI	**Differential result**	**IX-X**	**209000**	**41.80%**

Source: own processing using data from SC Gama

According to the data in the Differentiated Profit and Loss Account, the highest share of margins is given at a value of 68.80% which corresponds to the Margin on variable acquisition costs, followed by the Margin on variable production costs as a percentage of 63.10%, having all the positive values that help to cover the identified fixed expenses.

Based on the differential profit and loss account, certain specific indicators relevant to making decisions related to the product portfolio of the company under study can be calculated. (Table 13).

Table 13. Calculation of indicators based on the differential income statement

INDICATOR	CALCULATION	Product A	Product B	Product C	Total
Unit cost	c = Cv/Q	385.71	301.96	470.83	384.25
Coverage contribution					
- at the product level	Cc = Ps - c	94.29	408.04	579.17	
- globally	Cc gl = Σ Q *(Pv-c)				256250.8
Turnover	CA = Σ (Q * Pv)	67000	181000	252000	500000
Result	R = Cc gl- Cf				252160.2564
Break even	Bev = Cf/Cc	346.02	99.44	55.77	
The quantity that must be sold to obtain a planned profit	Qpl = (Cf+ Target profit)/Cc	462.69	126.40	74.76	
Critical turnover	Tcr = Bev * Ps	166090.9	70601.67	58557.94	138315.9
Date of reaching the break-even point		**18.apr**	**23.mai**	**28.feb**	
Determining the number of months	x = (Tcr*12)/T	**15.78**	**4.680774**	**1.612244**	
Determining the number of days in the month	30 zile	18.02	22.68	28.98	
Coverage factor					
- on cost carriers	Fc = Cci/ Ti*100	19.70	57.49	55.16	
- globally	Fc = Cc gl/T *100				51.25

INDICATOR	CALCULATION	Product A	Product B	Product C	Total
Index sampling	Is = Cf/T * 100	48.69	22.42	12.82	21.10
Safety margin	SM = T - Tcr	-99090.9	110398.3	193442.1	361684.1
Safety margin rate	SMR = (T-Tcr)/T *100	-147.90	60.99	76.76	72.34
Volatility coefficient or operational leverage	Lo = Cc gl/R				1.23

Source: own processing using data from SC Gama

Based on the calculated indicators we can conclude that the company under study must sell at least 95 pairs of product A, 408 pairs of product B and 580 pairs of product C to cover expenses, without making a profit. Also, according to the Fc indicator of the total sales, 51.25% are needed to cover expenses and obtain a certain profit. The value of fixed expenses at the level of the entire activity represents 21.10% of the turnover. According to the safety margin rate, if the entity's sales decrease by 72.34%, the company reaches the critical T (Turnover) or reaches the break-even point.

Also, high quality accounting information is a valuable means of counteracting information asymmetry, and the quality of performance reporting is the fidelity of information provided by the financial reporting process, other features of these reports being highlighted by relevance, reliability, transparency, and clarity (Ferero, 2014, pp. 49-88).

6. CONCLUSIONS

Management accounting and costing is internal accounting designed to provide managers with the information they need to run a business. It is necessary to control the internal activity of the unit and first of all to control the production process.

As we can see from the analysis performed for SC Gama, managerial accounting is a necessary tool for managers to make decisions as favorable as possible to the entity. Through the multitude of procedures and methods for calculating costs, managerial accounting provides managers with valuable information in the decision-making process.

The accounting information system in general is not a perfect one, being a system that must continuously balance the information provided to the external environment that describes the company's performance and the internal one that requests information for control and decision making. Signs that the internal accounting system is not working optimally can be seen on the one hand by the dysfunctional behavior of managers who choose a wrong performance measurement system, and on the other hand it can be considered a signal to be taken into account the faulty operational decision-making system.

References

1) Alasdair, G. (2016). *Industry 4.0. The Industrial Internet of Things*. New York: Apress.
2) Atrill, P. and McLaney, E. (2014). *Management Accounting for Decision Makers*. Harlow: Prentice Hall.
3) Bâtcă-Dumitru, C. G., Calu, D. A. and Ponorîcă, A. G. (2018). *Contabilitate managerială - Ediția a II-a, revizuită*. Bucharest: CECCAR Publishing House.
4) Bhimani, A., Horngren, C. T., Datar, S. M. and Foster, G. (2008). *Management and cost accounting.* Harlow: Prentice Hall.
5) Căpușneanu, S., (2013). *Contabilitatea de gestiune. Instrument de evaluare a performanței.* Bucharest: Editura Universitară Publishing House.
6) Chandler D., A., (1977). *The Visible Hand: the Managerial Revolution in American Business.* Cambridge, MA: Belknap Press.
7) Cokins, G., Căpuşneanu, S. and Briciu, S. (2012). Schimbarea contabilității spre decizii bazate pe costuri. *Economie teoretică şi aplicată*, XIX(11/576), pp. 28-42.
8) Dyakova, O. V. (2020). Development of a methodology for sharing the enterprise total costs into the fixed and variable components in the cost-management tools' improvement. In: *IOP Conference Series: Materials Science and Engineering,* Bristol: IOP Publishing Ltd.
9) Dumitrana, M. and Caraiani, C. (2010). *Controlul de gestiune.* Bucharest: Editura Universitară Publishing House.
10) Edgeworth, F. Y. and Clark, J. M. (1925). Studies In the Economics of Overhead Costs. *The Economic Journal,* 35(138), pp. 245-250.
11) Fotoche, G. (2005). Costul și asigurarea avantajului concurențial al întreprinderii. *Buletin Științific anual,* 1(1), pp.135-137.
12) Gronwald, K. D. (2017). *Integrated Business Information Systems. A Holistic View of the Linked Business Process Chain ERP-SCM-CRM-BI-Big Data*. Berlin: Springer.
13) Ibarrondo-Dávila, M. P., Lopez-Alonso, M. and Rubio-Gámez, M. C. (2015). Managerial accounting for safety management. The case of a Spanish construction company. *Safety Science*, 79(11), pp. 116-125.
14) John, C. R., Manus, S., Roger, G. andSarvanan, D. (1995). A Path Analytic Model of a Theory of Quality Management Underlying the Deming Management Method: Preliminary Empirical Findings. *Decision Sciences,* 26(5), pp. 637-658.
15) Johnson, H. T. (1975). Management Accounting in an Early Integrated Industrial: E.I. duPont de Nemours Powder Company – 1903-1912. *Business History Review,* 49(2), pp. 184 – 204.
16) Johnson, T. (1925). Management accounting in an early multidivisional organization: General Motors in 1920. *Business History Review*, 52(1), pp. 490-517.
17) Kaplan, R. S. (1984). The Evolution of Management Accounting. *The Accounting Review,* 59(3), pp. 390-418.
18) Ferero, M. J. (2014). Consequences of financial reporting quality on corporate performance. Evidence at the international level. *Estudios de Economia*, 41(1), pp. 49-88.

19) Mihalciuc, C. (2019). Identification and Assessment of the Financial Risk within the Framework of Economic Entities. *European Journal of Accounting, Finance & Business,* 11(21), pp. 1-6.
20) Mihalciuc, C. and Pintescu, M. (2019). Cost calculation and Control – an Essential Tool for Determing Performance and Guiding the Decision – Making Process. *European Journal of Accounting, Finance & Business,* 10(20), pp. 1-6.
21) Mihalciuc, C. and Grosu, M. (2019). Instruments specific to the process of substantiating managerial decisions at the organization's level. *Balkans Journal of Emerging Trends in Social Science*, 2(1), pp. 194-209.
22) Mihalciuc, C., Grosu, V. and Musteata, A. (2018). Decisional model under uncertainity conditions. *The USV Annals of Economics and Public Administration*, 18(1/27), pp. 1-6.
23) Popkova, G., Ragulina, V. Y. and Bogoviz, V. A. (2019). *Studies in Systems, Decision and Control, Industry 4.0 - Industrial Revolution of the 21st Century*. Cham: Springer International Publishing.
24) Rikhardsson, P. (2005). *Accounting for Health and Safety costs: Review and comparison of selected methods*. [online] Available at: https://www.crrconference.org/Previous_conferences/downloads/pallrikhardsson.pdf [Accessed 21.04.2021].
25) Roman, L. W. and Maher, M. W. (2005). *Handbook of Cost Management*. New York; John Wikey & Sons Inc.
26) Swain, M. R., Albrecht, W. S., Stice, J. D. and Stice, E. K. (2004). *Management Accounting.* Cincinnati: South-Western College Publishing.
27) Van Eck, N. J. and Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), pp. 523–538. [online] Available at: https://doi.org/10.1007/s11192-009-0146-3 [Accessed 30.05.2021].
28) Vijay, R. K. and Keah, C. T. (2005). Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance. *Elsevier Omega,* 33(2), pp. 153-162.
29) Vivek, K. (2016). *Enhancing enterprise intelligence leveraging ERP, CRM, SCM, PLM, BPM, and BI, CRC*. New York: Auerbach Publications.
30) Womack, P. J. and Jones, T. D. (2007). *The Machine That Changed the World: The Story of Lean Production - Toyota's Secret Weapon in the Global Car Wars That Is Now Revolutionizing World Industry.* New York: Free Press.
31) Zimmerman, J. (2014). *Accounting for Decision Making.* New York: McGraw-Hill.

FOCUS OF THE NATIONAL PLAN FOR RECOVERY AND RESILIENCE (NPRR) ON DIGITALIZATION: FINANCIAL EFFORT AND EXPECTED RESULTS

VASILE NIȚĂ
Alexandru Ioan Cuza University of Iași
Iași, Romania
nita.vasea@gmail.com

Abstract
Today, digital transformation has become a key element of human life in all areas. Public administration has been competing with other systems to win specific competitive advantages due to globalization, pressure from citizens and digitalization.
According to Digital Economy and Society Index (DESI-2020), which measures digital competitiveness using five subcomponents, Romania ranks 26 out of 27 EU member states, mainly due to insufficient development of electronic public services and a limited range of such services.
Considering the recently discovered setbacks regarding NPRR, the following measures should be implemented: governmental cloud and interconnected digital systems in public administration, electronic signature and identity, promotion of ICT investments with high added value; Digitalization of education; Broadband and 5G.
This study discusses the importance of accelerating the digitalization measures, and the continuation of budget allocations for a wide range of purposes. To conduct the study, we have examined the most relevant articles in the field, the content of NPRR itself, the financial provisions included in the multiannual plan for the 2021-2027 period (CFM), as well as the reports published on the websites of important national, European, and international public institutions.
Key words: *recovery and resilience; public services; digitalization.*
JEL Classification: G18**;** Z18; Z19

1. INTRODUCTION

In the last decades the governments worldwide have been constantly investing in developing digitalization strategies for better public transparency and administrative efficacy. Globally, digital transformation has generated changes in all areas of human activity.

Today, digital transformation has become the most important and necessary element in almost all area of human life seeking growth, expansion, quality, and sustainability (Shinde *et al.*, 2014).

Due to globalization and pressure coming from citizens and the digitalization wave, public administration has been facing fierce competition trying to survive and win different competitive advantages.

Continuous growth in the degree of global connectivity between companies and clients has been a key trend of today's age. This interconnection has been sustained by the high use of online platforms and devices helping users communicate faster and easier.

The importance of accelerating digitalization measures, higher budget allocations by area is the main goal of sustainable development, being implemented through development policies by local public administration.

Local public administrations are responsible for the development policies especially because local development strategies should be designed and implemented in compliance with their specific features., forced public administrations accelerate the implementation of digitalization measures in the public sector to solve the problems of local communities, as well as increase their sustainability (Churin and Kyung-a, 2021).

The concept of digital governance or e-governance focuses on public sector innovation, while smart city emphasizes on the digitalization of cities so that they adopt such technology as artificial intelligence (AI), the internet of objects (IoT), cloud computing, big data and mobile applications to build technologically advanced cities (Hollands, 2008; Komninos, 2002).

Digital transformation is accelerated due to COVID-19 (2019 coronavirus disease) and sets a target for e-governance and the smart city underlining their role in governance, citizenship' participation, autonomy and platforms.

2. LITERATURE REVIEW

Digital transformation is accelerated due to COVID-19 (2019 coronavirus disease) and sets a target for e-governance and the smart city underlining their role in governance, citizenship' participation, autonomy and platforms.

Covid Pandemics – 19 has revived the role of digitalization in provision of online public services/applications, and in the implementation of innovative digitalization solutions, especially among the poorest and the most vulnerable groups (United Nations, 2020).

Since its appearance in the 70s (Reis *et al.*, 2018, pp. 411–421), the concept of digital transformation 1has gone through several interpretations from the perspective of different (Ferreira, Moreira and Seruca, 2017), as follows: a) an organizational strategy formulated and executed through the use of digital resources to create different value (Bharadwaj *et al.,* 2013); (b) the degree to which an organisation gets involved into any IT activity (Mithas, Tafti and Mitchell, 2013), being described through the use of new digital technology to enable significant improvement of business (Piccinini, Gregory and Kolbe, 2015); (c) use of new digital technology such as social networks, mobile devices, built-in devices improving business, for instance, client experience or new business models (Fitzgerald *et al.*, 2013) aimed to encourage performance and business security; (d) targeted digital transformation, on-going digitalization of development, business model, business idea generation or strategic or tactical methodology (Mazzone, 2014, pp. 233–256); (e) a part of organizational strategy that includes the creation of networks among such actors as companies and clients along the value added chain segments (Bowersox, Closs and Drayer, 2005; Bouée and Schaible, 2016); (f) deep and accelerated transformation of processes, activities, skills and models benefitting from changes and opportunities (Solis, 2021) based on such technologies as cloud, mobile and social networks, big data analysis.

To ensure successful transformation of digital transformation, public administrations should ensure they are aware of failures and risks they have been facing over a specific period. Due to this, local public administrations should identify the key factors influencing the acceleration of measures for the implementation of digitalization in the public sector (Morakanyane, Grace and O'Reilly, 2017): digital strategy, digital maturity, business model and used digital methodology.

Therefore, the impulse for the introduction of digitalization in governmental services and activities gained attention. Biller and Nabi reported that many international funding organizations and governments provided high funding to contribute to the acceleration of extended digitalisation of public services (Biller and Nabi, 2013).

Through the tools provided by the digital environment (Big Data Analytics, IoT, digital cloud) to both to managers, as well as other categories of users (department managers, experts), digital transformation encourages digital culture development, automation of manual tasks and data integration of the entire institution which leads to more efficient activity and cost reduction (Capușneanu *et al.*, 2021).

Innovative technological development outside the public sector change the expectations of clients related to the capacity of public administration to provide digital services of high value. Although the expectations are high, digital transformation is seen especially as a cultural change occurring inside an organisation, and the literature in the field failed to provide detail show this transformative change should be managed. Still, there are important articles looking into this matter.

3. RESEARCH METHODOLOGY AND RESULTS

This study is a detailed literature review which also considers the reports of renown international organizations. The quality of communication services is measured against most important elements of quality of these online services, namely, focus on the user, observation of user satisfaction and the correlation with the results.

An insight into global digital performance in Europe included the study of the progress in the EU member states in terms of digital competitiveness.

So, after the analysis of over 40 relevant indicators related to digital performance, the study found the most significant growth in the level of digitalization in Ireland, followed by the Netherlands, Malta and Spain.

4. DIGITALIZATION STRATEGIES IN THE EUROPEAN UNION

In the European Union, digitalization strategies have been implemented so that national public policies aligned to the general goals of the EU and be adapted to national realities and needs.

Main strategic documents regarding digitalization of the EU include EU Digital Single Market Strategy, EU E-government Action Plan 2016-20202, European Interoperability Strategy and EU Interoperability Framework (initially launched by the EU in 20103), as well as 2021-2027 Digital Europe Program (Romanian Government, 2021, pp. 80-87).

Acceleration of digitalization measures for public administration, reforms and technology investments, digital infrastructure and processes will increase global competitiveness globally and will also contribute to growth of resilience and innovation in the Union and to the decrease in its dependence through diversification of its main supply chains. Investment in digital technology should comply with the principles of interoperability, energetic efficiency and personal data protection supporting the participation of SMEs and start-ups and by promoting the use of open-source solutions.

5. INDICATORS ON DIGITAL PROGRESS OF MEMBER STATES

There is rich package of e-governance legislation in the EU, namely, regulations, and the legislative acts directly applied in Romania which create a legislative framework for the consolidation of digitalization at national level. To measure the evolution of e-governance by country, the digital economy and society index (DESI) provides one of the most relevant descriptions as it comprises almost 30 indicators relevant for digital performance of the EU by means of the following: connectivity, human capital, use of the Internet, digital technology integration, digital public services.

The digital economy and society index (DESI) is a composite index, resulted after an analysis of over 40 indices relevant for Europe's digital performance, which measures the evolution of the EU member states in five main areas (European Commission, 2020): public digital services, use of Internet services, connectivity, integration of digital technology, human capital. DESI measure progress of EU states to digital economy and society (Tudora, Gheorghe – Moisii and Tîrziu, 2020).

This COVID-19 Pandemic has shown how important are the digital assets for our economies, as well as the way in which networks, connectivity, data, AI and advanced computing, as well as basic and advanced digital skills support the economy enabling us to continue work, monitor the spread of the virus and accelerate the search for medication and vaccines. Romania took several digital measures to cope with the crisis generated by the COVID-19 pandemic. The Ministry of Health's application is used to centralize medical data referring to the situation generated by the SARS-CoV-2 virus. As for DESI indices, which are especially relevant for the economic recovery after the COVID-19 pandemic crisis, Romania is highly advanced in what regards very high capacity networks (VHCN), being ranked 14 in the EU its degree of readiness for the use of 5G networks. On the other hand, Romania has been lagging behind in indicators referring to digital competencies and shows a weak performance in the digitalization of companies and public services (European Commission, 2020).

5.1. Human Capital

DESI's human capital component comprises two sub-dimensions covering „Internet users' skills" and „advanced development skills". According to most recent data, Finland has the highest ranking in both sub-dimensions of human capital, being followed by Sweden, Estonia and the Netherlands in general performance. Italy, Romania and Bulgaria rank the lowest. Compared to last year, the highest growth in human capital were reported in Malta (+7 percentage points), Bulgaria (+5 percentage points) and Estonia (+4 percentage points). Romania ranks 27 out of 28 EU countries in human capital, namely, at least basic level of digital skills and software use. In the EU, out of 85% of the citizens, who had been using the Internet in 2019 before the COVID-19 crisis, only 58% had, at least. Basic digital skills. Digital skills vary from basic skills, enabling people to take part in digital society and to consume digital goods and services, up to advanced skills, allowing labour force to develop new digital goods and services (European Commission, 2020, p. 51).

Table 1. Human capital indicators in DESI

Human capital indicators in DESI	EU		ROMANIA	
	DESI 2018	DESI 2020	DESI 2018	DESI 2020
2a1 At least basic digital skills % individuals	**57%** 2017	**58%** 2019	**29%** 2017	**31%** 2019
2a2 Above basic digital skills % individuals	**31%** 2017	**33%** 2019	**10%** 2017	**10%** 2019
2a3 At least basic software skills % individuals	**60%** 2017	**61%** 2019	**32%** 2017	**35%** 2019
2b1 ICT specialists % total employment	**3.7%** 2016	**3.9%** 2018	**2.0%** 2016	**2.2%** 2018

Human capital indicators in DESI	EU		ROMANIA	
	DESI 2018	DESI 2020	DESI 2018	DESI 2020
2b2 Female ICT specialists % female employment	**1.3%** 2016	**1.4%** 2018	**1.2%** 2016	**1.2%** 2018
2b3 ICT graduates % graduates	**3.5** 2015	**3.6** 2017	**5.4%** 2015	**5.6%** 2017

Source: DESI 2020 (European Commission, 2020, p. 51)

Table 2. Human capital indicators in DESI, 2020 Romania compared to the EU

Human capital indicators in DESI	EU	ROMANIA	
	score	position	score
DESI 2018	**47.6**	**28**	**31.5**
DESI 2019	**47.9**	**27**	**31.1**
DESI 2020	**49.3**	**27**	**33.2**

Source: DESI 2020 (European Commission, 2020)

5.2. Use of Internet Services

Although 85% of the citizens had already been using the Internet in 2019, before the COVID-19 pandemic, the current crisis could have a positive impact on ongoing growth of Internet users and online interactions. In such member states as Denmark, Sweden and the Netherlands, most population (95%) uses the Internet, at least, once a day. Compared to last year, significant growth has been noted in Ireland (+8 percentage points), Spain and Hungary (+5 percentage points). Still, over half of the population in some countries do not use the Internet regularly (33% of Bulgarians and 28% of Romanians). Romania still shows one of the lowest levels in the EU in the use of the Internet services matching the lowest level of basic digital skills overall in the country. Nevertheless, there are two online activities, for which, Romania ranks the sixth in the EU. These include use of social networks (82%, compared to the EU average of 65%) and video calls (67%; EU average: 60%). In contrast, the use of online banking services (11%), online purchases (29%), reading news (55%), as well as consumption of music, video materials and online games (63%) are the lowest among the EU member states, especially due to lack of trust in digital technology (European Commission, 2020, p. 57).

Table 3. Use of internet services indicators in DESI

Use of internet services indicators in DESI	EU		ROMANIA	
	DESI 2018	DESI 2020	DESI 2018	DESI 2020
3a1 People who have never used the internet % individuals	**13%** 2017	**9%** 2019	**27%** 2017	**18%** 2019
3a2 Internet users % individuals	**81%** 2017	**85%** 2019	**61%** 2017	**72%** 2019
3b1 News % internet users	**72%** 2017	**72%** 2019	**69%** 2017	**55%** **2019**
3b2 Music, videos and games % internet users	**78%** 2016	**81%** 2018	**67%** 2016	**63%** 2018
3b3 Video on demand % internet users	**21%** 2016	**31%** 2018	**6%** 2016	**10%** 2018
3b4 Video calls % internet users	**46%** 2017	**60%** 2019	**53%** 2017	**67%** 2019
3b5 Social networks % internet users	**65%** 2017	**65%** 2019	**82%** 2017	**82%** 2019
3b6 Doing an online course % internet users	**9%** 2017	**11%** 2019	**5%** 2017	**4%** 2019
3c1 Banking % internet users	**61%** 2017	**66%** 2019	**11%** 2017	**11%** 2019
3c2 Shopping % internet users	**68%** 2017	**71%** 2019	**23%** 2017	**29%** 2019
3c3 Selling online % internet users	**22%** 2017	**23%** 2019	**4%** 2017	**3%** 2019

Source: DESI 2020 (European Commission, 2020, p. 57)

Table 4. Use of internet services indicators in DESI, 2020 Romania compared to the EU

Use of internet services	EU	ROMANIA	
	score	position	score
DESI 2018	**51.8**	**28**	**31.5**
DESI 2019	**55.0**	**28**	**35.0**
DESI 2020	**58.0**	**28**	**35.9**

Source: DESI 2020 (European Commission, 2020)

5.3. Digital public services

Digital technologies create new opportunities in the public sector. The use of the entire potential of these technologies is a big challenge for public administration. Efficient e-governance could offer a great variety of benefits, including more efficiency and savings for both public administration and companies. This dimension measures both demand and supply for digital public services, and open-source data. Most performant are Estonia, Denmark, Finland and Latvia, all with a score over 85. On the other hand, Romania, Greece, Croatia, Slovakia and Hungary have a score below 60, way below the EU average of 72.2. Romania ranked the last among EU countries, and the eighth in the number of e-governance service users, with 82% of Internet users compared to the EU average of 67% (European Commission, 2020, p. 63).

Table 5. Digital public services indicators in DESI

Digital public services indicators in DESI	EU		ROMANIA	
	DESI 2018	DESI 2020	DESI 2018	DESI 2020
5a1 e-Government users % internet users needing to submit forms	**58%** **2017**	**67%** **2019**	**80%** 2017	**82%** 2019
5a2 Pre-filled forms Score (0 to 100)	**53%** 2017	**59%** 2019	**12%** 2017	**10%** 2019
5a3 Online service completion Score (0 to 100)	**85%** 2017	**90%** 2019	**62%** 2017	**70%** 2019
5a4 Digital public services for businesses Score (0 to 100) - including domestic and cross-border	**83%** 2017	**89%** 2019	**51%** 2017	**53%** 2019
5a5 Open data % of maximum score	**NA**	**66%** 2019	**NA**	**57%** 2019

Source: DESI 2020 (European Commission, 2020, p. 74)

Table 6. Digital public services indicators in DESI, 2020 Romania compared to the EU

Digital public services indicators in DESI	EU	ROMANIA	
	score	position	score
DESI 2018	61.8	28	41.1
DESI 2019	67.0	28	45.0
DESI 2020	72.0	28	**48.4**

Source: DESI 2020 (European Commission, 2020)

5.4. Digital technology integration

This dimension measures the digitalization of companies and e-shops. Among the most performant are Ireland, Finland, Belgium and Sweden, with scores over 55 points (out of 100). At the other end, Bulgaria, Romania, Hungary, Poland, Greece and Latvia lag behind with scores below 35 points, significantly below the EU average of 43 points. Romania ranks 27 among the EU states in digital technology integration by business, much less than the EU average (European Commission, 2020, p. 74).

Table 7. Integration of digital technologies indicators in DESI

Integration of digital technologies indicators in DESI	EU		ROMANIA	
	DESI 2018	DESI 2020	DESI 2018	DESI 2020
4a1 Electronic information sharing % enterprises	**34%** 2017	**34%** **2019**	**22%** 2017	**23%** 2019
4a2 Social media % enterprises	**21%** 2017	**25%** **2019**	**9%** 2017	**8%** 2019
4a3 Big data % enterprises	**10%** 2016	**12%** 2018	**11%** 2016	**11%** 2018
4a4 Cloud % enterprises	**NA**	**18%** 2018	**6%** 2017	**7%** 2018
4b1 SMEs selling online % SMEs	**17%** 2017	**18%** 2019	**8%** 2017	**11%** 2019
4b2 e-Commerce turnover % SME turnover	**10%** 2017	**11%** 2019	**5%** 2017	**5%** 2019
4b3 Selling online cross-border % SMEs	**8%** 2017	**8%** 2019	**2%** 2017	**6%** 2019

Source: DESI 2020 (European Commission, 2020, p. 63)

Table 8. Integration of digital technologies indicators in DESI, 2020 Romania compared to the EU

Integration of digital technologies indicators in DESI	EU	ROMANIA	
	score	position	score
DESI 2018	37.8	27	20.8
DESI 2019	39.8	27	21.3
DESI 2020	41.4	27	**24.9**

Source: DESI 2020 (European Commission, 2020)

6. NATIONAL PLAN FOR RECOVERY AND RESILIENCE

Acceleration in the public sector implementation of digitalization strategies is the main concern of governments in the EU aimed to improve quality, efficiency and control of interactions between public administration and the citizens and private organizations in the process of provision of various public services o (Romanian Government, 2021).

The outbreak of COVID-19 pandemic at the beginning of 2020 has changed the economic, social and budgetary perspectives worldwide, due to the need of an urgent and targeted response both at EU’s and national level to cope with the economic and social consequences, and the asymmetric effects on the member states. For this purpose, the European Union, established a recovery and resilience mechanism („the mechanism”) to provide significant financial support to provide significant and efficient financial support aimed to accelerate the implementation of sustainable reforms and connected public investments in the member states. To respond to the recommendations of the European Commission regarding the launch and growth of economic activity, promotion of green transition and digital transformation, Romania should introduce flexible, reusable and interoperable instruments. The problem is not due to the fact that Romania had not initiated the digitalization of public administration but is due to doing it in a non-integrated way. (Romanian Government, 2021, p. 19).

7. IMPLICATIONS OF NPRR FOR THE REDUCTION OF WORKLOAD IN PUBLIC ADMINISTRATION AND FOR DIGITALIZATION OF EDUCATION

a) *creation of governmental cloud, electronic signature and identity* will provide the necessary infrastructure for public institutions that have to collect and store data of the beneficiaries of public services. Also, it will protect databases and will create the national interoperability infrastructure, also outside Romania, facilitating the exchange of information and good practices. Also, NPRR promotes ITC investments with high added value. According to the EU Regulation 241/2021, the foreseen investments in *creation of the governmental cloud,* *electronic signature and identity* contributes in the amount of 100% to digital transition through the provision of public digital services, governmental applications, European system of digital identity, e-health services and applications, digitalization of health and judicial systems. The initial negotiation budget for Romania for these investments amounts to 2.112 million Euro (Romanian Government, 2021, pp. 81-84).

b) *Digitalization of Education*

COVID-19 pandemic has shown the urgent need to digitalize the educational system efficiently and inclusively. According to the EU Regulation 241/2021, proposed investments in educational digitalization contribute 100% to digital transition by providing services and applications targeted at digital skills and digital inclusion. He initial negotiation budget for Romania allocated to the digitalization of education is of 780 million Euro (Romanian Government, 2021, pp.85-86).

c) *Broadband and 5 G*

Broad band Internet coverage is above the EU average but lags behind other 10 European countries, there is room for improvement. 5G infrastructure is still in its initial phase, being available just in a limited number of cities. The negotiation initial budget for Romania amounting to 650 million Euro (Romanian Government, 2021, p. 87).

8. CONCLUSIONS

In the context of modern society and global technological change, growth in the degree of use of online public communication services, application of information technology and communication to solve the problems the society is dealing with has become a *sine qua non condition*. Quality of online services is targeted at users, user satisfaction and results. It should be noted that external context and environment, in which the service is provided, will have an impact on the success of online public services initiatives.

Therefore, it could be observed that Romania has had weak results in almost all components of the Economy and Society Index, according to the 202 DESI report, including the digital public services, although the legislative policies and initiatives of Romania and the European Union encouraged growth in the degree of use online public communication services and promoted growth in the access to desired online public services.

ACKNOWLEDGEMENT

"This work was co-funded by the European Social Fund, through Operational Programme Human Capital 2014-2020, project number POCU/380/6/13/123623, project title «PhD Students and Postdoctoral Researchers Prepared for the Labour Market!»".

References

1) Bharadwaj, A., El Sawy, O. A., Pavlou, P. A. and Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quaterly,* 37(2), pp. 471–482.
2) Biller, D. and Nabi, I. (2013). *Investing in Infrastructure: Harnessing Its Potential for Growth in Sri Lanka. Directions in Development–Infrastructure*. Washington, DC: World Bank Publication.
3) Bouée, C. E. and Schaible, S. (2016). *The Digital Transformation of Industry*. Munich: Roland Berger Strategy Consulting.
4) Bowersox, D. J., Closs, D. J. and Drayer, R.W. (2005). The digital transformation: Technology and beyond. *Supply Chain Management Review,* 9(1), pp. 22–29.
5) Capușneanu, S., Mates, D., Turkes, M. C., Barbu, C. M., Staras, A.-I., Topor, D. I., Stoenică, L. and Fulöp, M. T. (2021). The Impact of Force Factors on the Benefits of Digital Transformation in Romania. *Applied Science,* 11(5), 2365. https://doi.org/10.3390/app11052365.
6) European Commission, (2020). *Digital Economy and Society Index (DESI) - Thematic chapters.* [online] Available at: https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2020 [Accessed 12.04.2021].
7) Ferreira, M. J., Moreira, F. and Seruca, I. (2017). Organizational training within Digital Transformation: The ToOW model. In: *Proceedings of the 19th International Conference on Enterprise Information Systems ICEIS 2017,* pp. 526–532. Porto: SCITEPRESS.
8) Fitzgerald, M., Kruschwitz, N., Bonnet, D. and Welch, M. (2013). *Embracing digital technology. MIT Sloan Management Review Research Report.* [online] Available at: https://sloanreview.mit.edu/projects/embracing-digital-technology/ [Accessed 23.04.2021].
9) Romanian Government, (2021). *Planul Național de Redresare și Reziliență (PNRR),* [online] Available at: https://mfe.gov.ro/pnrr/ [Accessed 23.04.2021].
10) Hollands, R. G. (2008). Will the real smart city please stand up? Intelligent, progressive or entrepreneurial? *CITY,* 12(3), pp. 303–320.
11) Churin, K. and Kyung-a, K. (2021). The Institutional Change from E-Government toward Smarter City; Comparative Analysis between Royal Borough of Greenwich, UK, and Seongdong-gu, South Korea. *Journal of Open Innovation Technology Market and Complexity,* 7(1), pp. 42-48.
12) Komninos, N. (2002). *Intelligent Cities: Innovation, Knowledge Systems and Digital Spaces.* London, UK: Spon Press.
13) Mazzone, D. M. (2014). *Digital or Death: Digital Transformation—The Only Choice for Business to Survive Smash and Conquer,* 1st ed. Mississauga: Smashbox Consulting Inc.
14) Mithas, S., Tafti, A. and Mitchell, W. (2012). How a firm's competitive environment and digital strategic posture influence digital business strategy. *MIS Quaterly*, 37(2), pp. 511–536.
15) Morakanyane, R., Grace, A. and O'Reilly, P. (2017). Conceptualizing digital transformation in business organizations: A systematic review of literature. In:

Proceedings of the 30th Bled e-Conference Digital Transformation–From Connecting Things to Transforming Our Lives. [online] Available at: https://www.researchgate.net/publication/321805933_Conceptualizing_Digital_Transformation_in_Business_Organizations_A_Systematic_Review_of_Literature [Accessed 16.04.2021].

16) Piccinini, E., Gregory, R. W. and Kolbe, L. M. (2015). Changes in the producer-consumer relationship–towards digital transformation. In: *Wirtschaftsinformatik Proceedings 2015* (pp. 1634–1648). [online] Available at: https://core.ac.uk/download/pdf/301364734.pdf [Accessed 16.04.2021].
17) Reis, J. C. G., Amorim, M. P., Melao, N. F. R. and Matos, P. S. L. (2018). *Digital transformation: A literature review and guidelines for future research.* Cham: Springer International Publishing.
18) Solis, B. (2021). *The Definition of Digital Transformation*. [online] Available at: https://www.briansolis.com/2017/01/definition-of-digital-transformation/ [Accessed 16.04.2021].
19) Shinde, S., Kimbahune, S., Singh, D., Deshpande, V., Piplani, D. and Karthik, S. (2014). Digital Transformation in Livestock Services. *Proceedings of the India HCI 2014, Conference on Human Computer Interaction,* pp. 148–153. New York: ACM.
20) Tudora, E., Gheorghe - Moisii, M. and Tîrziu, E. (2020). Analiza evoluției indicatorilor DESI și SNADR ai societății informaționale. *Romanian Journal of Information Technology and Automatic Control,* 30(2), pp. 121-134.
21) United Nations, (2020). *Digital Government in the Decade of Action for Sustainable Development - e-Government Survey*, [online] Available at: https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020 [Accessed 16.04.2021].

GREENHOUSE GAS EMISSION CERTIFICATES - FINANCIAL INSTRUMENTS FOR IMPLEMENTING ENVIRONMENTAL POLICIES IN ROMANIA

CRISTINA ONEȚ
Lucian Blaga University of Sibiu
Sibiu, Romania
cristina.onet@ulbsibiu.ro

Abstract
This paper aims to present and analyse how Romania succeeds in implementing a flexible and innovative European legislation on green finance, designed to support one of the most challenging environmental objectives, namely, reducing greenhouse gas emissions, until their complete elimination.
The EU Emissions Trading System (EU ETS) covers emissions from around 11000 power plants and factories, as well as from air transport within and between participating countries.
Romania has transposed the European legislation in this matter by adopting GEO no. 115/2011 regarding institutional framework and Governmental authorization, through Ministry of Public Finance, to auction greenhouse gas emission certificates attributed to Romania at the level of the European Union and GD no. 780/2006 regarding the establishment of the greenhouse gas emission allowance trading scheme, with subsequent amendments.
Romania has opted for the solution that the amounts resulting from these financial operations be distributed to the treasury accounts of certain public authorities with competences in promoting environmental policies, following that they initiate and financially support various projects to reduce pollution by greenhouse gas emissions.
Keywords: *greenhouse; gas emissions; certificates; carbon credit.*
JEL Classification: Q52

1. INTRODUCTION. EUROPEEAN PERSPECTIVE

The European Green Pact is an action plan and a new growth policy based on ambitious climate and environmental goals. Europe aims to significantly reduce its greenhouse gas emissions by 2030 and to become climate neutral by 2050, according to Art. 3 (1) of Regulation EU 2018/842 of the European Parliament and Decision of 30 May 2018 on mandatory annual greenhouse gas emission reductions by Member States for the period 2021-2030 (EU Parliament and Council, 2018). With a view to contributing to climate action to meet commitments under the Paris Agreement, "Emissions "greenhouse gas" means emissions of carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluorides (NF3) and sulphur hexafluorides (SF6) expressed in tonnes of CO2 equivalent, as they have been established under Regulation EU No. 525/2013, for which a so-called "Fair Transition Mechanism" has been of at least EUR 100 billion, per Thursday 2021-2027, for the most affected regions.

At European level, Commission Regulation (EC) no. 1.031/2010 of 12 November 2010 on the timing, administration, and other aspects of the auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowances trading within the Community (as subsequently amended) was adopted (EU Parliament and Council, 2003). The latter creates a greenhouse gas emission allowance trading system to promote the reduction of greenhouse gas emissions in a cost-effective way. It also regulates the acceleration of the rate of reduction of greenhouse gas emissions, to contribute to the levels of reduction considered scientifically necessary to avoid dangerous climate change. The reductions envisaged have been amplified from a level of 20%, then reaching the 30% target approved by the European Council in March 2007, so that at present the target is set at 40% and has been already reached by Germany.

Directive 2003/87/EC requires Member States to put up for auction emission allowances that are not allocated free of charge (EU Parliament and Council, 2003). They may not resort to other methods of allocation, nor may they retain or cancel them. For this purpose, a common auction platform has been set up that facilitates the widest possible participation throughout the Union and therefore best reduces the risk of participants undermining the auctions, using them as a tool for money laundering, terrorist financing, criminal activities, or market abuse.

1.1. Introductory considerations on the greenhouse gas emission allowance trading system

The EU Emission Trading System (EU-ETS) launched 16 years ago is the largest market for carbon emissions certificates in the world, covering almost 45% of carbon emissions in the European Union. The system is meant to limit carbon emissions from the continent by requiring "polluters" to buy expensive certificates to operate and produce energy.

Directive 87/2003/EC of the European Parliament and of the Council establishes a system for the trading of greenhouse gas emission allowances (GHGs) to promote their reduction in a cost profitable and efficient manner (EU Parliament and Council, 2003). It also regulates the acceleration of the rate of reduction of greenhouse gas emissions, to contribute to getting the levels of reduction considered scientifically necessary to avoid dangerous climate change. The considered reductions were in line with the existing emission levels in 1990 and have been steadily increasing. Thus, from a level of emission reductions of 20%, the target of 30% approved by the European Council in March 2007 was reached. Under EU climate and energy policies, GHG emission reductions were established at least 40% by 2030.

Thus, in 2019, all Member States have definitively prepared their integrated national energy and climate plans. They show that, although Member States have made significant progress regarding their directions towards achieving the current 2030 climate and energy targets, additional efforts are still needed. It is foreseen that the total EU-27 emissions are reduced with 30% by 2030, according to the aggregate national GHG projections. Considering the implementation of the planned measures, the overall reduction of EU GHGs is estimated at 41%, thus reaching the current target concerning the reducing emissions with at least 40%.

EU ETS covers the emissions from around 11000 power plants and factories, as well as from air transport within and between participating countries. The total revenue generated by the Member States, the United Kingdom and the EEA countries from auctions held between 2012 and 30 June 2020 exceeded 57 billion EUR, more than half of this amount being generated in 2018 and 2019. After getting doubled in 2018, the revenues from auctioning for certificates on the European carbon market slightly increased in 2019. Thus, in 2019, the total revenues exceeded 14.1 billion EUR and approximately 77% of revenues were used or are planned to be used for climate and energy purposes, thus supporting the green transition.

To increase the rate of emission reduction, the total number of emission allowances will decrease by an annual rate of 2.2% from 2021. This increase implies a steady reduction of around 48 million allowances per year, in line with 43% reduction in GHG emissions from the sectors covered by the ETS until 2030. Additionally, the Market Stability Reserve (MSR), as a mechanism instituted to reduce the carbon market imbalance, will be significantly strengthened. Between 2019 and 2023, the rate at which certificates will be introduced in the MSR will double, reaching 24%, to restore more quickly the balance of emissions certificates on the carbon market. To further improve the functioning of EU ETS starting with 2023, the number of emission allowances held in the MSR will be limited to the volume of allowances auctioned in the previous year. Certificates already held certificates, exceeding this volume, will lose their validity, unless it is otherwise decided in the first revision of the MSR in 2021. Member States may voluntarily cancel, from the total volume of auctioned certificates, those in their possession the case of the closure of electricity generation capacity because of additional national measures. If power plants are shut down without the Member State concerned opting for the cancellation of the certificates, the MSR rules will reflect upon the effect by increasing the number of certificates in reserve or by subsequently issuing certificates in reserve (EU Commission, 2020).

The European Commission has proposed the creation of a "fair transition mechanism", including a fund for a fair transition. The mechanism for a fair transition is supposed to focus on the regions and sectors most affected by the transition due to their dependence on fossil fuels, including coal, peat, and oil shale, and on industrial processes with very high greenhouse gas emissions. Huge sums of money are and will be given to ensure a fair transition, a sustainable and equitable development for regions dependent on the burning of fossil fuels, but also for those with high emissions. Funding is allocated to decouple regions from the economically unsustainable development model that generates environmental and health problems. This financing mechanism was created as a form of financial support necessary for companies and regional and local communities severely affected by the free trading of greenhouse gas emission certificates (carbon certificates) whose financing is achieved by taxing the biggest polluters in the European space.

Other low-carbon support mechanisms have also been designed to help the industrial and energy sectors respond the challenges of innovation and investments in the transition to a low-carbon economy in the 4th phase. Two new funds are included:

- The Innovation Fund will support, on a competitive basis, the promotion of innovative technologies and revolutionary innovation in the sectors covered by the EU ETS, including the renewable energy sources, carbon capture and use (CCU) and energy storage.

The available resources will correspond to the market value of at least 450 million certificates at the time of their auctioning. They will be supplemented by any unpaid budget from the NER 300 program and a maximum of 50 million certificates that can be available to the fund if they are not required for the buffer mechanism for free allocation, as shown before. The projects in all Member States, including small projects, will be eligible for support from the Innovation Fund. The activity regarding the establishment of the Innovation Fund started with a public consultation at the beginning of 2018. On 6.01.2021, the Commission announced the first series of direct capital investments, made through the new European Innovation Council Fund (EIC). A total of 42 start-ups and highly innovative small and medium-sized enterprises (SMEs) will benefit from equity financing of around 178 million EUR to develop and expand radical innovations in areas including health, circular economy, and advanced production technology.

- The Modernization Fund will support investment in modernizing the energy sector and wider energy systems, stimulating energy efficiency and renewable systems energy production, and facilitating a fair transition in the carbon-dependent regions of the top ten lowest-income Member States (Bulgaria, Czech Republic, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia).

Power plants that use solid fossil fuels will not be eligible for support. An exception was made for efficient and sustainable district heating in Member States with a GDP per capita at market prices below 30% of the EU average in 2013 (Bulgaria and Romania). This exception only applies to the 30% share of the funds available to these Member States. The Fund will be funded by certificates corresponding to 2% of the total quantity in phase 4, which are auctioned in accordance with the rules and modalities established for the auctions taking place on the common auction platform. Depending on the extent to which the auctioning quota is reduced for the purpose of the buffer mechanism for free allocation, the number of certificates available for the fund may increase by up to 0.5% of the total amount of certificates. The activity regarding the establishment of the Modernization Fund started with preliminary workshops organized in the beneficiary Member States since September 2018.

Additionally, the optional transitional free allocation under Article 10c of the EU ETS Directive will still to be available for the modernization of the energy sectors in the same Member States with lower revenues eligible for the Modernization Fund. Projects with a value of more than EUR 12.5 million will be selected through an auction, and investments below this value will have to be selected based on some clear and transparent criteria, the results of the selection being subject to public consultation.

1.2. Greenhouse gas emission certificates (carbon certificates) and their operation in the European Union

Art. 10 (line 1) of Directive 2003/87/EC requires Member States to auction emission certificates included in Chapter III of that Directive which are not allocated free of charge (EU Parliament and Council, 2003). They may not resort to other allocation methods, nor may they withhold or cancel emission certificates that are not allocated free of charge instead of auctioning them. To achieve this goal, it was considered that a common auction infrastructure is especially important to ensure equitable access for small and medium-sized enterprises included in the trading scheme if the emissions certificates, as well as to facilitate the access of low-emission operators. Indeed, the cost of getting acquainted, registering, and taking part in several auction platforms would be very burdensome for these companies. Therefore, a common auction platform allows the widest possible participation across the Union and, therefore, best reduces the risk that participants undermine auctions, using them as a tool for money laundering, terrorist financing, criminal activities, or market abuse.

For reasons of simplicity and accessibility, the auctioned certificates should be available for delivery within a maximum of five days since trading. Such short delivery terms limit any potential negative impact on competition between auction platforms and trading places on emission certificates secondary market. In addition, short delivery times encourage large-scale participation, thus reducing the risk of market abuse and ensuring better accessibility for small and medium-sized enterprises included in the system and for low-emission operators. Instead of offering forwards and futures contracts in auctions, the market must offer optimal solutions to respond to the demand for derivatives of emission certificates.

It is necessary to offer the option to choose between spot contracts with a maturity of two days and futures contracts with a maturity of five days during the process of designating the auction platform, to evaluate the optimal solution for the best type of auctioned product that is to be selected. While the two-day spot contracts are not a financial instrument under Union financial market legislation, the five-day futures contracts are financial instruments for the purpose of regulating the European Union financial market.

Also, for the sake of simplicity, fairness and efficiency of costs and the need to reduce the risk of market abuse, auctions must be conducted in a single round format, sealed offers and uniform prices. In addition, auctions with equal offers must be settled through a random process, as this creates uncertainty for bidders, making hidden agreements on the price they auction unsustainable. The closing price of the auction can be expected to approach the predominant price on the secondary market, while an auction closing price significantly below the predominant price on the secondary market is likely to signal a shortcoming in the auction. If such a closing offer price is allowed to prevail, carbon price distortions, carbon market disruptions could occur, and it would not be ensured that bidders pay a fair value for emission certificates. Therefore, in such a situation, the auction must be cancelled.

The conduct of auctions, the establishment and management of the auction calendar and various other tasks related to auctions, such as the maintenance of an up-to-date website, accessible throughout the Union, require joint action of the Member States and the Commission. This need comes from the size of the trading system of emission certificates all over the Union, from the overall policy objectives of the revision of Directive 2003/87/EC and from the Commission's direct responsibility for the detailed implementation of some features of the trading scheme of emission certificates, which have a direct impact on the auction planning and on the auctions' monitoring (EU Parliament and Council, 2003).

Auction platforms must be purchased through an open, transparent, and competitive selection procedure, unless the designation of the auction platform by a Member State not participating in the joint action is not subject to acquisition rules under national law and of the Acquisition Union. In designing the auction platforms and the compensation or discount system connected to them, the solutions offered by the candidates must be considered to ensure cost-efficiency, full, fair and equal access to the auction for small and medium-sized enterprises and the access of low-emission operators, as well as robust auction monitoring, inclusively by providing an out-of-court dispute resolution mechanism.

Member States should therefore designate an auction platform for the auctioning of certificates because of a joint acquisition procedure between the Commission and the Member States taking part in the joint action, according to Art. 26 (1) of Regulation (EU) No. 1095/2010 (EU Commission, 2010). The designated auction platform shall provide the following services to Member States:

a) access to auctions, including the provision and maintenance of the necessary electronic interfaces via the Internet and the website;

b) auctions conducting;

c) management of the auction calendar;

d) announcement and notification of the results of an auction;

e) provision or provision insurance of the compensation or settlement system necessary for:

- the administration of the payments made by the winning bidders or their successors in rights and the distribution of the revenues from the auctions to the adjudicator;
- delivery of the auctioned certificates to the winning bidders or their successors in rights;
- management of guarantees, including any determination of the margins granted by the successful adjudicator or bidders;

f) the provision to the auction monitoring authority of any information regarding the conduct of the auctions;

g) the pursuit of the auctions, the notification of suspicions of money laundering, terrorism financing, criminal activities or market abuse, the administration of any necessary remedial measures or sanctions (EU Commission, 2010).

An auction platform conducts auctions separately through its own auction window, open at regular intervals. The auction window opens and closes on the same trading day but must remain open for at least two hours. For all potential bidders to have access to all auctions, the auction windows of any two or more auction platforms cannot overlap. Moreover, an interval of at least two hours between two consecutive tender windows must be ensured. Each auction platform must set the dates and times of the auctions considering the legal holidays affecting the international financial markets and any other relevant events or pertinent circumstances that could affect the proper conduct of the auctions, requiring changes.

An auction platform may change the schedule of any auction window only in exceptional circumstances and only after consultation the auction monitoring authority, notifying all persons who may be affected. The volume of emission certificates to be auctioned on the designated auction platform shall be equally distributed among the auctions held each year, with the only exception that the volume auctioned in August of each year shall be half the volume auctioned in the other months of the year.

All auction processes in a Member State are supervised and monitored by the same auction authority. Its functions shall be to monitor the conduct of each auction and to report on the proper implementation of the auctions conducted in the previous month, both to the Commission, on behalf of the Member States, and to the Member States concerned, mainly regarding the fair and open access, the transparency, price formation and technical or operational aspects.

Therefore, the auction monitoring authority provides the Member States and the Commission with an annual general report containing the above-mentioned issues, both for each individual and collective auction, for each auction platform, as well as any breaches of the contract for the designation of a platform. auction. The report shall also contain any evidence of anti-competitive behaviour, market abuse, money laundering, terrorist financing or criminal activities, as well as the impact of the auctions on the position of the auction platforms on the secondary market, if any. Last but not least, the report will also contain information on the number, type and status of complaints under Article 59 (line 4) or Article 64 (line 1) of the Regulation, as well as on the complaints against a auction platform and addressed to the competent authorities supervising that auction platform, the competent courts or administrative bodies, but also any recommendations considered appropriate for the improvement of any of the auction processes.

2. ROMANIA'S EXPERIENCE

2.1. National regulations

The Romanian legislative framework for executing the Regulation (EU) no. 1,031/2010 of the Commission (EU Commission, 2010) concerning the timing, administration and other aspects of the auction for greenhouse gas emission certificates issued based on Directive 87/2003/EC of the European Parliament and of the Council establishing a system of share allowances of greenhouse gas emissions within the Community, with subsequent amendments (EU Parliament and Council, 2003), is determined by GEO no. 115/2011 regarding the establishment of the institutional framework and the authorization of the Government (Romanian Govern, 2011), through the Ministry of Finance, to put up for auction the greenhouse gas emission certificates assigned to Romania at the level of the European Union, with subsequent amendments, as well as Govern Decision no. 780/2006 on establishing the trading scheme for greenhouse gas emission certificates, with subsequent amendments (Romanian Govern, 2006).

For a better understanding of the notions used in this matter, a series of fundamental concepts are defined:

- greenhouse gas emission certificate - the title conferring the right to emit one tone of equivalent carbon dioxide in a defined period and which is transferable under the conditions provided by law (art. 3 letter b),
- emissions - the release into the atmosphere of greenhouse gases generated by sources belonging to an installation or the release by an aircraft of the gases specified in the respective activity (art. 3 letter c),
- greenhouse gases - the gases mentioned in annex no. 2 of GD no. 780/2006 on establishing the scheme for the marketing of greenhouse gas

emission certificates, with subsequent amendments, and other gaseous components of the atmosphere (Romanian Govern, 2006), both natural and anthropogenic, which absorb and re-emit infrared radiation (art. 3 letter d),

- certified emission reduction (CER) - a unit for the reduction of greenhouse gas emissions, equal to one tone of equivalent carbon dioxide, from a project activity carried out in accordance with art. 12 of the Kyoto Protocol and with the decisions regarding art. 12 adopted by the conferences of the Parties to the United Nations Framework Convention on Climate Change or the Kyoto Protocol (Art. 3, letter k),
- emission reduction unit (ERU) - a unit for the reduction of greenhouse gas emissions, equal to one tone of equivalent carbon dioxide, derived from a project activity carried out in accordance with art. 6 of the Kyoto Protocol and with the decisions regarding art. 6 adopted by the conferences of the Parties to the United Nations Framework Convention on Climate Change or the Kyoto Protocol (Art. 3, letter n),
- one tone of equivalent carbon dioxide - one metric tonne of carbon dioxide or any other quantity greenhouse gas with a global warming potential equivalent to one metric tonne of carbon dioxide (Art. 3, letter m).

2.2. Romanian authorities with competences in the field of carbon certificates management in Romania

The Romanian authorities responsible for the application of Regulation (EU) no. 1,031/2010 of the European Commission (EU Commission, 2010), as well as Directive 2003/87/EC of the European Parliament and of the Council (EU Parliament and Council, 2003), are: the Ministry of Finance, the Ministry of Environment, the National Agency for Public Acquisition, the National Energy Regulatory Authority, the Financial Supervisory Authority and National Office of Prevention and Combating Money Laundering. The authorities responsible for using the revenues obtained from the auction of greenhouse gas emission certificates, in order to finance projects in established areas, are: the Ministry of Transport, Infrastructure and Communications, the Ministry of Environment, the Environment Fund Administration and the Ministry of Energy.

Thus, the Ministry of Finance is the authority designated as adjudicator until the establishment/designation of a national authority in the field of climate change to ensure, at national level, the implementation of the plan for greenhouse gas emissions certificates, as well as the competent authority for signing, on behalf of Romania, the contract with the common auction platform, designated according to art. 26 of the Regulation, including with any compensation and settlement system related to it, according to art. 3 of GEO no. 115/201 on establishing the institutional framework and authorizing the Government, through the Ministry of

Finance, to auction the greenhouse effect certificates attributed to Romania by European Union (Romanian Govern, 2011).

The National Energy Regulatory Authority is the competent authority for regulating the authorization of non-financial intermediaries (according to Article 18 (line 2) of Regulation (EU) No 1.031/2010 of the European Commission), to ensure their free access to the auction process of greenhouse gas emission certificates on the common platform, as well as for monitoring this activity, art. 4 line 1 of GEO no. 115/201 on establishing the institutional framework and authorizing the Government, through the Ministry of Finance, to put up for auction the greenhouse gas emission certificates assigned to Romania (Romanian Govern, 2011).

The National Public Acquisition Agency has been designated as the competent authority to represent Romania in the joint competitive acquisition procedure of the European Commission and the Member States for the designation of the common platform and the designation of the auction monitoring authority (Art. 125c of Regulation (EC, Euratom) No. 2342/2002 of 23 December 2002 laying down detailed rules for the application of the Regulation (EC, Euratom) No 1605/2002 on the Financial Regulation applicable to the general budget of the European Communities), and to sign, on behalf of Romania, joint procurement contracts for the common platform and for the auction monitoring authority, Art. 5 of GEO no. 115/201 establishing the institutional framework and authorizing the Government, through the Ministry of Finance, to auction emission certificates of greenhouse gases attributed to Romania at European Union level (Romanian Govern, 2011).

The Financial Supervisory Authority is the competent authority for:

a) the issuance of the authorizations provided in art. 18 line (3) of the Regulation, without prejudice to the provisions of art. 18 of GEO no. 99/2006 on credit institutions and capital adequacy, approved, with amendments and completions, through Law no. 227/2007, with subsequent amendments and completions.

b) providing assistance to the auction monitoring authority for the fulfilment of its functions, actively cooperating with it in its area of competence, if one of the regulated markets in Romania is designated a common platform based on the European common procurement agreement for the designation of the common platform (Art. 53 (3) and (5) of Regulation (EU) No 1.031/2010);

c) the reception of the notifications by any person from the common platform on situations of market abuse occurring on or through the systems of that common platform, on suspicions of market abuse, admitted to auction, or by any person on whose behalf acts the person admitted to auction in the auctions, if one of the regulated markets in Romania is designated a common platform based on the European common acquisition agreement for the designation of the common platform, Art. 6 of GEO no. 115/201 concerning the establishment of the institutional framework and the authorization of the Government, through the Ministry of Finance, to auction the greenhouse gas emission certificates assigned to Romania (Romanian Govern, 2011).

The National Office for the Prevention and Tackling of Money Laundering has been designated as the competent authority for receiving from the common platform notifications regarding money laundering and terrorist financing that take place on or through the systems of the common platform, if one of the regulated markets in Romania is designated common platform on the basis of the European common acquisition agreement (Art. 55 paragraph (2) of Regulation (EU) no. 201 for the establishment of the institutional framework and authorization of the Government, through the Ministry of Finance, to put up for auction the greenhouse gas emission certificates assigned to Romania at the level of the European Union, with subsequent amendments).

Not least, the Ministry of Energy is the Romanian authority responsible for the use of revenues obtained from the auctioning of greenhouse gas emission certificates, to implement financial measures in favour of the sectors or the subsectors that are exposed to significant risks of carbon relocation due to the significant indirect costs that are supported because of the costs of greenhouse gas emissions transferred to the price of electricity, according to art. 2 of GEO no. 115/201 on establishing the institutional framework and authorizing the Government, through the Ministry of Finance, to auction the greenhouse gas emission certificates assigned to Romania at the European Union level, with subsequent amendments (Romanian Govern, 2011).

2.3. The mechanism of operation of greenhouse gas emission certificates in Romania

In order to be able to put into operation industrial installations and any other installations of those considered by the special legislation (in which take place one or more of the activities provided in Annex No. 1 of GD No. 780/2006 on the establishment of the trading of greenhouse gas emission certificates, with subsequent amendments) that generate emissions, the operator must hold the authorization for greenhouse gas emissions issued by the National Agency for Environmental Protection, according to the provisions of the Order of the Minister of Environment no. 3420/2012 for the approval of the procedure for issuing the authorization regarding greenhouse gas emissions for the period 2013-2020, with subsequent amendments and completions (Romanian Govern, 2006).

For the activities provided in annex no. 1 of GD no. 780/2006 on the establishment of the trading plan for greenhouse gas emission certificates that will take place also after January 1, 2021, the operator must hold the authorization for greenhouse gas emissions issued by the National Agency for Environmental Protection, for a period of 10 years, since 1 January 2021.

To obtain the authorization for greenhouse gas emissions, the operator must submit to the National Agency for Environmental Protection to obtain the authorization together with the documentation in which are described:

a) the installation and the activities carried out, including the technology used;
b) raw materials and auxiliary materials whose use is likely to lead to greenhouse gas emissions provided in Annex no. 2 of GD no. 780/2006;
c) the sources of greenhouse gas emissions of the installations carrying out one or more of the activities provided in annex no. 1 of GD no. 780/2006;
d) the plan for monitoring and reporting greenhouse gas emissions.

The authorization for greenhouse gas emissions must contain (according to art. 8 of GD no. 780/2006 regarding the establishment of the scheme for the marketing of greenhouse gas emission certificates):

a) name and address of the operator / name and registered office.
b) a description of the activities and greenhouse gas emissions generated by the installation.
c) the requirements for monitoring and reporting of greenhouse gas emissions corresponding to the monitoring and reporting plan for greenhouse gas emissions approved by the National Agency for Environmental Protection.
d) the obligation to return, until 30 April of the year following the year for which the monitoring of greenhouse gas emissions was done, a number of greenhouse gas emission certificates equal to the total number of emissions from that installation, verified in accordance with Regulation (EU) No 600/2012 of 21 June 2012 regarding the verification of greenhouse gas emission reports and the data reports tonne-kilometer, as well as the accreditation of verifiers in accordance with Directive 2003/87 / EC of the European Parliament and of the Council, other than greenhouse gas emission certificates allocated to aircraft operators (EU Parliament and Council, 2003).

Starting with the third period of the trading scheme for greenhouse gas emission certificates allocated free of charge, respectively 2013-2020, the number of greenhouse gas emission certificates allocated annually will decrease linearly, starting from the middle of the period 2008-2012. That amount was reduced by a linear factor of 1.74% in relation to the average annual amount of greenhouse gas emission certificates allocated in accordance with the National Allocation Plan for greenhouse gas emission certificates for the periods 2007 and 2008-2012, approved by Government Decision no. 60/2008.

From 2021 onwards, the number of greenhouse gas emission certificates allocated annually free of charge will be reduced by a linear factor of 2,2% in relation to the average annual amount of greenhouse gas emission certificates allocated (Art. 10 of GD No. 780/2006 on establishing the scheme for trading greenhouse gas emission certificates, as subsequently amended).

To this end, the central public authority for environmental protection has published and transmitted to the European Commission, by 30 September 2011, the list of installations and the number of greenhouse gas emission certificates allocated free of charge to each installation. The installations which are not on the list do not receive greenhouse gas emission certificates allocated free of charge.

Information on the number of greenhouse gas emission allowances allocated free of charge to installations covered by the greenhouse gas emission certificate trading scheme for the period 2013-2020 has been published on the National Environmental Protection Agency website as well as on the website of the central public authority for environmental protection. The information in the annual reports on greenhouse gas emissions can also be consulted there.

The National Environmental Protection Agency shall ensure that all the decisions and reports on the quantity and allocation of certificates and on the monitoring, the reporting and verification of emissions are immediately made public, by publishing them on the institution's website to ensure non-discriminatory access to this information. At the same time, the central public authority for environmental protection publishes and transmits to the European Commission on 30 September 2024 the list of installations and the number of greenhouse gas emission certificates allocated free of charge to each installation, for the period of 5 years starting on January 1, 2026, and the lists for each subsequent 5-year period shall be submitted thereafter every 5 years. Each list includes information concerning the activity of production, the gas and heat transfers, the production of electric energy and the subinstallation level emissions of the 5 calendar years preceding the transmission of the list. Allocations are granted only to installations for which such information is provided (Art. 10.1 of GD no. 780/2006 on establishing the scheme for greenhouse gas emission certificates trading).

2.4. Management of funds resulting from the auctioning of carbon certificates on specialized markets

To reduce greenhouse gas emissions in an economically efficient way, the Ministry of Finance was entrusted with the management of the separate account opened with the National Bank of Romania in its name, which collects, in euros, the amounts obtained from the auctioning of greenhouse gas emission certificates.

Since April 30, 2013, all greenhouse gas emission certificates that were not allocated free of charge were put up for auction. The amount obtained following the auctioning of the unused emission certificates from the reserve for joint implementation projects for Romania from 2008-2012 within the scheme for the trading of greenhouse gas emission certificates is carried out by the department of speciality from the Ministry of Finance through the separate account opened at the

National Bank of Romania, on the basis of Art. 8 of GEO no. 115/2011 on establishing the institutional framework and authorizing the Government, through the Ministry of Finance, to auction gas emission certificates attributed to Romania at the level of the European Union (Romanian Govern, 2011). The equivalent value in Romanian currency-ROL of these amounts is the income of the Environmental Fund and is used by the Administration of the Environmental Fund, to finance the projects provided by law. Thus, according to art. II, line (2) of GD no. 204/2013 (Romanian Govern, 2013), the funds obtained from auctions are used to finance projects aimed at reducing greenhouse gas emissions, as follows:

a) funding the research and development, as well as demonstration projects in the field of emission reductions and adaptation to the effects of climate change, including participation in various initiatives within the strategic plan in the field of energy technology and European technology platforms;
b) the development of clean technologies and the development of other technologies that contribute to the transition towards a low carbon economy and to increase energy efficiency;
c) forest seizure;
d) the capture and geological storage of environmentally safe CO (2), in particular the one from power plants producing solid fossil fuels and a number of industrial sectors and subsectors, including in third countries;
e) encouraging the transition to forms of public transport with reduced greenhouse gas emissions;
f) financing research and development in the field of energy efficiency and clean technologies in the sectors covered by this decision;
g) measures regarding the increase of energy efficiency and those regarding the thermal insulation of dwellings or the financial support granted for solving the social aspects regarding the low and medium income households;
h) covering the administrative expenses related to the management of the greenhouse gas emission certificates trading scheme.

According to art. 10 paragraph (1) of GEO no. 115/2011 on establishing the institutional framework and authorizing the Government, through the Ministry of Finance, to auction the greenhouse gas emission certificates assigned to Romania at the level of the European Union (Romanian Govern, 2011), the destination of the amounts obtained after the auction through the common platform of emission certificates of greenhouse gases attributed to Romania, is as follows:

a) 29% of the gross amount is transferred by the account manager to the state budget, in a separate account, within 5 working days from the date of foreign exchange;

b) 50% of the gross amount is raised to the Environment Fund, in order to finance the projects provided by the existing European legislation in this field, art. 10 line (3) of Directive 2003/87/EC, with subsequent amendments and completions (EU Parliament and Council, 2003);
c) 15% of the gross amount is made available to the Ministry of Energy, in order to implement financial measures in favor of sectors or subsectors that are exposed to significant risks of carbon leakage due to significant indirect costs that are actually supported as a result of the costs of greenhouse gas emissions transferred to the price of electricity, provided that such financial measures comply with state aid rules;
d) 6% of the gross amount is made income to the Ministry of Energy, for the financing of the greenhouse gas reduction projects established by the Ministry of Energy.

The equivalent value in lei of the amounts obtained following the auctioning through the common platform of greenhouse gas emission certificates for aircraft operators, is distributed as follows:

a) 70% of the gross amount is transferred by the account manager to the Ministry of Transport;
b) 30% of the gross amount is made income to the Environmental Fund.

The financing of the projects is carried out by the Administration of the Environment Fund within the funds approved for this purpose in the revenue and expenditure budget of the Environment Fund, according to the list of priority project categories, established annually by the central public authority for environmental protection. This list is approved by the order of the Minister of the Central Public Authority for Environmental Protection and underlies the substantiation of commitment credits and budget credits related to projects. The beneficiaries of these projects may be legal persons of public or private law, natural persons, and authorized natural persons. The Advisory Committee of the Environment Fund Administration approves, by decision, the projects, the total value of each project, as well as its beneficiary, according to Art. 12 lines (1) - (5) of GEO no. 115/2011 on establishing the institutional framework and authorizing the Government, through the Ministry of Finance, to put up for auction the certificate up for auction the greenhouse gas emissions certificates attributed to Romania at the level of the European Union (Romanian Govern, 2011).

2.5. Romania's experience regarding the application of financial systems created at European level for reducing greenhouse gas emissions

The Ministry of Energy, both through the Integrated National Plan in the field of Energy and Climate Change (PNIESC), and through the Decarbonization Plan of the Oltenia Energy Complex, establishes a medium-term strategy regarding Romania's transition to a green economy (Energynomics, 2020). According to PNIESC projections for the national electricity mix of 2030, lignite-based electricity production will have a share of about 15% of the total electricity market, which was a justification for assuming a more ambitious target, of 18-20% at the CEO level, for 2030 (Romanian Ministry of Energy, 2020).

With a total installed capacity of 3,570 MW, Oltenia Energy Complex (CEO) had in 2019 a share of 22% of the Romanian electricity market. Through the two cogeneration groups in Craiova, the CEO annually produces about 700,000 Gcal of thermal energy, which provides heating for approximately 200,000 inhabitants of Craiova. Lignite extraction at the nine CEO mining sites in Gorj and Mehedinți counties totalled about 20 million tons (mt) in 2019, falling to about 13.5 mt in 2020.

As a result of the massive financial losses registered by the CEO in 2018 and 2019, amid the significant increase in the cost of CO emissions certificates, the European Commission approved in February 2020 the granting by the Romanian Government of a loan to the company worth 251 million euros, for a period of six months. Unable, predictably, to repay the borrowed funds, the company opted to submit to the European Commission a Restructuring Plan approved by the Romanian Government, including a decarbonization investment plan, meant to ensure the financial viability of the CEO until 2026. According to CEO data, the costs of purchasing carbon certificates were 41% of turnover in 2018 and 45% in 2019 (Energynomics, 2020).

The CEO's decarbonisation plan estimates a reduction in company-specific CO emissions from 0.82 tCO / MWh in 2020 to 0.74 tCO / MWh in 2025 and 0.51 tCO / MWh starting with 2026. Nevertheless, at the aggregate level, the CEO would, according to his own data, emit higher annual amounts of greenhouse gases in 2030 than in 2020, which makes the very notion of "decarbonization plan" questionable (Energynomics, 2020).

At the same time, the CEO decarbonization plan for the period 2021-2026, part of the above-mentioned Restructuring Plan, involves investments in eight photovoltaic parks on closed slag and ash depots (Energynomics, 2020), respectively on indoor and outdoor dumps, with a total capacity of 725 MW, rehabilitation and modernization of the micro-hydropower plant with installed capacity of 10 MW from Turceni, as well as the construction of two power plants based on natural gas, with capacities of 475 MW (Turceni) and 850 MW (Ișalnița).

Indeed, the total annual emissions of CEO indicated in the Plan will increase between 2020 and 2030 from 7 Mt CO / year in 2020 to about 9 Mt CO / year in 2030, with a maximum of 10.7 Mt CO / year 2 2 2 in 2024. Throughout the period 2021-2030, the CEO will be responsible for a total emission of approximately 92 Mt CO. The total emissions amount to 95.5 Mt CO, if the emissions of the two groups from Craiova are also considered, which the CEO intends to transfer to the ownership of the municipality of Craiova in 2023. Calculated at an average annual price of 40 euros / tone of carbon emissions certificates (EUA), the CEO cost of CO emissions in the period 2021-2030 would be 3.68 billion euros, according to its own emissions projection (respectively 3.82 billion euros, if the emissions of cogeneration units from Craiova are included in the calculation).

The anticipated evolution of electricity production is one of lignite-based electricity production increase from 8.5 TWh in 2020 to 12 TWh in 2024 and will subsequently decrease to a constant level of 7.2 TWh between 2026 and 2030. The decrease in emissions from lignite-based electricity production is compensated by emissions from new natural gas-based units, which will become operational from 2026. Electricity produced from lignite will continue to be a major part of electric energy sold by the CEO also after 2026 (about 41% of the total), while renewable energy produced by photovoltaic panels will be only 6% of the total, in 2030.

The financial construction of the CEO Decarbonization Plan is based on the intention of the company and the Government of Romania to access the Fund for Modernization (Energynomics, 2020), based on Article 10 (d) of Directive 2018/410/EU, amendment of the ETS Directive 2003/87/EU (EU Parliament and Council, 2003).

According to Art. 10 (d) of the revised EU ETS Directive (2018), for the period 2021-2030, a fund shall be established to support investments proposed by beneficiary Member States, for the modernization of energy systems and the improvement of energy efficiency in Member States with a GDP per capita at market prices of less than 60% of the Union average in 2013, hereinafter referred to as the "modernization fund". The same paragraph states that “Support investments must be in line with the objectives of this Directive as well as with the objectives of the Union's climate and energy policy framework for 2030 and with the long-term objectives set out in the Paris Agreement. No support from the Fund for the modernization of other energy production facilities using solid fossil fuels is granted, except for efficient and sustainable district heating plants in Member States with a GDP per capita at market prices below 30% of the Union average in 2013, i.e. Romania and Bulgaria.

Therefore, as one can see, Romania chooses its own complicated solutions that could exclude it from being eligible to benefit from the financial support mechanisms granted by the EU to implement the greenhouse emissions trading scheme, materialized in carbon certificates (Greenpeace European Unit, 2021).

3. INSTEAD OF CONCLUSIONS, LOOKING TO THE FUTURE

More and more institutional investors have recently entered the European emissions market amid clear EU climate neutrality plans, which has caused concern among European officials, as there has been a significant increase in the price at which carbon certificates are traded. If this increase goes on, it will be reflected in higher prices for electricity produced from polluting sources (especially coal) and thus higher energy prices for European industrial companies, prices that affect the economic competitiveness of the Union. Because the companies from Australia, Asia and the Americas do not pay carbon taxes, European producers will be disadvantaged.

To counteract this, the European Union will have to act towards reforming its market for carbon certificates. The aim would be to limit the influence of speculators who push up prices and jeopardize the efficiency of the system. The revision of the system should give an answer to this matter, also, but needs to determine a continuation of the route to be taken by the EU towards the goal of achieving climate neutrality until 2050.

The European Commission is working on new plans that will align the market with the emission reduction step since 2030. This reform is likely to increase the supply of CO2 certificates for the 12,000 companies in the system. Among them will still be found the Oltenia Energy Complex (CEO), the largest producer of coal-based energy in Romania and without which the national energy system can collapse in times of economic stress, in general, or in case of energy crisis.

References

1) Energynomics, (2020). *The Decarbonization Plan of the Oltenia Energy Complex*. [online] Available at: https://www.energynomics.ro/planul-de-decarbonare-a-complexului-energetic-oltenia-costa-7-mld-lei/ [Accessed 13.04.2021].
2) EU Commission, (2010). *Regulation (EU) no. 1,031/2010 of the Commission from 12 November 2010 concerning the timing, administration, and other aspects of the auctioning the greenhouse gas emission certificates*. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32010R1031 [Accessed 03.03.2021].
3) EU Commission, (2020). *Report from the Commission to the European Parliament, Council, European Economic and Social Committee and Committee of the Regions Towards a Climate Neutral Europe by 2050*. [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0777 [Accessed 03.03.2021].
4) EU Parliament and EU Council, (2003). *Directive 2003/87/EC of the European Parliament and of the Council establishing a system for the marketing of greenhouse gas emission allowances in the Community and amending the Council Directive 96/61/EC.* [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32003L0087 [Accessed 13.04.2021].
5) EU Parliament and EU Council, (2018). *Regulation (EU) 2018/842 of the European Parliament and of the Council from 30 May 2018 on the mandatory annual reduction of greenhouse gas emissions by Member States in the period 2021-2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013.* [online] Available at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:32018R0842 [Accessed 20.04.2021].
6) Greenpeace European Unit, (2021). *Greenpeace's comments on State Aid SA.59974 (2021/C) - Romania Restructuring of Complexul Energetic Oltenia SA*. [online] Available at: https://www.greenpeace.org/static/planet4-romania-stateless/2021/04/20210419-Submission-in-State-aid-investigation-SA-59974.pdf

[Accessed 03.03.2021].
7) Romanian Govern, (2006). *Government Decision no. 780/2006 concerning the establisment of the trading scheme for greenhouse gas emission certificates, with subsequent amendments.* [online] Available at: http://legislatie.just.ro/Public/DetaliiDocument/72971 [Accessed 20.05.2021].
8) Romanian Govern, (2011). *Government Emergency Ordinance no. 115/2011 concerning the establishment of the institutional framework and authorization of the Government, through the Ministry of Finance, to auction the greenhouse gas emission certificates assigned to Romania at the level of the European Union.* [online] Available at: http://legislatie.just.ro/Public/DetaliiDocument/134109 [Accessed 10.05.2021].
9) Romanian Govern, (2013). *Government Decision no. 204/2013 for the amendment and completion of Government Decision no. 780/2006*. [online] Available at: http://legislatie.just.ro/Public/DetaliiDocument/147480 [Accessed 13.04.2021].
10) Romanian Ministry of Energy, (2020). *The Integrated National Plan in the field of Energy and Climate Change (PNIESC).* [online] Available at: https://ec.europa.eu/energy/sites/default/files/documents/ro_final_necp_main_ro.pdf [Accessed 03.03.2021].

A SAMPLE OF MENTALITY IN TAX RETRAINING

SEPTIMIU IOAN PUŢ
Babeş-Bolyai University
Cluj-Napoca, Romania
septimiuput@law.ubbcluj.ro

Abstract: *The requalification of the transactions or operations covered by the fiscal inspection must be done with the careful observation of the positive tax and non-tax legislation. Exceeding the common or special normative limits places the fiscal requalification and the administrative act generated by it in the annulable area of "anti-abuse". At the same time, the fiscal body must pay more attention to the fiscal fact from which it starts and to which the whole mechanism of recalibration of fiscal obligations returns, but also to the relationship between the subjective element and its transposition in an objective plan. The solution of reconsidering the fiscal reality must be motivated and substantiated in order to ensure a subsequent judicial control.*
Key-notes: *profit tax; tax requalification; prescription; dividends.*
JEL Classification: K34

1. INTRODUCTION TO THE SPECIFICITY OF THE TOPIC

The requalification of the transactions or operations verified in the fiscal inspections represents an exclusive anti-abuse prerogative of the fiscal body. According to the provisions of art. 11 para. (1) C.fisc (Law no. 227/2015): "When determining the amount of a tax, charge or compulsory social security contribution, the tax authorities may disregard a transaction which has no economic purpose, adjusting its tax effects, or may reclassify the form of a transaction/activity for to reflect the economic content of the transaction/activity".

The theory of abuse of law is the major instrument of control over the conformity of the exercise of rights with their function. It is the result of the abandonment of the absolutism of rights and the assertion of their relativity, under the influence of social doctrines, the law and rights having above all a social function (Bergel, 2012, p. 290).

Regarding the anti-abuse rules, between an artificial formalism and an economic formalism, the freedom of assessment that the tax authority has in the tax law relations is a seemingly unlimited one. In other words, the fiscal body can reclassify any transaction, operation, activity carried out by individuals or legal entities to bring it to the area of its economic desirability. The prerogative of requalification is far from absolute, being limited both by the tax rule and by the factual reality deciphered on the subjective-objective or subjectivized-objectified binomial.

Aware of the normative back-up conferred by the provisions of art. 11 para. (1) C.fisc., and driven by the need to confirm the tax function on each occasion and regardless of the factual specifics, the tax authority often enters the so-called area of "abuse anti-abuse" that the tax administration carries out in its activity and which we separate from the “abuse of the anti-abuse norms” (Bufan, 2016, pp. 341-344) that mark the tyranny of the norms and only consecutively the tyranny of the facts.

Starting from this normative reality, we arrive at a common factual state, apparently without special valences. A substantive tax inspection started at the end of 2020 on a limited liability company from which, recently, sums of money were withdrawn or transferred from bank accounts to justify the existence of debts to trading partners, but which did not they were covered in supporting documents. Therefore, the amounts withdrawn from the cashier or withdrawn from the account by the managing partner were reclassified as dividends distributed to him.

The fiscal inspectors established as calculation basis the gross amount of 483,692 lei existing in the balance on 01.01.2015. Thus, although according to the provisions of art. 67 para. 1 V.C.fisc. "The deadline for transferring the tax is until the 25th of the month following the month in which the payment is made". (…) And according to the accounting data the balance from 01.01.2015 was related to the previous years, and not to 2015, the tax inspectors induced the idea that not the amount of 30,000 lei related to 2015 should be taxed with 16%, but the gross amount in balance at end of 2014, respectively 483,692 lei.

The cardinal question, beyond the differentiation of tax treatment given by the reduction of the rate from 16% to 5% in the taxation of dividends according to N.C.fisc., is related to the amounts that can be brought in the field of attraction of the tax inspection, in other words, how far can the tax inspection go temporarily as a projection of the amounts actually targeted? Can amounts that appear formally-accounting at the beginning of the tax inspection, related to previous tax years and considered as a tax base in the tax inspection, be reactivated?

2. WHAT ARE, HOW SHOULD BE INTERPRETED, HOW SHOULD THE TAX RULES REGARDING THE PRESCRIPTION OF THE RIGHT TO CARRY OUT THE TAX INSPECTION BE APPLIED?

From a fiscal perspective, the extinctive prescription is defined as the extinction of the fiscal right, respectively of the fiscal claim of any kind, due to its non-capitalization within the prescription term established by law (Costaş 2016, p. 254). From the perspective of common law, it was rightly stated that "the statute of limitations is one of the most remarkable legal institutions of positive civil law, being established for reasons of public order, respectively to ensure the security and stability of civil legal relations” (Nicolae, 2018, p. 737).

In many tax inspections, invoking the prescription of the right to carry out the tax inspection for one year or, rarely, several, is the taxpayer's lifeline. This is because despite the legal rules governing this matter and the interpretation of the HCCJ, the opinions of taxpayers and the tax authorities remain divergent. As there are divergences on other issues such as: the issue of nullity of the administrative-fiscal act, violation of the right to defense in the administrative procedure, the effects of non-communication or imperfect communication of the tax inspection notice, etc.

Somewhat paradoxically, the norms of the fiscal procedure code, old or new, like an iceberg, only partially discover the legal valences, the rest being immersed, and will be discovered only through a careful exploration. In this context, the legal interpretation is decisive. [1]

In order to apply the methods of legal interpretation, it is necessary to review the legal provisions applicable to determine the tax obligations related to 2015, respectively to establish the starting point of the expiry of the limitation period. Thus, from a procedural point of view, we summarize the applicable legislation in question by referring to the provisions of V.C.proc.fisc:

> “Art. 24. - Settlement of tax claims. Tax claims shall be extinguished by collection, set-off, enforcement, exemption, cancellation, prescription and other means provided by law. (…)
>
> Art. 91. - The object, the term and the moment from which the prescription term of the right to establish the fiscal obligations begins to run.
>
> (1) The right of the fiscal body to establish fiscal obligations shall expire within 5 years, unless the law provides otherwise.
>
> (2) The limitation period of the right provided in par. (1) begins to run from January 1 of the year following the year in which the tax claim was born according to art. 23, unless the law provides otherwise.
>
> (3) The right to establish fiscal obligations shall expire within 10 years if they result from the commission of an act provided by the criminal law.
>
> (4) The term provided in par. (3) runs from the date of committing the deed which constitutes an offense sanctioned as such by a final court decision."

Observing the provisions of art. 24 C.fisc., we find that the prescription is a way of removing the fiscal responsibility, and not a way of extinguishing the primary subjective right, affecting only the material right to action.

From a substantial point of view, some provisions of Law no. 571/2003 on the Fiscal Code with subsequent amendments and completions:

> “Art. 17. - Tax rates. The profit tax rate that is applied on the taxable profit is 16%, with the exceptions provided in art. 38. "
>
> Article 34. - Declaration and payment of corporate income tax (1) The declaration and payment of corporate income tax, with the exceptions provided by this article, shall be made quarterly, until the 25th of the first month following the end of quarters I-III. The finalization and payment of the profit tax afferent to the respective fiscal year is carried out until the term for submitting the declaration regarding the profit tax provided in art. 35. (…)

Art. 36: Declaration, withholding and payment of the dividend tax. (1) A Romanian legal person that distributes/pays dividends to a Romanian legal person has the obligation to withhold, declare and pay the withholding tax on dividends to the state budget, as provided in this article.
(2) The dividend tax is established by applying a tax rate of 16% on the gross dividend distributed / paid to a Romanian legal entity.
(3) The dividend tax shall be declared and paid to the state budget until the 25th of the month following the month in which the dividend is distributed / paid. If the distributed dividends have not been paid by the end of the year in which the annual financial statements were approved, the related dividend tax shall be paid by January 25 of the following year".

The problem is how do we calculate the limitation period, respectively the time from which it runs?

Referring to the positive legislation of 2015, the limitation period of the right of the tax authority to establish and determine the tax liability due is 5 years and begins to run from January 1 of the year following the year in which the tax base was established generated the tax claim.

The provisions of art. 23 and art. 91 para. (1) and (2) of Government Ordinance no. 92/2003 republished and those of art. 16, 19, 34 and 35 of Law no. 571/2003 do not refer to the moment of declaring, calculating, establishing or finalizing the tax base of the tax claim and the correlative fiscal obligation, but refer to the moment of generating the tax base.

A tax cannot be declared in the absence of its tax base, as a mandatory reporting to something. The systematic interpretation of the applicable legal provisions leads to the conclusion that the taxable base related to the profit tax and the one related to the dividend tax, from the same fiscal register, are constantly constituted during each month of the fiscal year in question, being only finally calculated and declared recapitulative.

In order to establish the moment from which the fiscal prescription begins to run, the law does not refer to the final calculation or recapitulative declaration of the tax base, but to the moment of its establishment, which is distinct and prior to the final calculation.

As shown in the explanatory memorandum of Decision no. 21/2020 of the HCCJ, the moment of establishing the tax base and the birth of the tax claim, to which the beginning of the limitation period is linked, does not coincide with the moment of their establishment, calculation or declaration, to which the prescription of the right to establish the tax claim is not linked, but the prescription of the right to obtain its forced execution, so that, in the case of the profit tax, the tax base is constituted in the year of the taxable profit, not in the following year, in which the taxpayer can submit to the fiscal body the fiscal declaration on establishing/calculating taxable profit and related profit tax.

Valuing this thesis, the ICCJ established with legal force by Decision no. 21/2020 of the HCCJ that: “In the interpretation and application of the provisions of art. 91 para. (1) and (2), corroborated with those of art. 23 of the Government Ordinance no. 92/2003 on the Fiscal Procedure Code, republished, with subsequent amendments and completions, the 5-year limitation period of the fiscal body's right to establish fiscal obligations representing profit tax and their accessories runs from January 1 of the following year the fiscal year in which the taxable profit was realized from which results the profit tax due by the taxpayer”.

Applying this interpretation to the analyzed premise, we note that regarding the year 2015 for the dividend tax, the extinctive prescription of the right of the fiscal body to perform a fiscal inspection intervened. In the tax decision and in the tax inspection report that supports it, we start from a wrong premise. Although the amounts alleged to be used for personal purposes and qualified as dividends amount to 30,000 lei in 2015, according to the annexes of the tax inspection report, the tax inspectors establish as a basis for calculation the gross amount of 483,692 lei, existing in the balance on 01.01.2015. Thus, although according to the provisions of art. 67 para. 1 V. C.fisc. "The deadline for transferring the tax is until the 25th of the month following the month in which the payment is made". (…) And according to the accounting data the balance from 01.01.2015 was related to the years 2003-2014, and not to 2015, the tax inspectors induce the idea that not the amount of 30,000 lei should be taxed with 16%, but the gross amount in the balance at the end of 2014, meaning 483,692 lei.

The premised amount from which the reasoning of the fiscal body starts was not used in 2015, being used, successively in time, in the period 2003-2014, on a factual chart given by the withdrawal and use of some amounts. The reasoning of the tax inspectors is paradoxical, on the one hand it is established that the amount was withdrawn on 01.01.2015, on the other hand it is shown that the amount related to 2015 is 30,000 lei. However, this should have been the concern of tax inspectors in supporting and motivating tax reclassification - full clarification of the factual elements by a simple and realistic means - timely placement of withdrawals and application of special rules on dividends.

In the event of a reclassification of transactions, the tax authority is obliged to present, in detail, the factual reasons on the basis of which it reclassified the form of a transaction, specifying: what is the economic content of the initial transaction with the facts in which it should materialize, it is the economic content of the transaction considered appropriate, with the factual elements in which it materializes and which are the evidentiary elements that prove their fulfillment (Bufan, 2016, p. 382).

Considering that in the case of dividend distribution there is a special cadence in the normative plan - the dividend tax is declared and paid to the state budget until the 25th of the month following the month in which the dividend is distributed / paid - but there is also a factual rhythmicity, the amount in balance at the end of 2014 - 483,692 lei was related to the months from a previous fiscal period, when the amounts circulated were effectively withdrawn, and not to 2015.

This has an automatic and sufficient repercussion on the entire reasoning of the tax inspectors, placing the findings and, more importantly, the taxation on 2015 outside the applicable law, exceeding the limits set by the legislator and imperatively interpreted by the ICCJ by Decision no. 21/2020 or subsequent case decisions.

The prescription of the right to perform a fiscal inspection was fulfilled on 01.01.2020, the term running not from 01.01.2016, but obviously from 01.01.2015, the tax base being successively monthly in the years prior to 2015 when there was the taxed amount in the accounting balance of the audited company.

3. DIVIDEND AWARD MECHANISM

According to the specific normative regulations from Law no. 31/1990 republished, dividends are the share of profit that is paid to each partner. Developing the legal definition, the doctrine stated that the dividend represents the share of the real benefit to be paid to each partner of a company (commercial) in direct proportion to its participation in the formation of share capital (so in proportion to its social contribution) (Costaş, 2019, p. 176).

As a sphere of taxation, art. 91 lit. a) of the Fiscal Code includes the dividend income obtained by associates/individual shareholders in the category of investment income. The same normative qualification existed in V.C.fisc.

The dividend is defined in art. 7 point 11 of the Fiscal Code as “a distribution in cash or in kind, made by a legal entity to a participant, as a consequence of holding shares in that legal entity, except for the following:

a) a distribution of new participation titles or the increase of the nominal value of the existing participation titles, as a result of an operation of increase of the share capital, according to the law;

b) a distribution made in connection with the acquisition / redemption of the own participation titles by the legal person;

c) a distribution in cash or in kind, made in connection with the liquidation of a legal person;

d) a distribution in cash or in kind, made on the occasion of the reduction of the share capital, according to the law;

e) a distribution of issue premiums, proportional to the share of each participant;

f) a distribution of units in connection with reorganization operations, provided for in 32 and 33".

In reclassifying the amounts withdrawn or used by the administrator, the tax inspectors disregarded the specific mechanism of dividend distribution. Of course, for the associate administrator the requalification of these amounts as dividends is more favorable, even for 2015 when the distribution tax rate was 16%, than a requalification as salary rights that naturally lends itself to the fiscal state, [2] where taxation is obviously more burdensome in terms of income tax and social security contributions. However, in order to be possible, the requalification must first be legal, in other words, the reasoning of the tax inspectors to be in the legal order preset by the norms of tax law, respectively by the related legislation. The disregard of the imperative legal norms places the requalification in the area of the legal absurdity that can be legally recalibrated only by annulling the taxation decision in the administrative-jurisdictional procedure or by the fiscal contentious court.

As a specific company mechanism, the distribution of dividends is made after the approval of the annual financial statements, in proportion to the share of participation in the paid-in share capital. The general meeting of shareholders proposes and decides on the distribution of dividends, setting a deadline in this regard, but not later than six months from the date of approval of the annual financial statements for the financial year ended.

The distribution of dividends is a formalized legal act, not a legal fact. [3] Therefore, taking into account the specificity of the matter and the provisions of Law no. 31/1990, the assimilation with dividends is not feasible, even if the possibility of appreciation conferred to the fiscal body by the Fiscal Code exists! The right of appreciation of the fiscal inspectors refers to the positive right in all its facets, and not only to the fiscal sequence.

The reclassification as dividends of the amounts highlighted in the tax inspection report had to be done in compliance with the factual reality, with a factual and legal motivation in accordance with the provisions of the Fiscal Code [4] that would allow the taxpayer, the appeal body and the court to verify this thesis in concrete and abstract plan.

The tax inspectors place the gross amount accumulated successively over time at the beginning of 2015, only to be able to formally tax with 16%, [5] although the same tax inspectors specify expressis-verbis in the annexes of the tax act that the amounts raised in 2015 are in the amount of 30,000 lei.

The premise of our approach, respectively the factual situation presented raises the issue of the limits of fiscal requalification. In other words, how wide are the limits of tax requalification? Certainly, these limits cannot exceed the impermeability of the legal norm.

Even if the fiscal requalification represented and represents a prerogative of the Fiscal Code, this cannot be achieved without disregarding the same provisions of the Fiscal Code, respectively of the related legislation. Moreover, in the current context, tax inspectors can no longer invoke the pretext of exclusivity or priority of domestic law. The fiscal body, in all its forms and facets, has the obligation to comply and, moreover, to value and apply the material or jurisprudential union law. [6]

At the concrete level, the fiscal body has the legal obligation to verify in good faith and objectively the fiscal state of affairs, taking into account the chronology of transactions, but also the legal provisions in force.

Of course, the fiscal body has the right to assess, secured by the provisions of the Fiscal Code, but this right cannot be manifested abusively. The conglomeration of all amounts prior to 2015 and their formal return on 01.01.2015, only to succeed in meeting the time limits of a legitimate tax inspection, is a sample of misinterpretation.

4. CONCLUSIONS

In tax law relationships, positions are usually antagonistic. The tax law also provides that administrative practice confirms that the public interest of the state takes precedence over the private interest of the taxpayer. However, over each of the parts of the tax law relationship, the law must be sovereign. Therefore, in terms of legal basis, on the one hand, the provisions of domestic law in specific forms of representation must be taken into account in tax requalification, and on the other hand, the provisions of substantive Union law and the case law of the Court of Justice must be valued and applied of the European Union with regard in particular to indirect taxation. In the factual plan, the requalification cannot ignore the meaning, the reality, the finality, the chronology of the operations carried out by the taxpayer. The establishment of another fiscal significance can take place only between the two plans, in good faith, in balance and using non-partisan methods of interpretation.

ACKNOWLEDGEMENTS

„This work was supported by a grant of the Romanian Ministry of Education and Research, CNCS - UEFISCDI, project number PN-III-P4-ID-PCE-2020-2174, within PNCDI III"

NOTES:

[1] Provided that the interpretation does not deviate from the descriptive content of the law, it should be done with caution and without entering into the extreme theories of legal interpretation. (Jori and Pintore, 1995, p. 206)

[2] The assimilation was easy to achieve in the light of the provisions of point 68 of the Methodological Norms for the application of the Fiscal Code - H.G. no. 44/2004 which included in the category of assimilated income "any other earnings in cash or in kind, received from employers by employees, as payment for their work" and the quality of administrator that the sole shareholder had.

[3] Assimilated, so possibly non-existent.

[4] The obligation to state reasons was introduced in 2015, as a normative reaction to the expeditious tendency of the fiscal bodies in the instrumented fiscal requalifications, located in the vicinity of the abuse of right.

[5] As the doctrine has shown, beyond the fine distinction between "economic purpose" and "economic content", "what is of fiscal interest is the basis of taxation". (Niculeasa, 2014, p. 482)

[6] Of course, in direct taxation, which is rightly dependent on the fiscal sovereignty of the Member States, the CJEU will not intervene through its specific mechanisms, but in indirect taxation, harmonized at EU level, the Court will "sanction" the abuse of tax law, even if in line with the principles fundamentals of EU organization.

References

1) Bergel, J-L. (2012). *Theorie generale du droit*. Paris: Dalloz.
2) Bufan, R. (2016). *Tratat de drept fiscal. Volumul I. Teoria generală a dreptului fiscal [Treaty of fiscal law. Volume I. The general theory of fiscal law.]*. Bucureşti: Hamangiu.
3) Costaş, C. F. (coord.) (2016). *Codul de procedură fiscală. Comentariu pe articole [Fiscal procedure code. Comment on articles]*. Bucureşti: Solomon Publishing House.
4) Costaş, C. F. (2019). *Drept fiscal [Fiscal law]*, 2nd ed. Bucureşti: Universul Juridic.
5) Decision no. 21/2020 of the HCCJ published in the Official Gazette, Part I no. 1257 of December 18, 2020.
6) Government Ordinance no. 92/2003 republished in the Official Gazette no. 863 of September 26, 2005.
7) Jori, M. and Pintore, A. (1995). *Teoria Generale del Diritto*. Torino: G. Giappicheelli Editore.
8) Law no. 31/1990 republished in the Official Gazette no. 1066 of November 17, 2004.
9) Law no. 571/2003 on the Fiscal Code published in the Official Gazette no. 927/23 of December 2003 and repealed on January 1, 2016 by Law no. 227/2015 regarding the Fiscal Code.
10) Law no. 227/2015 regarding the Fiscal Code published in the Official Gazette no. 688 of September 10, 2015.
11) Nicolae, M. (2018). *Drept civil. Teoria generală. Vol. II. Teoria drepturilor subiective civile [Civil law. General theory. Vol. II. Theory of subjective civil rights].* Bucureşti: Solomon Publishing House.
12) Niculeasa, M.-I. (2014). *Summa fiscalis. Tratat de drept fiscal și financiar public [Summa fiscalis. Fiscal and financial public law treaty]*, 3rd ed. București: Universul Juridic.

THE REGULATION OF EU MEMBER STATES ON THE TAX TREATMENT FOR INVESTMENT INCOME AND ITS INFLUENCE ON HOUSEHOLD SAVINGS

MIHAELA TOFAN
Alexandru Ioan Cuza University of Iași
Iași, Romania
mtofan@uaic.ro

Abstract
Taxation is a relatively new field and disputed area of integration for European legislation, yet there are aspects of similarity and harmonization in the field of tax regulation of investment income. The paper analyzes the national legal framework of the European Union Member States for the tax treatment of investment income. The era of exclusive unilateral regulation of the tax system has been overtaken by the need to build assistance mechanisms in the context of globalization and digitalisation of trade. The international dimension of private investments has stimulated cooperation projects between governments and legislative actors in different states and has paved the way for multilateral agreements in this particular area of law.
There is a delicate balance between the autonomous right of states to regulate taxation and the need for common regulation in order to have an effective response in the rule of law to the reality of the global taxation. This effect is presented in connection with the influence on household saving behavior.
Keywords: *EU taxation; investments income; Member States.*
JEL Classification: K34, K40, G51

1. INTRODUCTION AND LITERATURE REVIEW

Taxation can influence the everyday life choice, namely whether to work as entrepreneur and, in this case, the legal form of business to use, if to invest your own savings or to engage external finance, where to settle the business, if hiring employees is a feasible option, and, not in the end, whether to comply with taxes or try to elude the fiscal liability. This paper analyses the patern of household capital taxation with a view to its influence on the saving money decision (i.e., whether to invest or to spend the personal revenue/income. The research points out the differences in household capital taxation, including the taxation of income from specific assets and of capital gains.

The paper presents the concepts used in the relevant literature, describing the features of the current tax systems that act as obstacles to saving and the way through which the tax system can be designed to actively encourage it (European

Commission, 2017). The taxation of dividends and capital gains is one of the most controversial issues in public finance, as relatively high effective tax rates on capital income discourage the investment and eventually, slow, or even stop the economic growth. Corporations must pay corporate income taxes on profits before they distribute dividends to shareholders, and shareholders pay an additional, individual-level tax on those amounts, significant and economically important determinants of household saving rates in European countries (International Monetary Fund, 2019). Because the Euro zone is relatively young and many integrative processes have not yet reached their picks, analogies of nations that have a single currency but maintain differentiated tax systems in different parts of the country are used (Oates, 2001). Canada and the United States are good examples of federal states that have a single currency and where attempts at harmonization of taxation were unsuccessful (Baldwin and Krugman, 2004), both experiencing tax rate competition between different states (Zodrow, 2003). Most works present the possibilities and need for tax system unification with positive and negative consequences of tax rate competition (Wołowiec, 2011). Yet, income tax harmonization is seen inevitable and a natural effect of internal market integration.

Comparing the development of average tax rates in OECD countries on dividends at the shareholder level, an appropriate indicator for taxes on portfolio capital, with the statutory tax rate on retained corporate profits provides initial evidence for this theory (Ahrens *et al.,* 2021). The investigation of the variation across countries and increased transparency depends on domestic factors (Ahrens *et al.*, 2020). Transparency alone is not sufficient to motivate governments to increase tax rates. Such domestic factors are the drivers of tax policy decisions and the most critical domestic factor that drives tax increases is the budgetary situation of a government (Lierse and Seelkopf, 2016). Financial transparency makes it more likely that higher taxes on capital income actually lead to higher tax revenue because evasion is less likely. We expect conditional effects of government partisanship, compensatory fairness demands (Limberg, 2020; Plümper, Troeger and Winner, 2009) and the mismatch between the taxation of labour and capital (Ganghof, 2006).

The dual income tax systems use taxation of household capital income simultaneously with corporate income taxation. To align the personal and corporate income tax system, the corporate income tax rate should be set equal to the flat tax rate on personal capital income (Boadway, 2004). A distinct tax treatment of certain asset types versus the regim of the personal income tax could lead to incentives for limiting tax burden while setting up a company in a particular location and to shift income between capital and labour tax bases. A review of the empirical economic literature ranks income shifting between capital and labour sources as a major distortion (Nicodème, 2009).

2. TAXATION OF HOUSEHOLD CAPITAL INCOME IN EU MEMBER STATES

Literature presents two major points about European integration: Union creators assumed that income taxes will be neutral towards integration processes and a natural convergence of tax systems of nations belonging to the economic and currency union will develop (Davidson, 2005). During 2008–2011, precautionary saving is the most reported motive for the euro area countries, followed by saving for old-age (Le Blanc *et al.,* 2016).

Whereas dividend taxes increase after 2009, the year the G-20 countries credibly committed that 'the era of banking secrecy is over', corporate profits taxes continue to decrease. In a comprehensive difference-in-difference analysis, we estimate the average tax rate on dividends in OECD countries to be 4.5 percentage points higher in 2017 than it would have been absent international tax cooperation (Hakelberg and Rixen, 2021). We control for important potential confounders, like the occurrence of a financial crisis that may affect tax rates on dividends differently from tax rates on profits, and the top rate on personal income that may be linked to dividend taxes but not corporate taxes.

There is, however, substantial variation around this trend. Belgium, for instance, raised the tax rate on dividend payments from 15 per cent in 2008 to 30 per cent in 2018, Hungary lowered it from 35 per cent to 15 per cent and Sweden kept it constant at 30 per cent. This cannot be explained by financial secrecy alone. Furthermore, the binary approach of the diff-in-diff analysis disregards that some countries were subjected to a more significant increase in financial transparency than others. The US, for example, does not reciprocate information sharing, which implies that jurisdictions for whom financial services provided by the US are pivotal saw a lesser increase in transparency.

The regime of household capital income taxation is very various across EU countries and the taxation of capital income paid to individuals is also lacking harmonisation. Sweden and Finland choose dual income tax system and completly separate the tax treatment for capital and labour income, while the large part of EU Member States use the combined tax approach, namely features of dual income tax system together with taxation of some both inside and outside the personal income tax (PIT) regime (Table 1).

Some of the EU Member States use tax expenditures such as exclusions, deductions, credits and reduced rates for specific groups of tax payers or specific activities, in order to favour certain types of capital income and to encourage investmen. Actually, EU Member States use of tax expenditures for a large area of scopes, covering employment creation, education, entrepreneurship, home ownership, income redistribution and investment. All these mechanisms are eligible as 'hidden subsidies' (Kalyva et al., 2014), because they have the effect of dimishing the tax liability for taxpayers or operations.

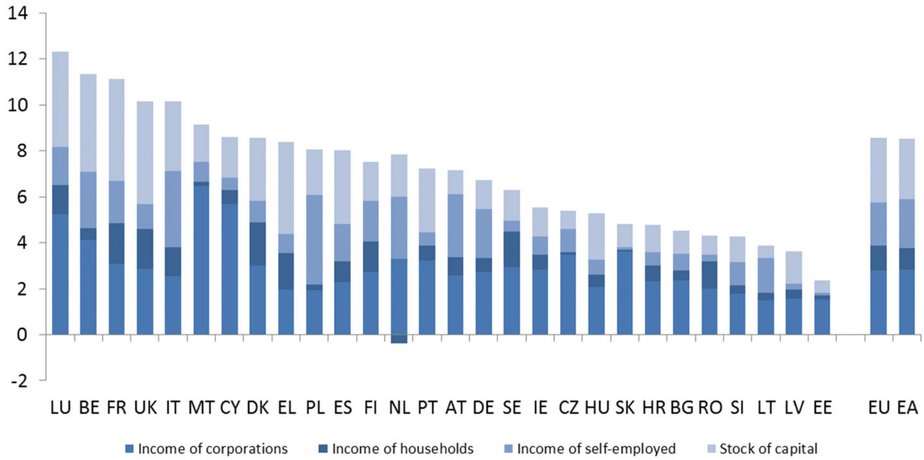
Table 1. Tax treatment of different types of assets, 2017

Country	Oveall tax system	Tax treatment of different types of assets			
	Dual or comprehensive income taxation	Owner-occupied housing (imputed rent)	Rental income	Interest/ Dividend	Private pension income
BE	Mixed	Untaxed	PIT	Separately	Separately
BG	Mixed	Untaxed	PIT	Separately	Separately
CZ	Mixed	Untaxed	PIT	Separately	Separately
DK	Mixed	Untaxed	PIT	PIT	PIT
DE	Mixed	Untaxed	PIT	Separately	PIT
EE	Mixed	Untaxed	Separately	PIT	Separately
IE	Mixed	Untaxed	PIT	Separately/PIT	PIT
EL	Mixed	Untaxed	Separately	Separately	PIT
ES	Mixed	Untaxed	PIT	Separately	Mixed
FR	Mixed	Untaxed	PIT	PIT	PIT
HR	Mixed	Untaxed	Separately	Separately	Separately
IT	Mixed	Untaxed	Mixed	Separately	Separately
CY	Mixed	Untaxed	PIT	Separately	PIT
LV	Mixed	Untaxed	Mixed	PIT	PIT
LT	Mixed	Untaxed	Mixed	Separately	PIT
LU	Mixed	Untaxed	PIT	Separately	PIT
HU	Mixed	Untaxed	Separately	Separately	Separately
MT	Mixed	Untaxed	Mixed	Separately	PIT
NL	Mixed	PIT	Separately	Separately	PIT
AT	Mixed	Untaxed	PIT	Separately	PIT
PL	Mixed	Untaxed	Mixed	Separately	PIT
PT	Mixed	Untaxed	PIT	Separately	PIT
RO	Mixed	Untaxed	Separately	Separately	Separately
SI	Mixed	Untaxed	Separately	Separately	PIT
SK	Mixed	Untaxed	PIT	Separately	Separately
FI	Dual	Untaxed	Separately	Separately	Separately
SE	Dual	Untaxed	Separately	Separately	PIT
UK	Mixed	Untaxed	PIT	PIT/Separately	PIT

Source: (Princen *et al.*, 2020, p. 12)

From the economic point of view, efficient taxation always relies on a broad tax base and less (ideally, none) tax expenditures. Less regulation for tax expenditures supports the general principle of the tax system neutrality and reduces the effect tax system has on the investment decision, on organising work and employment strategy and, not in the end, on volume of consumption. Large tax bases positively reflects on the revenue collection and tax compliance, increasing the tax system performance. In turn, increased revenue collection provides the necessary fiscal space to reduce marginal tax rates (OECD, 2010a; OECD, 2010b). If market failures is apparent, the mechanims of tax expenditures is justified to stimulate specific forms of capital income (Kalyva *et al.*, 2014).

Figure 1. Structure of capital taxes



Source: (Princen *et al.,* 2020, p. 13)

Analising the state budget revenues collected beyond PIT area, we observe the variety of the household capital income taxes applied in the EU countries. As presented in oficial statistics, capital taxes (8% of GDP) generate less public revenue within the EU Member States, comparison baing made with the public revenue from fiscal treatment of the income from labour (19% of GDP) and consumption taxes (11% of GDP in 2016). Analising the structure of the capital taxes (Figure 1), household capital income taxes have the smallest contribution, especially when considering capital income apart of the PIT, although many Member States tax capital income through the PIT system.

3. REGIME OF TXATION FOR REVENUE FROM FINANCIAL ASSETS

EU Member States use various methods when taxing dividend income of individual shareholders, prevalent being the following two:

- Few states use the method of including the collected dividends in the personal income tax base, having the same tax treatment as the other income sources.

- Most EU Member States tax collected dividends apart form the PIT system, imposing a specific tax withheld by the payer of the dividend or creating a separate tax base in the hands of the recipient.

Saving rates reflect the decision to invest, the financial stability of households and, eventually, the economic growth. In these line, EU members states use additional mechanisms to enhance saving rates, such as excluding from the tax base the income derived from interest paid for specific current or savings accounts. Belgium, for instance, and other Member States too, use a favourable tax treatment to interest received in order to promote savings, partially exempting interest income from the tax base, when derived from a savings account.

Additionally, tax incentives can be used to influence the saving decision. Still, this type of tax expenditure may also lead to economic distortions, while increasing saving rates. In the short-run, it effects employment and inflation and in the medium-term it refflects on the economic growth.

Although revenues from capital gains taxes are rather limited in most EU Member States, they strongly influence the efficiency and redistributive capacity of national tax systems. The reduced revenues are not necessarily generated in the Member States that do not regulate taxes on capital gains or regulate reduced tax rates, but they are the effect of extensively used tax exemptions. Still, capital gains taxation can rebalance tax system, because when capital gains are taxed at preferential tax rates (*in extremis*, when they are are not taxed at all), taxpayers have an incentive to act for reshaping their taxable income into capital gains. Yet, if limiting possible negative effects on savings and investment decisions is taken into consideration, the tax design is one of the most important topic to be addressed.

To assess the impact of taxation of capital gains on revenues, economic efficiency and inequality, section 3.1 examines the efficiency of the capital gains tax treatment, section 3.2 analyses the effect of capital gain taxation realization on public budgets, while section 3.3 briefly addresses lock-in effect.

3.1. The efficiency of the capital gains tax treatment

Usually, a positive return on an investment takes the form of a current income (dividends for equity investments) or a capital gain (the increase of a particular asset value between the moment of its acquisition and the moment of evaluation). In general, the return on investment paid as current income is lower, although the value of a business whose owners decide to reinvest all the profit need to generate capital gains.

Tax evasion and tax planning have a large playfield in the area of capital gains, whose tax treatment is able to influence the investors' conduct. Whether the fiscal treatment of capital gains is relaxed (or, extremely, not regulated at all), the taxpayers have the tendency to transform their respective taxable income (distributed profits, interest, rents, wages) into capital gains, i.e. buying shares up to the value of profit and not distributing it to the entitled owners of the company.

There are two main methods to regulate the fiscal treatment of the capital gains: on an accrual basis, when the increase in the value of the asset occurs, and on the increase of the value, observed when the possibility of valorization the asset occurs. Where the fiscal treatment of the capital gains is regulated on accrual basis, the tax neutrality is enforced, and the economic efficiency is stimulated. It is considered that taxing capital gains at realisation affects economic efficiency, as tax treatment of different investment returns should be neutral, i.e. not influential for the investment decisions. Consequently, fiscal theory recommends identical fiscal treatment of capital gains as for other returns on investment (i.e. dividends, rents or interest income), preferably on an accrual basis and not on realisation. The accrual-based taxation limits tax avoidance, removing the issues generated by the owner of the capital option when confronted with capital losses. (Tofan, 2020)

Still, capital gains are usually taxed when they are realised and accrual taxation is regulated only to few financial market instruments, by the application of the 'marked-to-market' accounting rules. Although it is used in a facile manner for publicly traded assets, accrual-based taxation is difficult to use for non-traded assets, because their market values is established using cost increase methods (market evaluation etc.), which influence the decision to comply with tax liability and dimmish the rate of collection. The available financial liquidity may also have a strong influence on the decision to pay taxes. Additionally, the capital gains taxation can be accompanied by high administrative bureaucracy.

3.2. Effects of effect of capital gain taxation realization on public budgets

The level of public revenues derived from fiscal treatment of the capital gains taxes is in direct connection with the regulated tax rates and the volume of obtained capital gains. Tax avoidance for fiscal liability for the capital gains is easier than any other form, for instance when the owner of the assets delays the selling which would generate the taxable income. This conduct is mainly present when the tax rate is increased compared to other previous period and is very possible as short-term reaction, the long termen decision being influenced by other important determinants. Sales of corporate equity appear relatively sensitive to changes in tax rates, while lower capital gains taxes were found to contribute to a more active equity market and to increased tax revenue (Burman, 1999). A temporary tax reduction decreases the tax liability from an immediate sale of assets, providing the investors with the tool to postpone the budget revenue. Several studies show that permanent changes in tax rates are not expected to lead to a permanent response of capital gains realisations (Auerbach, 1989).

Our brief theoretical analysis on the elasticity of public revenues from capital gains taxation shows that increasing tax rates could generate the corresponding increase in tax revenue only in the medium and long term, not immediately. Still, the decrease of the public revenue as response to an increase of the rate is expected to be temporary, as explained above.

While public revenue from capital gains taxes is expected to remain relatively constant over a relatively short period of time, despite the increase of the respective tax rate, revenue from taxes on other income sources would increase proportionally with the increase of the tax rate, so the cumulated influence of the increase of the capital gains tax rate will be consequently reflected in total government revenue.

There are some particularities of the influence generated by the modification of the tax rate of the capital gains, such as:

- **The impact on the demand for and the supply of assets, reflected on asset prices and equity trading volumes**

Empirical evidence on the reduction in the capital gains tax rate shows that changes in the long-term capital gains tax rate affect assets prices and equity trading volumes (Dai *et al.,* 2008).

Two countervailing effects on equity trading can be observed: a demand side capitalisation effect and a supply-side lock-in effect. The 'capitalisation effect' describes the increase in the asset price and the current rate of return on the investment when there is a decrease of the tax rate reduction. This increase is generated by the investors' acceptance to pay a higher price to buy the particular assets, balancing the larger after-tax cash flows in the future. On the contrary, the supply-side asset prices would most probably increase before the entry into force of regulation diminishing the tax rate, and they are most likely to decrease soon after the respective tax cut.

- **Effects on saving, investment and capital allocation**

Using preferential tax treatment for capital gains would influence the increase of savings and investment, although the effectiveness of this measure is not factual justified yet. Still, it is obvious that a decrease level of tax rate for capital gains positively reflects on saving, because of the higher return on different forms of household investments. There is also the reverse effect, when the possibility to get higher returns on investments might influence households to save less and increase their consumption levels (the income effect). Eventually, the magnitude of these two effects determines the net effect of capital gains taxes on private savings. The substitution effect is likely to prevail for high-income households and during periods of rapid economic growth, whereas the income effect is expected to be stronger for low- income households and during periods of subdued economic conditions (Burman, 1999).

It is empirical that high tax rates for capital gains would lead to a decreased volume of saving and investment, identically to the way of action of other taxes on capital income (e.g. taxes on savings and dividends). Simultaneously, diminished tax rates for capital gains would positively reflect on the volume of investment, determining the optimum distribution of capital to the most effective economic activities. Still, this situation could also reflect into investment scenario that describe tax avoidance conduct.

- **Effects on entrepreneurship dynamics**

Small and medium-sized enterprises (SMEs) are more affected by the increased level of tax rate for capital gains taxes than larger companies (Tofan, Bercu and Roman, 2016). When entrepreneurs are risking their own capital investing a particular business, they are looking for substantial financial returns. The level of the tax rate is usually in direct correspondence with the level of the returns, and it is reflected in the entrepreneurship dynamics. In small private companies with a limited number of shareholders who also manage the business, the prospect for compensation primarily takes the form of potential capital gains on their equity stake, and not of the management salaries offered by large and established corporations (Clemens, Emes and Veldhuis, 2015). Consequently, limitation of the tax incentives will discourage entrepreneurial initiative so severe tax treatment of the capital gains would generate important negative influence on SMEs, especially on start-ups.

- **Horizontal and vertical equity**

The tax treatment of the capital gains is often designed to insure horizontal and vertical equity (Elkins, 2006). The tax for capital gains comply with horizontal equity when all types of capital income are treated very much comparable, if not in identical manner, at least from the fiscal point of view. Any modification in taxation of the capital gains will determine volatility of the asset prices and of the returns on investment.

The equity in taxation needs to be analyses both from horizontal and vertical perspective. Horizontal equity involves methods of identical fiscal for identical level of income, despite the sources that has generated the income, vertical equity addresses the situation when there is the possibility to pay more taxes, because the level of the income is significantly higher. Horizontal and vertical equity have the same influence on the complying to the fiscal liability and on the volume of the public budget revenue (Tofan, 2016; Tofan, 2019). imilarly, the fiscal equity has influence on the saving atitude, the taxpayer responding to the indirect message transmited by the regulation in force (Tofan, Bercu and Roman, 2016).

3.3 The lock-in effect

Taxation when the income is effectively present in the taxpayer patrimony might determine the taxpayer to postpone the action that generate in income eligible as part of the tax base, for instance keeping the goods able to create any form of capital gains and not the ones generating returns in cash. In this manner, some assets are retained in taxpayer patrimony for a long period and this effect is called the "lock" effect (Schmalbeck, Soled and DeLaney, 2017).

Realisation-based capital gains taxation creates a lock-in effect that can distort decisions on sales of assets (Bakija and Gentry, 2014). The taxpayers conduct aims at paying the latest possible the tax liability, i.e. the moment when the price for selling the asset is collected. The lock-in effect when the tax for capital gains is reduced generates decrease price of equity and of rate of investment return. The net effect of the tax changes depends equally on the lock-in effects and on the taxpayer decision to sell their financial goods, aiming for a certain tax treatment.

The final influence of lock-in effect is to reduce the tax burden for each affected taxpayer, a form of subdue of the consume being the best description of this conduct. The taxpayer temporary refrain the capital gains, but the tax will be eventually paid, so the public budget revenue is delayed depending on the taxpayer decision.

The lock-in effect may lead to sub-optimal diversification of investment portfolios (Way *et al.,* 2019). An investor is not inclined to modify the structure of his financial asset portfolio in order to decrease risk level, unless this action entirely covers the subsequent capital gains tax paid for this conduct (i.e. for selling certain assets from its possession). The cumulate influence of lock-in effect is capable to change structure of financial assets at macroeconomic level. The lock-in effect possibly affecting the structure of financial asset for each individual investor aggregates till the level of overinvestment by those investors with lock-in positions in certain firms (Ahrend and Schwellnus, 2013).

4. TAX TREATMENT OF CAPITAL GAINS IN SELECTED EU MEMBER STATES

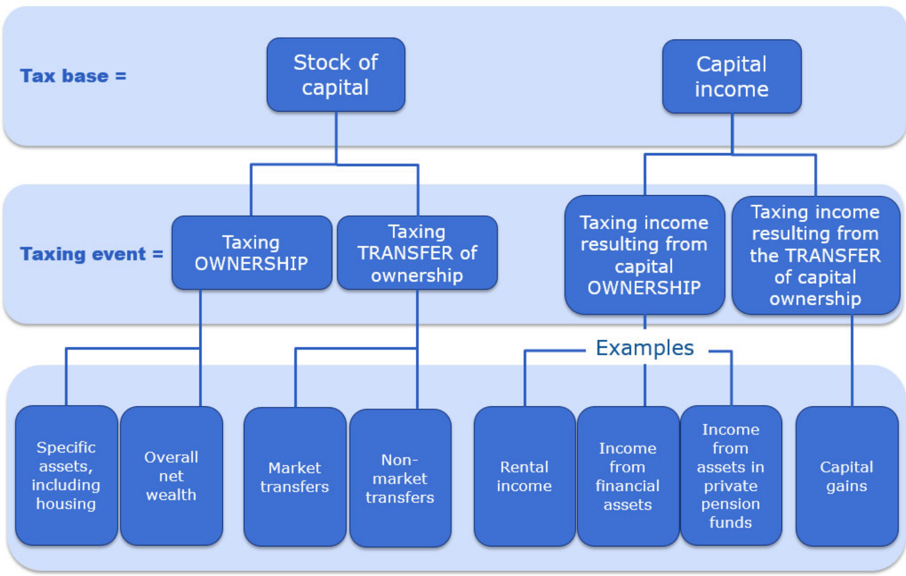
From the regulatory perspective, taxes on capital gains are usually included in the PIT system and tax treatment (including tax rates) is considerably different from one state to another. The volatility of the fiscal regulatory system also contributes to generating large difficulties in extracting effective data and generating realistic analysis.

In the few Member States, for which OECD data on the capital gains tax on individuals is available, collected revenue is rather low. In 2016, revenue varied from 0.01% of GDP in Slovenia to 1.69% in Sweden. The most important bases for capital gains taxes are housing and financial assets, which may follow a different cycle compared to aggregate economic activity.

The regulation establishing tax treatment of capital gains varies significantly across Member States of the EU. These differences range from the absence of taxes on capital gains, the application of reduced rates and (other) tax expenditures, to the application of the full tax rates as charged on other sources of income (European Commission, 2014). While looking for efficient methods to increase tax revenue, governments tend to propose specific changes in tax treatment, among which the changes for taxes on capital gains aim at increasing saving and investment, with the final purpose of supporting economic growth. Still, these changes must be in line with tax neutrality principle. Establishing the same tax rates for all types of capital income, including capital gains, makes the tax system simpler in terms of bureaucracy and more efficient on the level of collected public revenues.

In all EU Member States, the taxes on capital gains tax are established and collected according to the method of realisation basis (Figure 2). The identification of the taxable base implies the calculation of the difference between the price of selling the particular asset and the respective asset value at that particular date. However, some Member States have regulated partial accrual system in their taxation of capital gains, in order to counter fight the lock-in effect consequences. Capital gains taxation varies considerably across Member States, reflecting the heterogeneity of income tax systems and the different preferential rates and exemptions granted across the EU, especially at local level (Bercu, Tofan and Cigu, 2015).

Figure 2. Taxing household capital stocks and capital income



Source: (Princen *et. al.*, 2020, p. 7)

A few EU Member states use dual income tax systems, using differential tax treatment for income from capital and from labour. This system is consistent with the comprehensive income definition and therefore reduces the incentive for taxpayers to try to convert their taxable labour and investment income (e.g. interest, dividends, rents) into capital gains.

Still, variation of the tax rates for labour and capital income could stimulate the taxpayer to opt for transforming income into its less taxable form. When the dual income tax was first introduced in the Nordic countries, the more favourable income tax was intended to fall on the full return of capital. This created an incentive for income shifting. To counter this incentive, an alternative version of the dual income tax applies the more favourable tax regime on capital gains only for "normal" returns, while subjecting the above normal returns to a tax burden that is close to the top marginal tax rate on labour income (Bastani and Waldenström, 2018). As the opportunity for tax avoidance is present in the above situations, there are special anti-abuse provisions applied in some Member States, aiming at limiting income conversion of most capital gains to tax-exempt or tax favoured capital gains.

Most EU Member States apply specific tax exemptions, for instance when immovable assets are sold and for the valorization of the house by the occupying owner. Some Member States offer the possibility to postpone the tax liability on realised gains on the primary residences through the so-called rollover relief (Princen *et. al.,* 2020), while some Member States tax capital gains from sales of substantial shareholding to counter tax planning strategies, to transform taxable income into tax-exempt capital gains (Tofan, 2020). In line with the various form of incentives, some Member States use preferential tax rate for the fiscal treatment of the capital gains, depending on the type of the assets to be sold.

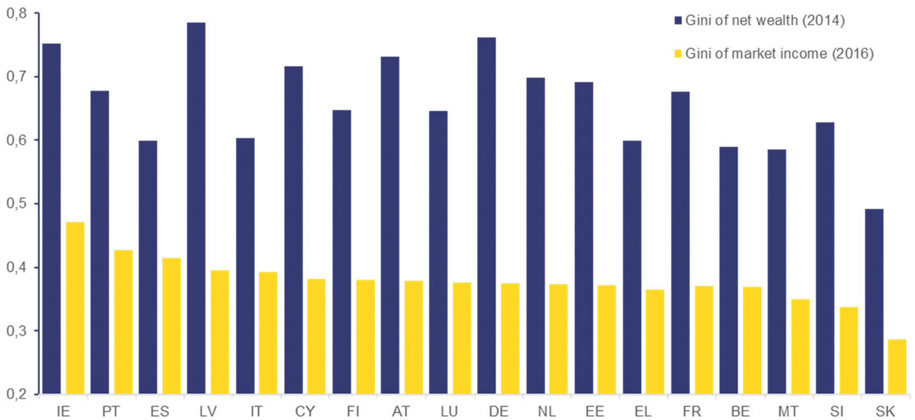
Another method to limit the impact of the lock-in effect is to decrease the tax rate or to cancel the tax liability of the capital gains on assets retrained in the owner patrimony for a certain period. This preferential taxation is present in Austria, France, Finland. Once the legally established period is reached, the taxpayers are inclined to sell their assets for tax reasons, the legal regime proving its efficiency in decreasing the volume of short-term speculative transactions.

There are specific fiscal previsions in some of the EU Member States, adopted with the express goals at stimulating household savings and investment (e.g. Estonia, Spain, Sweden, Ireland, Bulgaria, Cyprus and also ex-Eu member United Kingdom). The used methods include regulating types of tax-free savings, preferential ax arrangements for the development of domestic capital markets and of equity financing of local businesses, favorable tax treatment to start-ups and SMEs.

Sweden, Spain, Denmark adapts their regulation for taxing the capital gains on grounds of equity. The method is used especially when the capital gains is mainly present for the taxpayer with higher revenues and when it is better represented in the public revenues than other sources of income. Differences across the EU Member States in the distribution of income from capital gains relative to the distribution of income excluding capital gains seem to exist (Roine and Waldenström, 2012).

The fiscal treatment for the household stocks and wealth is able to make the tax system more efficient and supports solving inequality issues. In addition to income or consumption inequality, wealth inequality, inequality of opportunity and the transmission of inequality from one generations to the following are important. Based on their wealth databases, both the ECB (Dossche, Slačálek and Wolswijk, 2021) and the OECD (Balestra and Tonkin, 2018) have recently studied wealth inequality and found that wealth is about twice as concentrated as income. Furthermore, their research proves that the concentration of wealth is related to the concentration of income, but also to debt rate and the life cycle. The structure of the financial asset portfolio varies greatly depending on the size of the capital stock: real estate accounts for most of the gross wealth, while financial assets are particularly observed at the top of the listing.

Figure 3. Gini of market income (2016) and Gini of net wealth (2014) in the euro area



Source: (Princen *et al.,* 2020, p. 6)

As indicated in the source of Figure 3, the presented data uses the European Commission's calculations, based on EU-SILC data on market revenues and the second wave of the ECB survey on household finance and net wealth consumption (European Central Bank, 2016). Wealth data are from 2014, except for Estonia, Ireland, Malta, the Netherlands, Portugal and Finland, where they are from 2013 and for Spain, where they are from 2011 and no information was available for Lithuania.

The available information is designed and analised using Gini index, a simple and blunt summary statistics that measures how equitably a resource is distributed in a population (Farris, 2010). While the equitable distribution of the income is one of its primary aplication, Figure 3 shows Gini of market income and Gini of net wealth for the members of Eurozone. The figure shows similar values for countries from old Europe, compared to new Europe, although very different income distributions can result in identical Gini coefficients. Being a primary indicator, Gini is not revealing complete information about the status of inequality, but it clearly showe the level of heterogeinity for the countries using euro.

5. CONCLUSIONS

Imposing two levels of taxation (on corporate income and on dividends) may result in a total tax rate on capital income substantially higher than the rate on other types of income. In recent years, policymakers have become concerned about the economic damage caused by relatively high effective tax rates on capital income, and in 2003 the tax rate on capital gains and dividend income was lowered to 15 percent.

All in all, a number of tax design considerations appear to merit close attention and possibly more in-depth analysis. Capital gains taxation may support reform efforts to shift taxation to less growth distortive tax bases. It can also help protect the income tax base by reducing the incentive for taxpayers to convert ordinary taxable income into capital gains. However, the design of capital gains taxes faces the challenge of possible inefficiencies resulting from the lock-in effect. Many Member States attempt to mitigate this effect by charging lower or no taxes on the capital gains on assets that have been held for a long time or by using accrual-based concepts.

Moreover, the careful design of capital gains taxes may support an investment-friendly environment especially for SMEs. Finally, equity considerations might merit careful consideration, especially in those Member States where the distribution of income from capital gains is skewed towards the higher income earners.

ACKNOWLEDGEMENTS

The author acknowledges financial support from the Romanian National Authority for Scientific Research and Innovation, CNCS –UEFISCDI - Project PN-III-P4-ID-PCE- 2020-0929 Household Saving Behavior - A Socio-Economic Investigation from Households, Banks and Regulators Perspective.

References

1) Ahrend, R. and Schwellnus, C. (2013). Do investors disproportionately shed assets of distant countries during global financial crises?: The role of increased uncertainty. *OECD Journal: Economic Studies*, 2012(1), pp. 1-22.
2) Ahrens, L., Bothner, F., Hakelberg, L. and Rixen, T. (2020). New Room to Maneuver: National Tax Policy under the Automatic Exchange of Information. *Socio- Economic Review.* doi: 10.1093/ser/mwaa007.

3) Ahrens, L., Bothner, F., Hakelberg, L. and Rixen, T. (2021). Capital Taxation and International Cooperation. The Causes and Consequences of Automatic Exchange of Information. In: B. Unger, L. Rossel and J. Ferwerda, eds., *Combating Fiscal Fraud and Empowering Regulators. Bringing tax money back into the COFFERS.* Published to Oxford Scholarship Online: February 2021, pp. 112-131.
4) Auerbach, A. J. (1989). Capital Gains Taxation and Tax Reform. *National Tax Journal*, 42(3), pp. 391-401.
5) Bakija, J. M. and Gentry, W. M. (2014). *Capital Gains Taxes and Realizations: Evidence from a Long Panel of State-Level Data*. [online] Available at: https://web.williams.edu/Economics/wp/BakijaGentryCapitalGainsStatePanel.pdf [Accessed 15.03.2021].
6) Baldwin, R. and Krugman, P. (2004). Agglomeration, Integration and Tax Harmonisation. *European Economic Review*, 48(1), pp. 1-23.
7) Balestra, C. and Tonkin, R. (2018). Inequalities in household wealth across OECD countries: Evidence from the OECD Wealth Distribution Database. *OECD Statistics Working Papers Series,* WP no. 88. [online] Available at: https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=SDD/DOC(2018)1&docLanguage=En [Accessed 18.04.2021].
8) Bastani, S. and Waldenström, D. (2018). *How Should Capital Be Taxed? Theory and Evidence from Sweden. Discussion Paper Series*. IZA Institute of Labour Economics, Deutsche Post Fundation, IZA DP No. 11475. [online] Available at: http://ftp.iza.org/dp11475.pdf [Accessed 15.03.2021].
9) Boadway, R. (2004). The Theory and Practice of Equalization. *CESifo Economic Studies, CESifo*, 50(1), pp. 211-254.
10) Bercu, A. M., Tofan, M. and Cigu, E. (2015). New challenges concerning sustainable local development. Romanian case. *Procedia Economics and Finance*, 20, pp. 65-71.
11) Burman, L. (1999). *Labyrinth of Capital Gains Tax Policy: A Guide for the Perplexed*, Washingon DC: Brookings Institute Press.
12) Clemens, J., Emes, J. and Veldhuis, N. (2015). Entrepreneurship, Demographics anbd Capital Gains Tax Reform. *Fraser Research Bulletin,* April 2015, pp. 1-13.
13) Dai, Z., Maydew, E., Shackelford, D. and Zhang, H. (2008). Capital gains taxes and asset prices: capitalization or lock-in. *The Journal of Finance*, 63(2), pp. 709-742.
14) Davidson, S. (2005). Tax Competition. Much To Do About Very Little. The Center for Independent Studies Policy Monograph, Nr 78. EA, *International Journal of Central Banking*, 12(2), pp.15–69.
15) Dossche, M., Slačálek, J. and Wolswijk, G. (2021). Monetary policy and inequality. *ECB Economic Bulletin*, Issue 2/2021. [online] Available at: https://www.ecb.europa.eu/pub/economic-bulletin/articles/2021/html/ecb.ebart2021 02_01~1773181511.en.html [Accessed 18.04.2021].
16) Elkins, D. (2006). Horizontal Equity as a Principle of Tax Theory. *Yale Law & Policy Review*, 24(1), pp. 43-90.
17) European Central Bank, (2016). *Statistics Paper Series: The Household Finance and Consumption Survey: methodological report for the second wave*. [online] Available at: https://www.ecb.europa.eu/pub/pdf/scpsps/ecbsp17.en.pdf [Accessed 15.03.2021].

18) European Commission - Directorate-General for Economic and Financial Affairs, (2014). *Tax expenditures in direct taxation in EU Member States*. [online] Available at: https://ec.europa.eu/economy_finance/publications/occasional_paper/2014/pdf/ocp207_en.pdf [Accessed 18.04.2021].
19) European Commission, (2017). Literature review on taxation, entrepreneurship and collaborative economy. *Taxation Papers,* Working Paper No. 70/2017, p. 8.
20) Farris, F. (2010). The Gini Index and Measures of Inequality. *The American Mathematical Monthly,* 117(10), pp. 851-864.
21) Ganghof, S. (2006). *The Politics of Income Taxation: A Comparative Analysis*. Colchester: ECPR Press.
22) Hakelberg, L. and Rixen, T. (2021). Is Neoliberalism Still Spreading? The Impact of International Cooperation on Capital Taxation. *Review of International Political Economy,* 28(5), pp. 1142-1168.
23) International Monetary Fund. European Dept. (2019). *Front Matter Page. -IMF Country Report no. 19/222. Portugal*. Selected Issues Paper. Washington D.C.: International Monetary Fund Publication Services. [online] Available at https://www.elibrary.imf.org/view/journals/002/2019/222/article-A000-en.xml [Accessed 15.03.2021].
24) Kalyva, A., Astarita, C., Bauger, L., Fatica, S., Mourre, G. and Wöhlbier, F. (2014). Tax expenditures in direct taxation in EU Member States. *European Economy. Occasional Papers,* 207(December 2014), pp. 48.
25) Le Blanc, J., Porpiglia, A., Teppa, F., Zhua, J. and Ziegelmeyerb, M. (2016). Household saving behavior in the euro area. *International Jounral of Central Banking*, 6(2016). [online] Available at: https://www.ijcb.org/journal/ ijcb16q2a2.pdf [Accessed 15.05.2021].
26) Lierse, H. and Seelkopf, L. (2016). Room to Manoeuvre? International Financial Markets and the National Tax State. *New Political Economy*, 21(1), pp. 145–165.
27) Limberg, J. (2020). What's Fair? Preferences for Tax Progressivity in the Wake of the Financial Crisis. *Journal of Public Policy*, 40(2), pp. 171-193.
28) Nicodème, G. (2009). Corporate Income Tax and Economic Distortions. *Bulletin de Documentation du SPF Finances,* 68(3), pp. 91-106.
29) Oates, W. E. (2001). Fiscal Competition or Harmonization? Some Reflections, *National Tax Journal*, 54(3), pp. 507-512.
30) OECD, (2010a). *Tax Policy Reform and Economic Growth, Growth-oriented Tax Policy Reform Recommendations*. [online] Available at: https://www.oecd.org/berlin/46391708.pdf [Accessed 17.04.2021].
31) OECD, (2010b). *Policy framework for Investment user's toolkit - Chapter 5. Tax Policy.* [online] Available at: https://www.oecd.org/investment/toolkit/policyareas/41890309.pdf [Accessed on 17.04.2021].
32) Plümper, T., Troeger, V. E. and Winner, H. (2009). Why Is There No Race to the Bottom in Capital Taxation? *International Studies Quarterly*, 53(3), pp. 761–786.
33) Princen, S., Kalyva, A., Leodolter, A., Denis, C., Reut, A., Thiemann, A. and Ivaskaite- Tamosiune, V. (2020). *Taxation of Household Capital in EU Member States: Impact on Economic Efficiency, Revenue & Redistribution*. Discusion paper no. 130/2020. Luxembourg: Publications Office of the European Union.

34) Roine, J. and Waldenström, D. (2012). On the Role of Capital Gains in Swedish Income Inequality. *Review of Income and Wealth,* 58(3), pp. 569-587.
35) Schmalbeck, R., Soled, J. A. and DeLaney, K. T. (2017). Advocating a Carryover Tax Basis Regime. *Notre Dame Law Review*, 93(1), pp. 109-154.
36) Tofan, M. (2016). *Drept fiscal [Fiscal Law]*. Bucuresti: CH Beck Publisher.
37) Tofan, M. (2019). *European financial law*. Iasi: Alexandru Ioan Cuza University of Iasi Publishing House.
38) Tofan, M. (2020). Redesigning sovereignty using European and international tax avoidance regulation. *The Jean Monnet Working Papers Series*, no. 17/2020.
39) Tofan, M., Bercu, A. M. and Roman, A. (2016). Entreprenership Dynamics in EU. A Comparative Perspective. *Transformation in Bussiness & Economics*, 15(39C), pp. 431-452.
40) Way, R., Lafond, F., Lillo, F., Panchenko, V. and Farmer, J. D. (2019). Wright meets Markowitz: How standard portfolio theory changes when assets are technologies following experience curves. *Journal of Economic Dynamics and Control,* 101, pp. 211-238.
41) Wołowiec, T. (2011). Selected issues of personal income taxation harmonization. *e-Finanse: Financial Internet Quarterly*, University of Information Technology and Management, Rzeszów, 7(2), pp. 30-44.
42) Zodrow, G. R. (2003). Tax Competition and Tax Coordination in the European Union. *International Tax and Public Finance*, 10(6), 71 p.

Section IV

EU BUSINESS AND GREEN FINANCE

THE IMPACT OF COVID-19 ON SMEs ECONOMIC AND ENTREPRENEURIAL OUTCOMES AND EXPECTATIONS. CASE OF ROMANIA AND UNITED KINGDOM

ELENA CIGU (RUSU)
Alexandru Ioan Cuza University of Iași
Iași, Romania
elena.chelaru@uaic.ro

DENIS HYAMS-SSEKASI
University of Bolton
Bolton, UK
dh4@bolton.ac.uk

ANCA FLORENTINA GAVRILUȚĂ (VATAMANU)
Alexandru Ioan Cuza University of Iasi
Iasi, Romania
anca.vatamanu@uaic.ro

Abstract
In the context of the COVID-19 pandemic, all countries are facing an inevitable economic recession where SMEs have been severely affected. This paper focuses on the impact of COVID-19 on SMEs economic outcomes and expectations based on the context of Romania and United Kingdom. Firstly, the paper will present economic strategies and model in recession times from the perspective of the literature. The second objective, based on descriptive analysis methodology, is to analyze the status of small and medium enterprises (SMEs) in Romania and United Kingdom.
Keywords: *entrepreneurship; pandemic crisis; SME; recession.*
JEL Classification: G32, O52

1. INTRODUCTION

The COVID-19 pandemic generated a major economic crisis, with a collapse in consumption and production in affected countries and low confidence, and stock exchanges responding negatively to heightened uncertainties (OECD, 2020a) and produced uneven impacts by sector (Pedauga, Sáez and Delgado-Márquez, 2021). The sectors most affected by the crisis were in wholesale and retail trade, air transport, accommodation and food services, real estate, professional services, and other personal services. SMEs have experienced in COVID-19 pandemic a reduction in labor supply, human mobility restrictions and self-isolation, large decreases in capacity utilization, and interruptions in supply chains (Pedauga, Sáez and Delgado-Márquez, 2021). However, economic impact is not equally distributed across productive sectors or firms during a recession, but, in general, SMEs are more affected by crisis than large companies (Bartik *et al.,* 2020; Narjoko and Hill, 2007; Soininen *et al.,* 2012), and few sectors of activity such as tourism and transportation are more vulnerable to social distance or confinement.

Economic forecast depicted an increasingly negative outlook in terms of the scale of the global economic recession triggered by the pandemic crisis, respectively a 6% drop in global GDP, and a 7.6% fall in case of a second pandemic wave by end 2020, with a double digit decline in some of the most hit countries, followed by a modest recovery of 2.8% in 2021 (OECD, 2020b). Reality proves that smaller firms are typically more financially fragile and have smaller cash buffers than their larger counterparts, which makes them less resilient to crises. On the other hand, small businesses are the ones that can reshape themselves to become attractive on the market in crisis conditions.

This paper focuses on the impact of COVID-19 on SMEs economic outcomes and expectations based on the context of Romania and United Kingdom. Firstly, the paper will present economic strategies and model in recession times from the perspective of the literature and public policies applied in pandemic time. The second objective, based on descriptive analysis methodology, is to analyze the status SMEs economic and entrepreneurial outcomes and expectations in Romania and United Kingdom.

The paper is structured as follows: section 2 provides the economic strategies and model in response to coronavirus pandemic; section 3 provides a general context of Romanian SMEs economic and entrepreneurial outcomes and expectations; section 4 summarizes the state of the UK regarding SMEs economic and entrepreneurial outcomes and expectations. The research ends with conclusions and references.

2. THE ECONOMIC STRATEGIES AND MODEL IN RECESSION TIMES

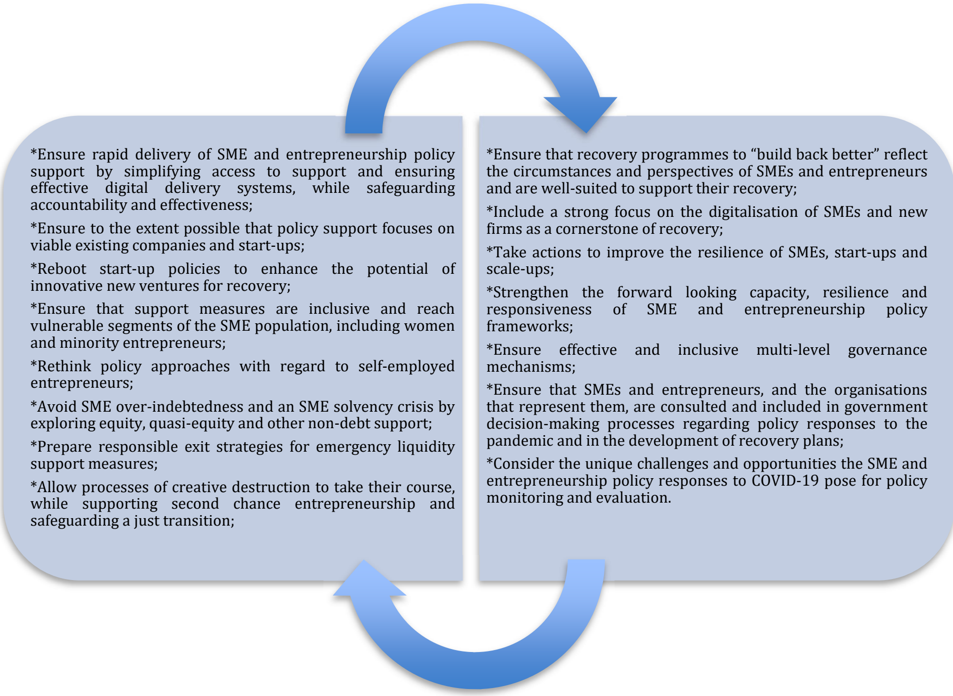
Recessions are considered by the literature (Bryson, 1996) as periods of ‘creative destruction’, of economic restructuring, during which industries decline, often terminally, while new ideas, technologies, products and industries emerge and become the driving forces of subsequent economic growth. Recession conditions determine at least two distinct processes, respectively, firstly, the entry and exit of firms, and, secondly, by motivating incumbent firms to adapt products and processes in order to increase or maintain business performance. Regarding public sector, the crises determine the increase of the budgetary expenditure (Dornean and Sandu, 2013).

The literature (Kitching *et al.,* 2009) identifies three broad categories of strategy in recession conditions which should be applied: (i) retrenchment strategy, as the most common approaches adopted by businesses environment to deal with recession conditions, which involves cutting operating costs and divestment of non-core assets (divestment of businesses, closure of establishments, reductions in employment, expenditure cuts on a wide range of activities including R&D, marketing and employee training); (ii) investment strategy, where recession is seen as an opportunity to implement strategic change that would otherwise not have occurred and involves expenditure on innovation and market diversification. Such strategies are risky and many firms are likely to be too preoccupied with short-term survival to think about innovation and growth, or lack the resources to implement such strategies effectively; and (iii) 'ambidextrous' or mixt strategies that combine retrenchment and investment. It is likely that most firms adapt under recession conditions through judicious cost/asset-cutting behaviour and through investment in product innovation and market iv development.

The 2020 Convergence Program was developed taking into account the guidelines set by the European Commission amid high difficulties in achieving a credible medium-term macroeconomic and budgetary forecast, given the context of the challenges posed by the COVID-19 pandemic and the state of emergency declared. Moreover, the European Commission launched on March 20, 2020, with the agreement of the European Council, the "general derogation clause" from the provisions of the Stability and Growth Pact, which allowed temporary and orderly deviation from existing tax rules, both at European and and at national level, for all Member States in a state of widespread crisis caused by a severe economic slowdown in the euro area or the EU as a whole. All Member States, including Romania, have adopted fiscal and budgetary measures to increase the capacity of the health system, to provide assistance to affected citizens and sectors, liquidity support measures or other forms of guarantees and facilities for companies. A similar behavior based on fiscal and budgetary measures to sustain economy and health system was adopted in UK also, even more detailed.

A strict analysis by the OECD (2021) of the COVID-19 crisis reflects 15th aspects to be considered by the business environment regarding small and medium enterprises (SMEs), presented by Figure 1.

Figure 1. Aspects to design effective, efficient and coherent SME and entrepreneurship policies in post COVID-19 crisis



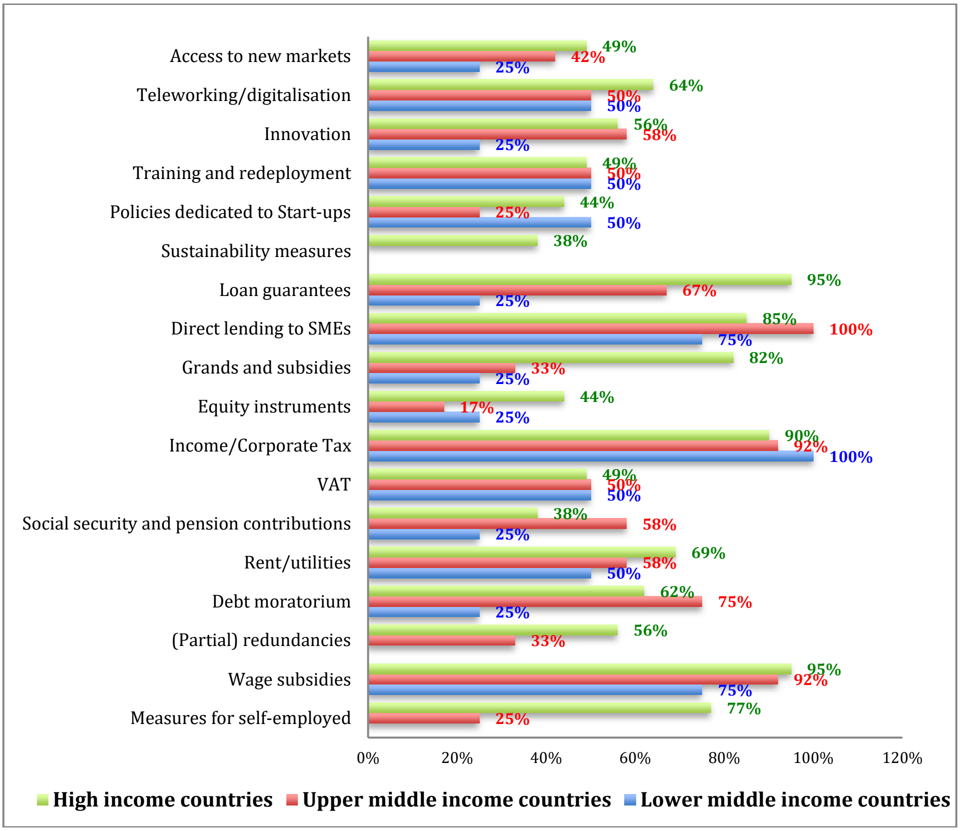
Source: data provided by OECD (2021a)

The SME policy responses can be categorized between those aimed at easing the liquidity concerns highlighted and those aimed at structural support (OECD, 2021a). Liquidity support measures can generally be classified within three categories: (i) Job retention schemes including short-time work schemes and wage subsidy schemes, targeting firms and self-employed and aiming to prevent sharp rises in unemployment as well as to lift consumer demand; (ii) Deferrals of payments including deferrals of income and corporate tax payments, value added tax, social security and pension payments, debt payment moratoria and waivers of rent and utility payments as well as waivers or reductions of financing fees and interest aim to preserve liquidity within SMEs by reducing operating expenses; and (iii) Financial support via debt channels such as: extended and simplified loan guarantees, direct lending through public institutions and support for non-banking finance, through grants and subsidies, or via equity or quasi-equity, including convertible loans.

Structural support measures aim to help SMEs adapt to the changed business environment and build resilience (OECD, 2021a). They include the following categories: (i) Support for digitalisation, including for teleworking and E-sales; (ii) Support for innovation and technology development. In some cases these policies focus on innovations related to the pandemic, in other cases on supporting wider competitiveness; (iii) Support for upskilling and reskilling; (iv) Support for start-ups; (v) Support for finding new alternative markets; and (vi) Support for sustainability.

For each of these structural support categories, countries use a variety of instruments such as business development services and advice, vouchers, grants, training and networking. Figure 2 gives an overview of the financial and structural measures that have been applied across 55 countries based on groups according to their income levels (lower middle income, upper middle income and high income) to support SMEs as a response to the COVID-19 crisis between February 2020 and February 2021.

Figure 2. SMEs support measures applied as a response to the COVID-19 pandemic (February 2020 - February 2021)



Source: data provided by OECD (2021a, 2021b)

The Figure 2 indicates that direct lending to SMEs and Income/Corporate tax are more widely used than others measures. For instance, Income/Corporate tax is used by all lower income countries and direct lending to SMEs by all upper middle income countries. Wage subsidies were used by 95% of high income countries, 92% of upper middle income countries and 75% by lower middle income countries. Sustainability measures are applied only by 38% of high income countries. 95% of high income countries applied loan guarantees.

Policies measures to support teleworking and digitalization are most popular, being adopted by 60% of high income countries, and 50% by lower income and upper middle income.

Table 1 gives an overview of the measures introduced as a response to the COVID-19 crisis by Romania and UK.

Table 1. Romania and UK SMEs and entrepreneurship policy responses to COVID-19 by type of policy instrument (February 2020-February 2021)

		Romania	UK
Labour related schemes	(Partial) redundancies		*
	Wage subsidies	*	*
	Self-employed		*
	Income/ corporate tax	*	*
Deferral measures	Value Added Tax (VAT)		*
	Social security and pension		
	Rent/utilities/	*	*
	Debt moratorium	*	*
	Loan guarantees	*	*
Financial Instruments	Direct lending to SMEs	*	*
	Grants and subsidies		*
	Equity Instruments		*
	New markets		*
Structural Policies	Teleworking/ digitalisation		*
	Innovation		*
	Training and redeployment		*
	Start-ups		*
	Sustainability measures		*

Source: data provided by OECD (2021a)

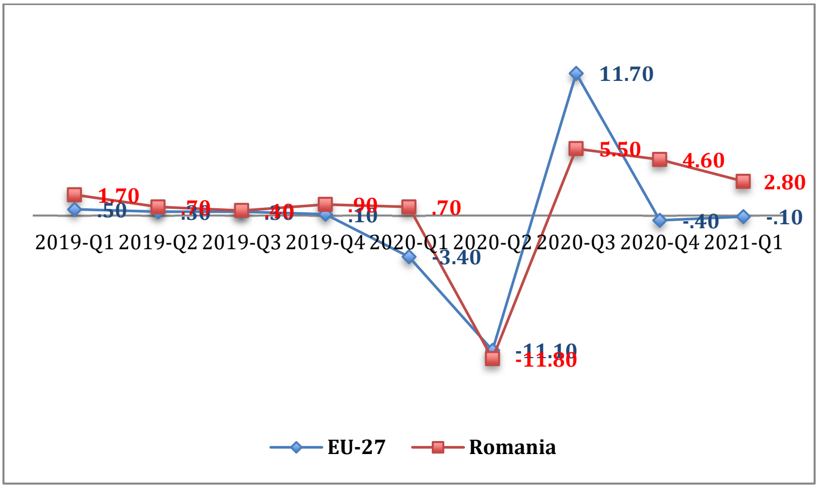
According to Table 1, United Kingdom used almost all measures (excepting Social security and pension) as a response to the COVID-19 crisis, while Romania took only six measures to protect SMEs, respectively two measures regarding Labour related schemes (wage subsidies and Income/corporate tax), three measures regarding Deferral measures (Rent/utilities, Debt moratorium, and Loan guarantees) and used one Financial instruments, more precisely Direct lending to

SMEs. According to this table, it is demonstrate Romania's inability to manage a crisis of SMEs generated by exogenous factors.

3. ECONOMIC AND ENTREPRENEURIAL OUTCOMES IN ROMANIA

Gross domestic product (GDP) is the most commonly used measure for the size of an economy. The GDP is the total of all value added created in an economy. Figure 3 reflects the effect of the COVID-19 crisis on economic performance in Romania.

Figure 3. Dynamic changes of GDP at market prices - chain linked volumes, percentage change on previous period in Romania

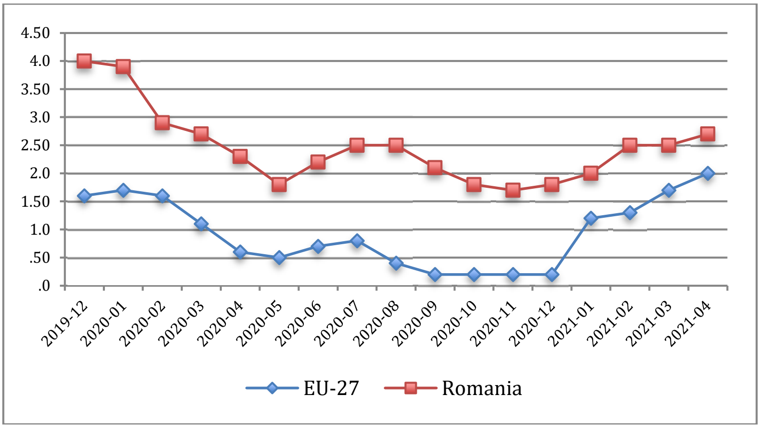


Source: data provided by European Commission (2021)

According to Figure 3, it can be seen that in the second half of 2020 there was a sharp decrease in GDP of over 11% both in Romania and in the EU (as an average). With the elimination of lockdown restrictions, in the 3rd semester, there was a much higher GDP growth than the same period of the previous year (2019), of up to 11.7% in the EU and 5.5% in Romania. In the beginning of 2021, EU-27 decreases in GDP of over -0.10, and Romania of over 2.80.

Figure 4 presents monthly inflation rate for Romania. Data of Figure 4 presents high fluctuations of inflation rate, starting in Romania from 4% in December 2019, with the lowest rate in November 2020, and inflation jumped to its highest level since the start of the pandemic in April 2021. There is a high gap between Romania and EU-27, Romania has a higher inflation rate with almost 2% for all period under analysis. The highest contribution to the inflation rate in all European Union countries came from services and energy.

Figure 4. Inflation Rate - HICP (2015 = 100) - monthly data (annual rate of change)

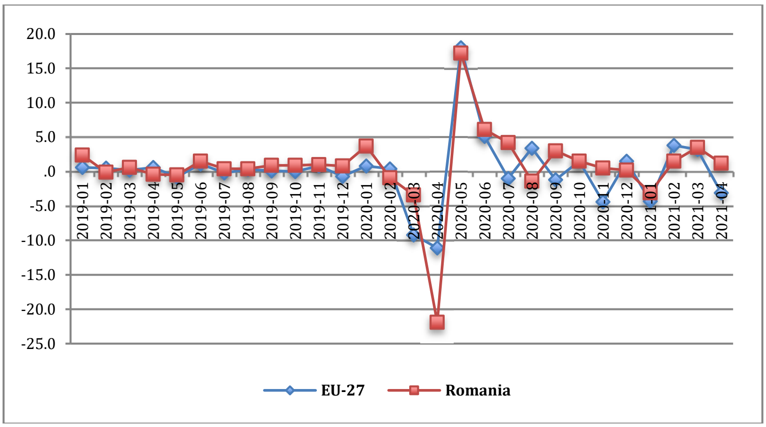


Source: data provided by European Commission (2021)

The lockdown has forced many small businesses to suspend their activities. The most visible effects of the COVID-19 epidemic were the reduction in turnover and the impact produced by the suspension of the company's activities. In this context, 91% of Romanian companies felt affected by the COVID-19 epidemic, with an average total impact of -10.2% for 2020. This reality is in line with European Commission estimates, which forecast a decrease of -7.5% at EU level.

The index of the volume of retail trade measures the evolution of the total amount of sales, adjusted for price changes (deflated), i.e. the evolution of the total amount of goods sold.

Figure 5. Volume of retail trade in Romania and EU-27 (% change on previous period)



Source: data provided by European Commission (2021)

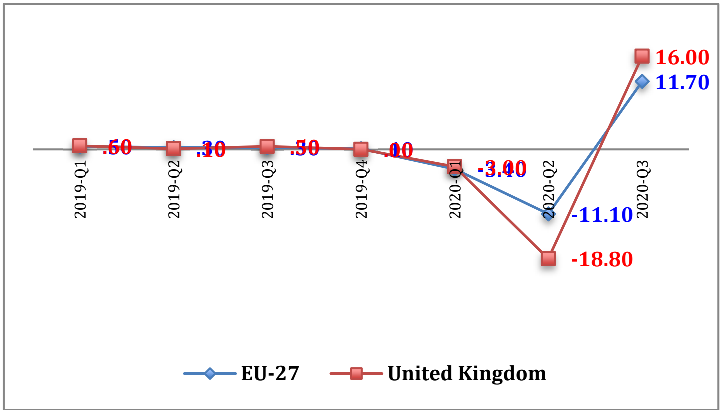
Some businesses have decided that they cannot put an end to it and so they have thought of creative strategies, tools and opportunities through which they continue to serve their customers and even and strengthen its position in the market. In this context, 95% of companies took measures to survive the pandemic crisis, and 90% took them immediately after the start of the lockdown in March. The companies that were decreasing on March 1, 2020 compared to March 1, 2019, estimate a decrease for 2021 as well (Patria Bank, 2021).

4. ECONOMIC AND ENTREPRENEURIAL OUTCOMES IN UK

The COVID-19 pandemic has had a large impact on UK businesses, especially when the lockdown temporarily closed one quarter of companies in the UK and the majority of those operating (in lockdown) have reported lower turnover (Financial Times, 2020).

Figure 6 reflects the evolution of UK GDP as measures were introduced in response to the spread of the COVID-19 pandemic, eased and then subsequently reintroduced over the course of the year 2020.

Figure 6. Dynamic changes of GDP at market prices - chain linked volumes, percentage change on previous period in UK

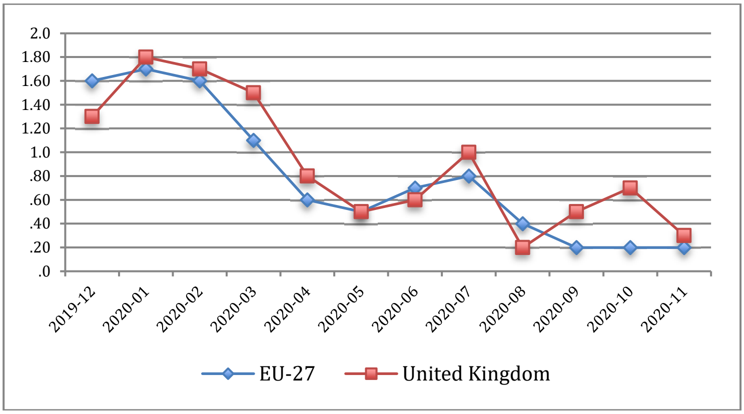


Source: data provided by European Commission (2021)

According to Figure 6, the first round of lockdown measures in second semester (Q2) of 2020 led to an immediate and significant fall in activity across all sectors of the economy and there was a sharp decrease in GDP of over 18.80% in UK, being a higher decrease than the EU-27 (as an average). With the elimination of lockdown restrictions, in the 3rd semester (Q3), there was a much higher GDP growth than the same period of the previous year (2019), of up to 11.7% in the EU and 16% in UK. The fluctuations in the UK are higher than in the EU-27, with a higher decrease in full pandemic and a better recovery in Q3 2020.

Figure 7 presents the inflation rate, monthly data (annual rate of change).

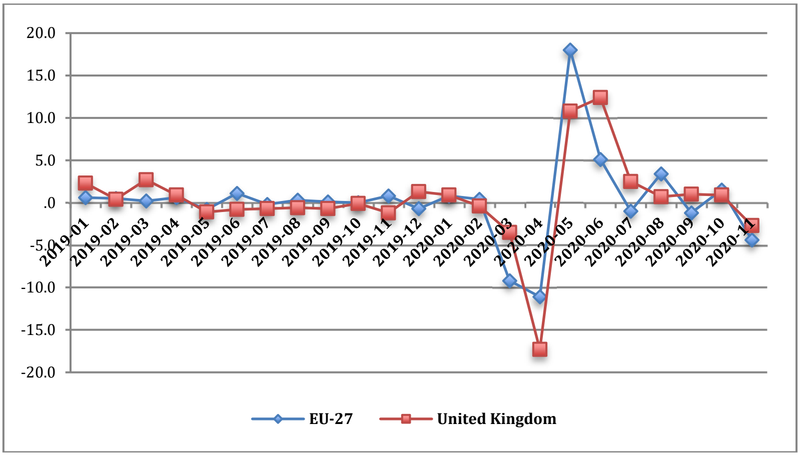
Figure 7. Inflation Rate - HICP (2015 = 100) - monthly data (annual rate of change)



Source: data provided by European Commission (2021)

Data of Figure 7 presents high fluctuations of inflation rate, starting in UK from 1.3% in December 2019, with the lowest rate in August 2020 and November 2020. UK and the average of EU-27 follow almost the same pattern of inflation rate, exception being October 2020, where inflation rate strongly fluctuated in UK compared with EU-27.

Figure 8. Volume of retail trade in UK and EU-27 (% change on previous period)

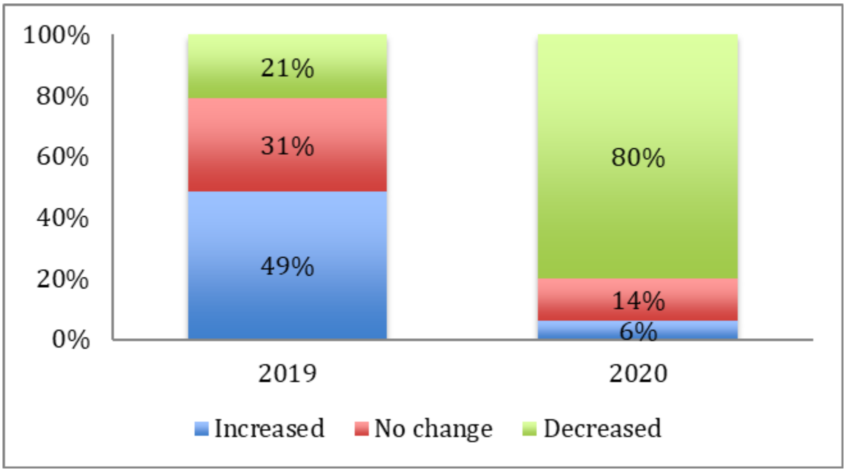


Source: data provided by European Commission (2021)

The first round of lockdown measures, introduced at the end of March 2020, led to an immediate and significant fall in volume of retail trade in UK of 17.3% and, in general, in activity across all sectors of the economy. Between February and May 2020 all sectors recorded a sharp contraction in output, with consumer facing sectors such as accommodation & food service and arts & recreation hardest hit as retail, tourism and leisure related activities were effectively closed.

McKinsey & Company (Albonico, Mladenov and Ruchi, 2020) developed a survey regarding the impact of COVID-19 crisis and based on the 600th respondents results (Figure 9).

Figure 9. Revenue changes in UK SMEs, % of respondents (n = 600)

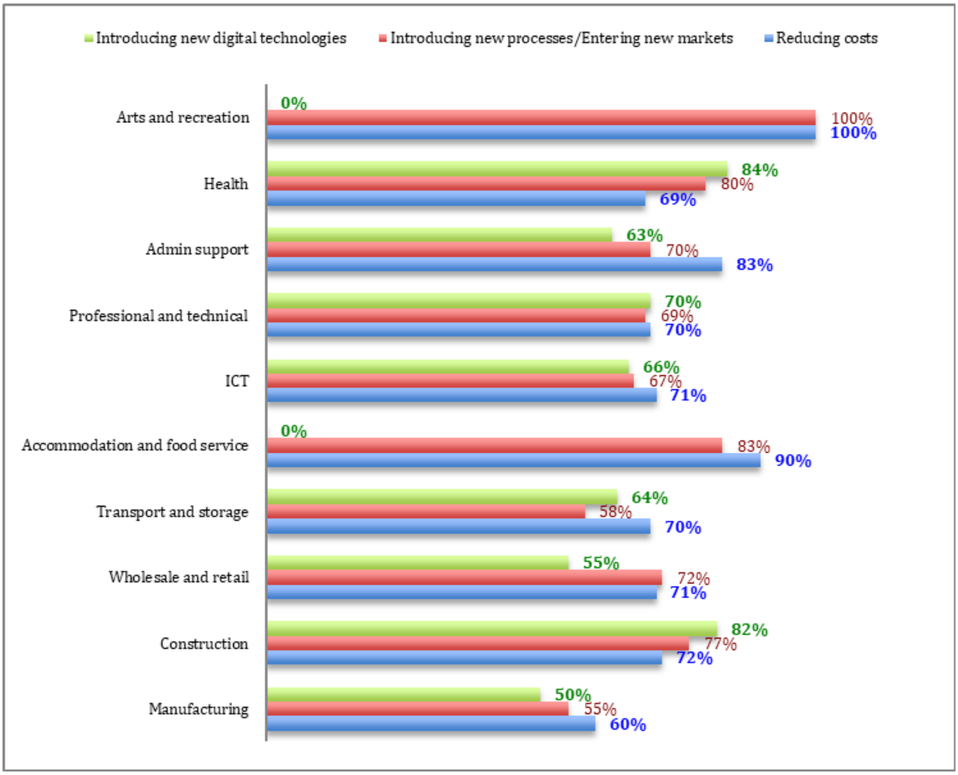


Note: Note: Figures may not sum to 100%, because of rounding.
Source: data provided by Albonico, Mladenov and Ruchi (2020)

According to Figure 9, almost 80% of respondents report unstable and declining revenue in pandemic crisis and other several concerns about defaulting on loans, their ability to retain employees (24%) and to sustain their supply chains (28%), and expectations of reducing headcount in the aftermath of the pandemic (28%) and postponing growth projects (36%) (Albonico, Mladenov and Ruchi, 2020).

Figure 10 shows the priorities that have become more important for businesses in key industry sectors.

Figure 10. Increased importance of business strategies in UK



Source: data provided by Hopley (2020)

In the UK, cost reduction measure tops the priority list for many sectors industries, such as manufacturing, transport and storage, accommodation and food service, professional and technical, admin support, and arts and recreation. Construction and Health sectors introduced new digital technologies. Wholesale and retail introduced new processes.

5. DISCUSSION AND CONCLUSIONS

COVID-19 pandemic negativelly impacted on businesses of SMEs, where the fall in demand and the need to pause business operations, being the main drag on activity. The majority of SMEs in both contries, Romania and United Kingdom, had adjusted their business strategy in response to the pandemic, some of them chaging radicaly their activity, some of them becoming more productive and some of them try to survive with the help of state grands. The theory agree that minimising trade disruptions, particularly for SMEs, will be critical in maintaining functioning supply chains.

References

1) Albonico, M., Mladenov, Z. and Ruchi, S. (2020). *How the COVID-19 crisis is affecting UK small and medium-size enterprises*. McKinsey & Company. [online] Available at: https://www.mckinsey.com/~/media/McKinsey/Industries/Public%20Sector/Our%20Insights/How%20the%20COVID%2019%20crisis%20is%20affecting%20UK%20small%20and%20medium%20size%20enterprises/How-the-COVID-19-crisis-is-affecting-UK-small-and-medium-size%20enterprises.pdf [Accessed 12.03.2021].
2) Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M. and Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, 117(30), pp. 17656–17666. https://doi.org/10.1073/pnas.2006991117.
3) Bryson, J. (1996). Small Business Service Firms in the 1990s Recession in the United Kingdom: Implications for Local economic Development. *Local Economy*, 11(3), pp. 221-236.
4) Dornean, A. and Sandu, A. (2013). The effects of the current global economic and financial crisis on the EU budget. *Transylvanian Review of Administrative Sciences,* 9(40), pp. 35-48.
5) European Commission, (2021). *EUROPEAN STATISTICAL Recovery Dashboard*. [online] Available at: https://ec.europa.eu/eurostat/cache/recovery-dashboard/ [Accessed 12.03.2021].
6) Financial Times, (2020). *Covid-19 shuts down a quarter of UK businesses.* [online] Available at: https://www.ft.com/content/f9537538-d7a0-44e3-8e86-5cb9a984aae4 [Accessed 12.03.2021].
7) IMF, (2021). *IMF Country Information.* [online] Available at: https://www.imf.org/en/Countries [Accessed 12.03.2021].
8) Kitching, J., Blackburn, R., Smallbone, D. and Dixon, S. (2009). Business Strategies and Performance during Difficult Economic Conditions. *Technical Report URN* 09/1031.
9) Narjoko, D. and Hill, H. (2007). Winners and losers during a deep economic crisis: Firm-level evidence from Indonesian manufacturing. Asian Economic Journal, 21(4), 343–368. https://doi.org/10.1111/j.1467-8381.2007.00261.x.
10) OECD, (2020a). *Coronavirus (COVID-19): SME policy responses*. [online] Available at: https://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/ [Accessed 12.03.2021].
11) OECD, (2020b). *OECD Economic Outlook,* 2020(1). Paris: OECD Publishing. [online] Available at: https://dx.doi.org/10.1787/0d1d1e2e-en. [Accessed 12.03.2021].
12) OECD, (2021a). *One year of SME and entrepreneurship policy responses to COVID-19: Lessons learned to "build back better"*. [online] Available at: https://www.oecd.org/coronavirus/policy-responses/one-year-of-sme-and-entrepreneurship-policy-responses-to-covid-19-lessons-learned-to-build-back-better-9a230220/ [Accessed 12.03.2021].

13) OECD, (2021b). An in-depth analysis of one year of SME and entrepreneurship policy responses to COVID-19: lessons learned for the path to recovery. *OECD SME and Entrepreneurship Papers*, forthcoming. Paris: OECD Publishing.
14) Patria Bank, (2021). *Studiu MKOR: Cum se resimte Impactul Epidemiei de COVID-19 în Mediului de Afaceri din România.* [online] Available at: https://www.patriabank.ro/blog/resurse/impactul-crizei-covid19-mediu-de-afaceri-romania [Accessed 12.03.2021].
15) Pedauga, L., Sáez, F. and Delgado-Márquez, B. L. (2021). Macroeconomic lockdown and SMEs: the impact of the COVID-19 pandemic in Spain. *Small Businesses Economics*, 1(1), pp. 1-24. https://doi.org/10.1007/s11187-021-00476-7
16) Soininen, J., Puumalainen, K., Sjögrén, H. and Syrjä, P. (2012). The impact of global economic crisis on SMEs Does entrepreneurial orientation matter? *Management Research Review*, 35(10), pp. 927–944. https://doi.org/10.1108 /01409171211272660.

HUMAN CAPITAL STOCK IN TIME OF CORONAVIRUS PANDEMIC. EMPIRICAL INVESTIGATION

LAURA DIACONU (MAXIM)
Alexandru Ioan Cuza University of Iasi
Iasi, Romania
lauradiaconu_07@yahoo.com

Abstract
The rapid spread of the COVID-19 pandemic throughout the globe highlighted the strengths and weaknesses of the healthcare systems, political institutions and of the economies themselves. Considering the visible short term costs of this crisis, among which can be mentioned the tremendous losses of human life, business failures and job losses, governments began to impose restrictive measures concerning the activities and movements of population. Yet, in the beginning of 2020, a major concern was related to the fact that low and middle income states would be hit much harder than advanced economies, both on the public health and economic fronts. From the point of view of the public health, these countries have a lower capacity of the healthcare system, proxied by the number of hospital beds, medical equipment and medical personnel. The main economic concern regarding these states was that they are more susceptible to economic contraction after the health crisis. Considering all these aspects, the purpose of this study is to investigate the effects of Coronavirus pandemic on the human capital stock of Romania and the potential recovery pathways. Using an empirical approach based on the secondary data investigation, we started our research by underlying the medium and long-run effects on health status, as major pillar of human capital, of historical pandemics and recessions. Afterwards, we highlighted the particular challenges faced by Romania in the attempt to manage the spread and limit the impact of COVID-19 disease, which revealed valuable insights into areas that are in need of major improvements in order to avoid a human capital stock's reduction and, consequently, a diminishing economic prosperity.
Keywords: *Coronavirus pandemic; healthcare system; human capital stock; Romania.*
JEL Classification: H51, I18

1. INTRODUCTION

As the COVID-19 health crisis spread, all countries became concerned about its potentially catastrophic consequences, as it greatly impacted the social, political, economic and healthcare aspects. Indeed, the COVID-19 pandemic seems to be a reality check for many aspects of an economy, regarding their overall readiness for a global crisis that affects various pillars of a society.

In the early months of 2020, it was expected that less developed and developing states would be much harder hit than the advanced economies both from the public health point of view and from the economic one. Regarding the public health aspect, it is known that lower developed states have a reduced capacity of the health care sector, as proxied by number of hospital beds, medical equipment, medicines and medical personnel, in terms of both quantity and quality (Anser *et al*., 2020). Therefore, their healthcare systems may not be able to absorb and manage sudden and persistent pressures on the workload, particularly in the acute care.

From the economic perspective, these countries can be more vulnerable to economic contractions after a health crisis. Moreover, while the developed states are confronting with economic issues generated from their efforts to contain the virus, the negative economic impact on less developed countries are, in general, related to the spillovers from the advanced economies' policies (Chaudhary, Sodani and Das, 2020).

Despite these pessimistic opinions, after a year and a half since the spread of the virus, the statistics show that the worst affected were, surprisingly, the developed economies (Beach, Clay and Saavedra, 2020). Their public health surveillance programs and available infrastructures proved to be not consistently optimal. Moreover, their healthcare expenditures tremendously augmented along with the increase in the intensity of the virus.

Considering all these aspects, the purpose of this study is to investigate the effects of Coronavirus pandemic on the human capital stock of Romania and the potential recovery pathways. In order to achieve this purpose, we have used an empirical approach based on the secondary data investigation.

2. LITERATURE REVIEW

Even if the COVID-19 crisis started less than two years ago, some short and long run effects on human capital can be depicted or estimated, based on the experience from other pandemics and recessions. On the short term, any health crisis burdens the healthcare systems and government assistance programs, reduces the work capacity, the stock of human capital and the economic prosperity (Almond and Currie, 2011). On the long run, the particular characteristics of the current crisis raise the risk of the potentially lasting morbidity among its many survivors (Arthi and Parman, 2021).

Even if the past pandemics had different empirical settings and epidemiological characteristics, they may offer a rich evidence base for the possible long-run effects of COVID-19 from the perspective of morbidity and mortality.

Going back to the Justinian Plague of 542, it can be noticed that, even in that period, the spread area was very large, reaching many parts of Asia, Africa and Europe. Similarly, the plague pandemic that started in Canton and Hong Kong in 1894 spread out to 77 ports across five continents (WHO, 2000). During the 1918 influenza pandemic, almost every country with consistent mortality statistics showed many deaths cases (Barro, Ursúa and Weng, 2020). All these examples indicate that even during previous periods, when countries were less tightly integrated than they are today, the pandemics succeeded to spread out across many countries from different continents. This fact underlines, once again, the importance of isolation and limited interactions between individuals (Nunn and Qian, 2010), especially nowadays, when global connectedness and population density increased.

Despite all the similarities, the current pandemic is, however, different from other historical catastrophic diseases in terms of the acute public health crisis alongside massive and widespread economic disruptions. For example, during 1957 influenza pandemic, the unemployment peaked at 7.4% in USA and the Dow Jones fell 15% (Simonsen *et al.*, 1997). Meanwhile, during the 2020 summer, the unemployment had a double digit in USA, while the Dow Jones fell by over 35%. Therefore, since previous health crises had the capacity to reshape the global economy through their effects on population size and demographic structure (Voigtländer and Voth, 2013), we might expect to see a great harm in the long run, considering the magnitude of COVID-19 short-run morbidity, mortality and economic disruptions. Moreover, previous health crises had long run consequences on various aspects of a society. While some analysts indicated the direct impact of pandemics on human capital stock (Bleakley, 2010), others focused on their consequences on the institutional development (Acemoglu, Johnson and Robinson, 2001).

Regarding the policy makers' responses to the health crises that occurred during time, it is interesting to find out that the implemented measures, mostly limited to quarantining sick individuals, restricting public gatherings and social interaction (Markel *et al.*, 2007), did not differ very much depending on the form of government. Moreover, it was found out that the democracy features did not have a significant contribution in controlling the spread of the disease. For example, Troesken (2015) points out that the institutional features of the USA which enhanced the economic development of the country (the decentralized federal system, a focus on property rights and commerce and protection of individual liberties) reduced the authorities' attempts to control the past outbreaks of smallpox, typhoid and yellow fever.

Yet, it was noticed that the socioeconomic status does matter (Carmichael, 2014). During the plagues of the fifteenth and sixteenth centuries, a negative relationship between socioeconomic status and mortality could be observed (Alfani, 2013). Meanwhile, the 1918 influenza pandemic hit harder the poor people (Mamelund, 2018) because low incomes reduced the ability of the disadvantaged groups to avoid exposure and look for treatment (Crosby, 2003). Referring to the situation from South Africa during the 1918 influenza pandemic, Fourie and Jayes (2021) mentioned that the pre-existing racial inequalities in the access to healthcare services were responsible for the differences in the mortality across communities. Thienemann *et al.* (2020) considers that high population density and increased poverty positively influence the spread and the severity of

COVID-19. In this context, Khan *et al.* (2020), stating that low-income countries are more vulnerable to the current health crisis than the developed ones, estimate that it will be very difficult for the Asian states to cope with COVID-19 consequences, because of the lack of the access to basic amenities. While Rollins (2020) stated that the most difficult to find the way to escape COVID-19 would be for the low-income economies, Walker *et al.* (2020a) considered that the effects of the pandemic will also be strongly felt by the developing countries due to the poor health infrastructure and the surplus of demand.

Taking into account all these aspects, we consider that it is important to evaluate the resilience of Romania in the presence of the current health crisis. Based on the previous studies' results, we launch the research hypothesis:

H1. The impact of COVID-19 pandemic on health status, as major pillar of human capital, is higher in Romania than in the more developed Western European states.

3. RESEARCH METHODOLOGY AND DATA

Using an empirical approach based on the secondary data investigation, we investigated how Romania managed to react to the pandemic, from the public health perspective, in comparison with 4 of the most developed economies from European Union (EU) in 2019: United Kingdom, Spain, Germany and France. We have chosen these states since they were both among the first states according to the real GDP/capita in EU in 2019 (Eurostat, 2020) and the worst hit by the COVID-19 pandemic.

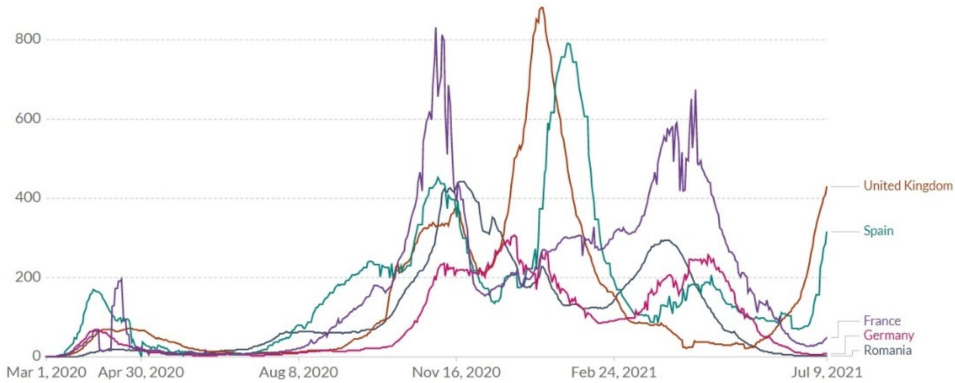
We measured the COVID-19 outcomes in terms of health status with the help of indicators such as: "deaths per million", "fatality rate of COVID-19 pandemic" and "cumulative confirmed COVID-19 cases". The data was taken from "Our World in Data COVID-19 Dataset", compiled based on statistics released by the European Centre for Disease Prevention and Control. Moreover, in order to see if the relationship between countries' per-capita income and deaths per million can be explained through demographics (age) and obesity, we have used two other variables: "obesity prevalence (% of adults)" and "population over age 70 (%)", taken from World Bank statistics.

To see the policy response to the pandemic, we have used "COVID-19: stringency index", also taken from "Our World in Data COVID-19 Dataset".

4. RESULTS AND DISCUSSIONS

In Romania, the first confirmed COVID-19 case was reported on 27th of February 2020, latter than in other developed Western European states. Moreover, as it can be seen in Figure 1, the magnitude of the pandemic in Romania was much more reduced compared to the 4 developed states considered into our analysis: UK, Spain, France and Germany.

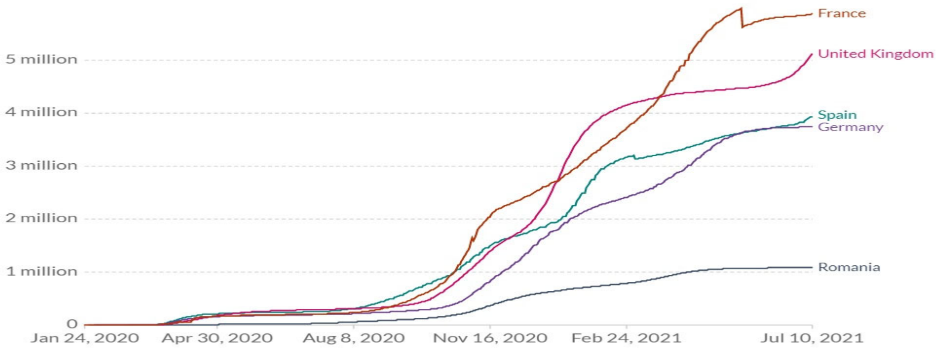
Figure 1. Daily new confirmed COVID-19 cases per million people in Romania versus UK, Spain, France and Germany between March 2020 and July 2021



Source: adapted from Our World in Data COVID-19 Dataset (2021a)

Even if the number of confirmed cases is lower than the number of actual cases due to the limited testing, we can see that the cumulative confirmed COVID-19 cases in Romania are much reduced than in UK, Spain, Germany or France, during the entire analyzed period (Figure 2).

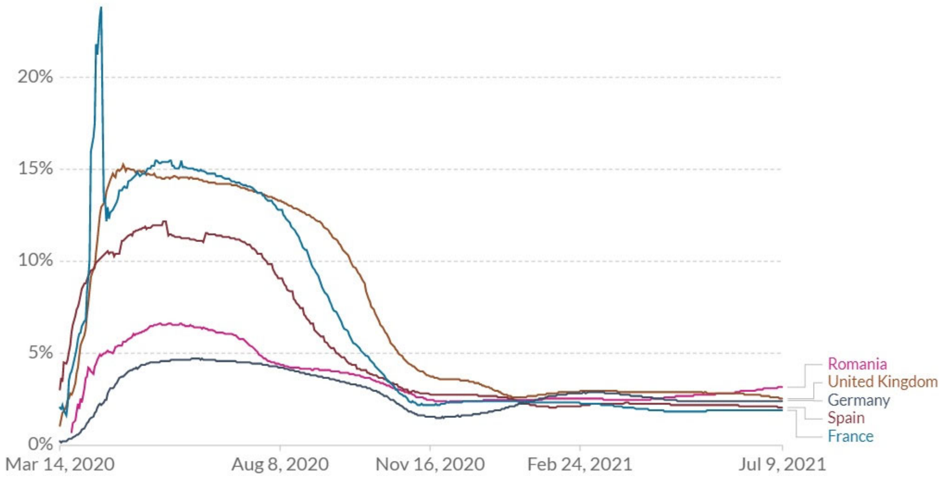
Figure 2. Cumulative confirmed COVID-19 cases in Romania versus UK, Spain, France and Germany between March 2020 and July 2021



Source: adapted from Our World in Data COVID-19 Dataset (2021b)

Another important indicator in the case of the current pandemic is the case fatality rate of COVID-19, which represents the ratio between the confirmed deaths and the confirmed cases. Yet, considering the fact that it takes into account only the confirmed cases, it cannot estimate the mortality risk of the disease. From the point of view of the case fatality rate of COVID-19, we can see from Figure 3 that, among the 4 developed states we considered, Germany had the lowest values of this indicator for the entire period, even lower than Romania. This means that in Germany the number of the diagnosed cases was much higher than the number of the people who have died. Since June 2021, Romania had the highest rate among all the analyzed states, fact that could be explained through the increased number of deaths – the peak being reached in the end of June: 8.6 deaths per million people (Our World in Data COVID-19 Dataset, 2021c).

Figure 3. Case fatality rate of COVID-19 pandemic in Romania versus UK, Spain, France and Germany between March 2020 and July 2021



Source: adapted from Our World in Data COVID-19 Dataset (2021c)

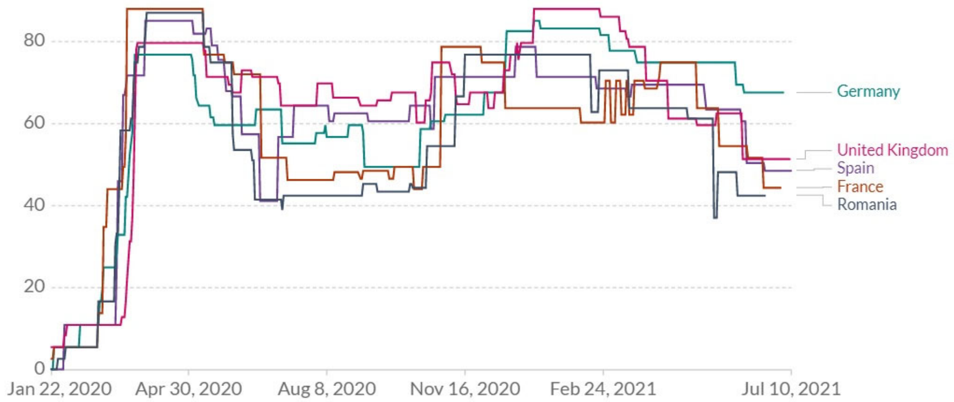
Considering these results, which show that the pandemic had a higher impact on the developed states than on Romania, we reject our research hypothesis: *H1. The impact of COVID-19 pandemic on health status, as major pillar of human capital, is higher in Romania than in the more developed Western European states.*

Moreover, we wanted to find out if the positive relationship between countries per-capita income and death per million can be explained through demographics (age – population over 70 years old) and obesity. We considered these two variables because it is known that in developed states the population is older and the obesity prevalence higher than in the developing or less developed countries (Walker *et al.*, 2020b; Lighter *et al.,* 2020). In order to test that, we have used the correlation analysis. Both correlation coefficients were positive and significant, suggesting that for a 1 percentage point increase in the population over 70, deaths per million increase by 0.93 of a percent. Meanwhile, a 1 percentage point increase in obesity prevalence, deaths per million raise by 0.65 of a percent.

Our results are in line with the findings of other studies. For example, Zhou *et al.* (2020) concluded that advanced age is a leading risk factor for severe COVID-19 illness and mortality, suggesting that lower income countries may face a lower disease burden since their population is younger. Meanwhile, Sattar, McInnes and McMurray (2020) found that obesity is another risk factor for the severe forms of the disease, and the obesity's prevalence increases with income.

In order to see the policy makers' responses to the pandemic, we have analyzed the COVID-19 stringency index, which is a composite measure of nine of the response metrics: school closures, workplace closures, cancellation of public events, restrictions on public gatherings, closures of public transport stay-at-home requirements, public information campaigns, restrictions on internal movements and international travel controls (Our World in Data COVID-19 Dataset, 2021d). We have chosen this index since it encompasses a wide range of measures and its evolution is available for all 5 analyzed states (see Figure 4).

Figure 4. COVID-19: stringency index in Romania versus UK, Spain, France and Germany between March 2020 and July 2021



Source: adapted from Our World in Data COVID-19 Dataset (2021d)

Since a higher score of this index suggests a stricter response, we can notice that the Romanian authorities implemented prompt measures to reduce the spread of the virus. Except for June-October 2020 and May-July 2021, when the index in Romania had the lowest values, for the rest of the analyzed period, in Romania, the values of the index were comparable if not superior to the other states included into the analyses.

Yet, despite the fact that Romania rapidly implemented security measures during the periods with the highest spreading risk, there are other institutional factors that exacerbated the challenges posed by the COVID-19 pandemic. First of all, the majority of the medical services are provided through the public healthcare system, which still largely relies on an old and inappropriate infrastructure, which, during a pandemic, leads to a lack of necessary equipment and inadequate medical facilities (Vladescu *et al.*, 2016). Secondly, Romania has the lowest health expenditure of all EU countries in both percentage of gross domestic product and per capita expenditure (World Health Organization, 2020), which worsens the situation. Thirdly, the Romanian healthcare system confronts with the understaffing issue, due to the continuous emigration of medical personnel (Neagu, 2019). To all these, it adds the fact that a part of the existing personnel resigned in order to raise the awareness regarding the problems of the healthcare system. A first response coming from government officials was related to the withdrawal of rights to practice medicine from the resigning healthcare persons. This aspect underlined, once again, the unsolved problems from the healthcare system and the lack of solutions coming from policy makers.

All these issues of the Romanian healthcare system raised serious challenges during the early stages of the COVID19 epidemic in Romania. Yet, by prompt responses and initiatives, an uncontrolled spread of the virus was avoided. As mentioned before, the impact of COVID-19 pandemic on health status in Romania was lower than in the more developed Western European states.

5. CONCLUSIONS

According to our findings, Romania was not hit by COVID-19 pandemic as hard as other developed European states. However, despite this, the current health crisis has highlighted the areas of the Romanian healthcare system where improvements are immediately required so that other future similar scenarios could be successfully managed. From this perspective, we can say that the COVID-19 pandemic represented a transformation catalyst, underlying the need for urgent implementation and adoption of changes in public health interventions.

Therefore, it is expected a new model of healthcare delivery, with more emphasis on preventive measures, remote care and substantial technological improvements.

Moreover, in order to control and limit the long term effects of COVID-19, it is important to consider the health and economics impacts of the pandemic in a close relationship. Thus, identifying the channels through which income loss and other negative consequences of the crisis impact the health status is necessary for properly analyzing any change in population health levels during COVID-19 and for designing effective policies.

References

1) Acemoglu, D., Johnson, S. and Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review*, 91(5), pp. 1369–1401.
2) Alfani, G. (2013). Plague in seventeenth-century Europe and the decline of Italy: An epidemiological hypothesis. *European Review of Economic History*, 17(4), pp. 408–430.

3) Almond, D. and Currie, J. (2011). Human capital development before age five. In: O. Ashenfelter and D. Card, eds. *Handbook of Labor Economics*, 4(B), pp. 1315–1486. Amsterdam: North-Holland.
4) Anser, M. K., Yousaf, Z., Khan, M. A., Nassani, A. A., Alotaibi, S. M., Abro, M. M. Q. and Zaman, K. (2020). Does communicable diseases (including COVID-19) may increase global poverty risk? A cloud on the horizon. *Environmental Research*, 187, 109668.
5) Arthi, V. and Parman, J. (2021). Disease, downturns, and wellbeing: Economic history and the long-run impacts of COVID-19. *Explorations in Economic History*, 79, 101381.
6) Barro, R. J., Ursúa, J. F. and Weng, J. (2020). The coronavirus and the Great Influenza Pandemic: Lessons from the “Spanish Flu” for the coronavirus’s potential effects on mortality and economic activity. *NBER Working Paper no. 26866*. [online] Available at: https://www.nber.org/papers/w26866 [Accessed 05.04.2021].
7) Beach, B., Clay, K. and Saavedra, M. H. (2020). The 1918 Influenza Pandemic and its Lessons for COVID-19. *NBER Working Paper 27673*, DOI: 10.3386/w27673. [online] Available at: https://www.nber.org/papers/w27673 [Accessed 05.04.2021].
8) Bleakley, H. (2010). Malaria eradication in the Americas: A retrospective analysis of childhood exposure. *American Economic Journal: Applied Economics*, 2(2), pp. 1–45.
9) Carmichael, A. G. (2014). *Plague and the poor in Renaissance Florence*. Cambridge: University Press.
10) Chaudhary, M., Sodani, P. R. and Das, S. (2020). Effect of COVID-19 on economy in India: some reflections for policy and programme, *Journal of Health Management*, 22(2), pp. 169–180.
11) Crosby, A. W. (2003). *America’s forgotten pandemic: the influenza of 1918*. Cambridge: University Press.
12) Eurostat, (2020). *Real GDP per capita*. [online] Available at: https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/bar?lang=en [Accessed 05.04.2021].
13) Fourie, J. and Jayes, J. (2021). Health inequality and the 1918 influenza in South Africa, *CAGE Online Working Paper Series 532*. [online] Available at: https://ideas.repec.org/p/cge/wacage/532.html [Accessed 15.04.2021].
14) Khan, S., Siddique, R., Ali, A., Xue, M. and Nabi, G. (2020). Novel coronavirus, poor quarantine, and the risk of pandemic. *Journal of Hospital Infection*, 104(4), pp. 449–450.
15) Lighter, J., Phillips, M., Hochman, S., Sterling, S., Johnson, D., Francois, F. and Stachel, A. (2020). Obesity in patients younger than 60 years is a risk factor for Covid-19 hospital admission. *Clinical Infectious Diseases*, 71(15), pp. 896-897. doi: 10.1093/cid/ciaa415.
16) Mamelund, S. E. (2018). 1918 pandemic morbidity: the first wave hits the poor, the second wave hits the rich. *Influenza Other Respiratory Viruses,* 12(3), pp. 307–313.
17) Markel, H., Lipman, H. B., Navarro, J. A., Sloan, A., Michalsen, J. R., Stern, A. M., and Cetron, M. S. (2007). Nonpharmaceutical interventions implemented by U.S. cities during the 1918-1919 influenza pandemic. *JAMA*, 298(6), pp. 644–654.

18) Neagu, A. (2019). *Map of the Medical Staff Deficit: 424 Localities in Romania Have No Family Doctor, and 1,098 Localities Have Insufficient Family Doctors*. [online] Available at: https://www.hotnews.ro/stirisanatate-23561486-harta-deficitului-medici-424-localitati-din-romanianu-niciun-medic-familie-iar-1-098-localitati-medici-familie-insuficientipentru-acoperi-populatia.htm [Accessed 17.03.2021].
19) Nunn, N. and Qian, N. (2010). The Columbian exchange: a history of disease, food, and ideas. *Journal of Economic Perspectives*, 24(2), pp. 163–188.
20) Our World in Data COVID-19 Dataset, (2021a). *Daily new confirmed COVID-19 cases.* [online] Available at: https://ourworldindata.org/covid-cases?country=~ROU [Accessed 17.03.2021].
21) Our World in Data COVID-19 Dataset, (2021b). *Cumulative confirmed COVID-19 cases*. [online] Available at: https://ourworldindata.org/covid-cases?country=~ROU [Accessed 17.03.2021].
22) Our World in Data COVID-19 Dataset, (2021c). *The case fatality rate*. [online] Available at: https://ourworldindata.org/mortality-risk-covid [Accessed 18.03.2021].
23) Our World in Data COVID-19 Dataset, (2021d). *COVID-19: stringency index.* [online] Available at: https://ourworldindata.org/covid-stringency-index [Accessed 17.03.2021].
24) Rollins, J. A. (2020). The coronavirus: exposing our nation's vulnerabilities. *Journal of Pediatric Nursing*, 46(2), pp. 57–59.
25) Sattar, N., McInnes, I. and McMurray, J. (2020). Obesity a risk factor for severe COVID-19 infection: multiple potential mechanisms. *Circulation*, 142(1), pp. 4-6. [online] Available at: http://dx.doi.org/10.1161/CIRCULATIONAHA.120.047659 [Accessed 17.03.2021].
26) Simonsen, L., Clarke, M. J., Williamson, G. D., Stroup, D. F., Arden, N. H. and Schonberger, L. B. (1997). The impact of influenza epidemics on mortality: Introducing a severity index. *American Journal of Public Health*, 87(12), pp. 1944–1950.
27) Thienemann, F., Pinto, F., Grobbee, D. E., Boehm, M., Bazargani, N., Ge, J. and Sliwa, K. (2020). World heart federation briefing on prevention: coronavirus disease 2019 (COVID-19) in low-income countries. *Global Heart*, 15(1), pp. 1-5. [online] Available at: http://doi.org/10.5334/gh.778 [Accessed 17.03.2021].
28) Troesken, W. (2015). *The Pox of Liberty: How the Constitution Left Americans Rich, Free, and Prone to Infection*. Chicago: University of Chicago Press.
29) Vladescu, C., Scintee, S. G., Olsavszky, V., Hernandez-Quevedo, C. and Sagan, A. (2016). Romania: health system review. *Health Systems in Transition*, 18, pp. 1-170.
30) Voigtländer, N. and Voth, H.-J. (2013). The three horsemen of riches: Plague, war, and urbanization in early modern Europe. *Review of Economic Studies*, 80, pp. 774–811.
31) Walker, P. G., Whittaker, C., Watson, O., Baguelin, M., Ainslie, K. E. C., Bhatia, S. and Cucunuba, Z. (2020a). On behalf of the imperial college covid-19 response team. In: *The Global Impact of COVID-19 and Strategies for Mitigation and Suppression*. London: Imperial College of London.
32) Walker, P. G. T., Whittaker, C., Watson, O.J., Baguelin, M., Ainslie, K. E. C., Bhatia, S., Bhatt, S., Boonyasiri, A., Boyd, O. and Cattarino, L. (2020b). The impact of

COVID-19 and strategies for mitigation and suppression in low- and middle-income countries. *Science,* 369(6502), pp. 413-422. DOI: 10.1126/science.abc0035.

33) World Health Organization, (2000). *WHO Report on Global Surveillance of Epidemic-prone Infectious Diseases*. [online] Available at: https://www.who.int/csr/resources/publications/surveillance/WHO_Report_Infectious_Diseases.pdf [Accessed 17.03.2021].
34) World Health Organization, (2020). *Global Health Expenditure Database*. [online] Available at: https://apps.who.int/nha/database/Select/Indicators/en [Accessed 17.03.2021].
35) Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B. and Gu, X. (2020). Clinical Course and Risk Factors for Mortality of Adult Inpatients with COVID-19 in Wuhan, China: A Retrospective Cohort Study. *Lancet*, 395(10229), pp. 1054-1062. Doi: 10.1016/S0140-6736(20)30566-3.

THE EVOLUTION OF GREEN FINANCE IN THE CONTEXT OF COVID-19 PANDEMIC. FOCUS ON EU-27

ADINA DORNEAN
Alexandru Ioan Cuza University of Iaşi
Iaşi, Romania
amartin@uaic.ro

ADA-IULIANA POPESCU
Alexandru Ioan Cuza University of Iași
Iași, Romania
ada.popescu@uaic.ro

Abstract
The present paper carries on with our previous research on green finance and sustainable development, highlighting the evolution of green finance during COVID-19 pandemic. A challenge such as sustainable development in times of pandemic is something that humankind did not face in modern era, if ever. Mixed signals from the global market and lack of data during these couple of years had generated fear, confusion and indecision in taking major economic steps in order to surpass the problems created by the social and, in some respect, economic lock-down. But, in spite of all of these shortcomings, maybe this is the time when we need to be bold and move towards a sustainable economy that relies much more than before on green finance.
The article is focusing on the potential link between the pandemic and the economic decline of the EU-27 common market and on the evolution of green finance instruments, such as bonds, in the same context, in order to prove the necessity of a renewed sustainable financial strategy meant to bring a much needed environmental protection boost to our planet and our lives.
Keywords: *green finance; COVID-19; sustainable development; European Union.*
JEL Classification: O13, O52, Q01, Q56

1. INTRODUCTION

Sustainable development calls for changes in the use and value of the financial assets and of their link with the achievement of real wealth and its management. Thus, a sustainable financial system has to rely on valuable financial assets that can be the base of proper wealth, wealth that is generated by a long-term environmentally sustainable economy (UNEP Inquiry Report, 2015).

During the last ten years, green finance has become an important instrument meant to deal with environmental perils associated with climate change and a necessity for sustainable development (Klioutchnikov and Kliuchnikov, 2021). Green finance represents the base for communities that aim to have a resource-efficient, low carbon emissions, environment friendly and more socially and inclusive economy. Today, environmental safety conditions sustainable development. The COVID-19 pandemic brought extra focus on green finance as an economic mechanism for creating friendlier environmental living.

The remainder of the paper is structured as follows: section 2 provides a literature review regarding the green finance concept and regarding the relationship green finance - sustainable development - COVID-19. Section 3 analyses with detailed the most important evolutions of green finance instruments (focusing on green bonds). Section 4 concludes and provides our findings and policy implications.

2. LITERATURE REVIEW

Interest in green finance, commonly defined as the financing of investments that provide environmental benefits, and also in green finance instruments, such as green bonds has been increasing rapidly (Ehlers, Mojon and Packer, 2020).

Cigu (2020) highlighted the role of green finance, which "becomes inevitable in a society whose principles are based on sustainable development". Thus, it is important that states all over the word harmonize globally green finance because there is not agreement among researchers not even regarding the concept of *green finance*.

In our previous research regarding green finance and sustainable development (Popescu and Dornean, 2020) we presented different approaches of green finance from the literature and also of different organizations, such as G20 group, Organisation for Economic Co-operation and Development (OECD), United Nations (UN), European Banking Federation, European Commission. We identified few main elements in all of these definitions: capital is allocated for sustainability purposes; environmental friendly investments are meant to reduce pollution, to facilitate the use of new alternative energy resources, to enhance waste management technologies, to reforest, to recycle etc.; the recognition and management of present and future environmental risks that could affect the financial sector and the society as a whole; the need for adequate green finance policies and infrastructure; and the major link between sustainable development and economic growth. In this context, we defined green finance as "a strategic approach in the financial sector meant to deal with climate change and, in consequence, with the transition to a low-carbon economy" (Popescu and Dornean, 2020).

Liebich *et al.* (2020) also noticed that "there are plenty of definitions aiming at characterizing the purpose and role of green finance in the transition to a low-carbon economy". In his opinion, in the case of green bonds, which are our study objective, green finance encompasses investments in projects or securities whose proceeds are used for climate change mitigation and adaptation as well as other environmental projects.

Green bonds are seen by Kabaivanov and Markovska (2019) as innovative financial instruments, that allow to attract private funding to projects mitigating climate change and facilitating implementation of environmentally friendly programs. Another important characteristic of green bonds and the only one that differentiates them from regular bonds is the issuance purpose (Wiśniewski and Łyskawa, 2020) because green bonds are issued to finance specific types of green initiatives. Many researchers, academics and politicians consider that green investments could help economies to recover from the pandemic in a sustainable manner.

The COVID-19 pandemic has generated much more than a health crisis. Its planetary magnitude is evident since societies and economies from around the world have been gravely affected.

In the context of COVID-19 crisis, it is important that each country's economic recovery measures contribute to building a more sustainable, resilient and inclusive society in the future.

Presently, countries are struggling to minimize business loss and unemployment by implementing various measures that are meant to stimulate their economies. However, traditional stimulus packages, such as fossil fuel-intensive industries support ones, are no longer suitable for long-term recovery and prevention of similar crisis (Mori *et al*., 2020b). Therefore, it is preferable that economic measures against COVID-19 to support environmentally friendly, carbon free societies and also economic recovery in the long run.

Today, governments are implementing different economic stimulus packages estimated to reach a total amount of 12 to 15 trillion US dollars, of which only about 3-5% is allocated to environmental and sustainability-related measures (C40 Cities Climate Leadership Group, 2020).

Various international organizations are encouraging this type of measures. Thus, OECD believes that these stimulus packages do not encourage the development of green economies (OECD, 2020). Also, the IMF, even though focused on health insurance and medical assistance at this time, recognizes the importance of promoting green policies compatible with economic growth and employment — e.g. transition to a low-carbon and digital economy utilizing carbon pricing (IMF, 2020). Along the same lines, the Word Economic Forum (WEF, 2020) advances the idea of a "great reset" for reconstruction based on public investments for a decarbonized economy, tax reform, and job creation meant to accelerate the transition to a sustainable society as stated in "Vision 2050", a part of World Business Council for Sustainable Development (WBCSD) landmark report (WBCSD, 2020).

The same opinion is shared by Hepburn *et al.* (2020), who consider that the COVID-19 crisis had dramatic consequences for progress on climate change and this will have impact also in the future. In order to investigate the recent effects of COVID-19 on emissions and to see the performance of 25 major fiscal recovery archetypes, they implemented a survey to 231 central bank officials, finance ministry officials, and other economic experts from G20 countries on the relative performance of. Their results showed that on short-term the GHG emissions declined, as a result of lockdowns, but on long-term will have minor effects, unless the governments facilitate deeper and longer-term human, business, and institutional changes. Of course, national governments differ significantly in their economic, social, and environmental priorities, and recovery packages reflect these priorities, with different consequences for the climate.

COVID-19 pandemic and the global lockdown of most economic activities associated with it generated a dramatic reduction in fossil fuel prices. As in a chain reaction, it is possible that lower fossil fuel prices could trigger a downward revision of investments in environmental protection, energy efficiency, and mostly in green energy projects since renewable energy sources exploitation has become less competitive price-wise. In this context, it seems that the implementation of Paris Agreement and the successful achievement of its climate change goals are under threat.

Thus, this is the time to promote new green finance policies designed to counteract the negative consequences of the pandemic. The aim of these actions is to reform the financial and fiscal policies, to bring change to the framework of green infrastructure projects and financial innovations, of taxing carbon emissions, energy subsidies, standards for green credit ratings and to facilitate the issuance of green bonds, and, also to minimize the risk of green investments by enforcing green credit guarantee schemes.

In his paper, McDaniels (2020) affirmed that the impacts of the pandemic on sustainable debt (e.g. green and sustainability-linked bonds and loans) are more difficult to evaluate at this stage. Even so, using data from the Climate Bonds Initiative highlighted the fact that issuance of green bonds has dropped significantly because monthly issuance has declined in March 2020 by approximately 90% compared to February 2020. The UN Report highlight also the increasing focus on ESG in emerging markets in 2019 has been predicted to spur growth in sustainable debt issuance in 2020 – but the fallout from the Corona virus outbreak has dampened near-term prospects.

The International Platform on Sustainable Finance (2020) in its 2020 Annual Report underlines the critical role that sustainable finance has during the COVID-19 pandemic and also states that green bonds are among the most powerful financial instruments used to raise capital for the transition to a sustainable economy. The COVID-19 crisis has drawn attention on the vital need for better coordinated financing actions in order to build a more sustainable and resilient economy. The report confirms that progress is being made but a lot of challenges still remain.

In their paper, Mukanjari and Sterner (2020) ask themselves from the beginning if the economic recovery from the COVID-19 crisis has to be green.

Thus, through an event study, they showed that many green investments have higher short run multipliers (require a lot of investment immediately) but low operating costs, low climate footprint and thus, higher sustainability in the long run.

Volz (2020) elucidates in his short paper how the pandemic is only a prelude to the looming climate crisis. He affirmed that well-designed green projects can generate more employment and deliver higher short-term returns per dollar spent, compared with conventional fiscal stimulus. He argues the necessity of a green recovery because such as the COVID-19 virus has spread across borders, in the same way the impacts of climate change will be felt across the world, not least through an increase in migration in the context of disasters and climate change.

Mori *et al.* (2020a) share the opinion of Volz that a green recovery is necessary as a starting point. In this context, he mentioned the European Green Deal (EGD) launched by the EU in December 2019. In accordance with the EU's environmental policies, one of EGD goals is for Europe to become the world's first 'climate-neutral' region, with net zero GHG emissions by 2050. In spite of COVID-19 economic crisis, the EU is determined to continue to promote this program, thus the Commission announced the intention to put forward a renewed sustainable finance strategy to help channel investments into sustainable projects and activities.

Liebich *et al.* (2020) find that both governments and companies are increasingly investing in green projects. In this context, they mention the transformation towards a financial system that directs capital flows towards investments that foster the transition to a low-carbon, resource-efficient global economy, according to the Paris Agreement on Climate Change (United Nations, (2015b) and the UN 2030 Agenda for Sustainable Development (United Nations, (2015a).

3. EVOLUTION OF GREEN FINANCE

According to European Environment Agency (EEA, 2020), in the EU-27 in 2018 total global greenhouse gas (GHG) emissions were 25.2% (1.425 million tones CO2 equivalents) below 1990 levels. There has been a progressive decoupling of gross domestic product (GDP) and GHG emissions compared to 1990, with an increase in GDP above 60% alongside a decrease in emissions of 25% over the same period. Recent EEA statistics (2021) show that greenhouse gas emissions in the EU-27 decreased by 24% between 1990 and 2019, exceeding the target of a 20% reduction from 1990 levels by 2020.

The pandemic could be the beginning of a much needed progress on climate change. For the first time on record, GHG emissions have registered a significant decline than in any other year. However, this could be just a small victory once the pandemic restrictions are lifted and economies will recover. Thus, governments need to step up to the challenge if they want to achieve the goal of net-zero GHG emissions by 2050 (Hepburn *et al.,* 2020).

According to UNDP COVID-19 Futures Platform (2021), the pandemic has generated unprecedented health, economic, and governance problems around the world on top of the climate change crisis. Under Paris Agreement, governments have been already developing Nationally Determined Contributions (NDCs) in order to tackle climate change. However, today, during COVID-19 crisis, these national pledges can give climate change actions a new impetus that could accelerate the green recovery of our planet.

In 2020, COVID-19 lockdown had triggered a major global reduction of CO2 emission for the first time since 2008 economic crisis. Liu *et al.* (2020) state that this reduction could be between 4% to 7% depending on the level and duration of COVID-19 restrictions. Thus, it is obvious that the decrease of CO2 emission level is temporary and it will only last if recovery policies and plans will focus more on environmental goals. Another study (Forster *et al.*, 2020) has determined that the GHG and pollutant reduction generated by the pandemic will be insignificant if governments maintain their current economic policies. The solution for limiting the global temperature warming is to gradually and surely abandon fossil fuel investments and support green ones, as a medium and long-term goal. It is the only way to achieve the objectives of Paris Agreement.

Many people believe that recovery from the pandemic should be focused on long-term environmental sustainability as much as on economic and social problems. Green finance can contribute by promoting sustainable sectors and by diverting funds away from heavy polluters.

One of the best-known green finance instruments are the green bonds, that can finance the necessary investments to sustain a low-carbon economy.

Ehlers, Mojon and Packer (2020) consider green bonds as debt instruments whose proceeds finance projects with various environmental benefits – including climate change mitigation. Regarding the link between green bond projects and carbon emissions, the authors concluded that at corporate level, at which their study was implemented, "the green bond labels are not associated with falling or even comparatively low carbon emissions at the firm level" (Ehlers, Mojon and Packer, 2020).

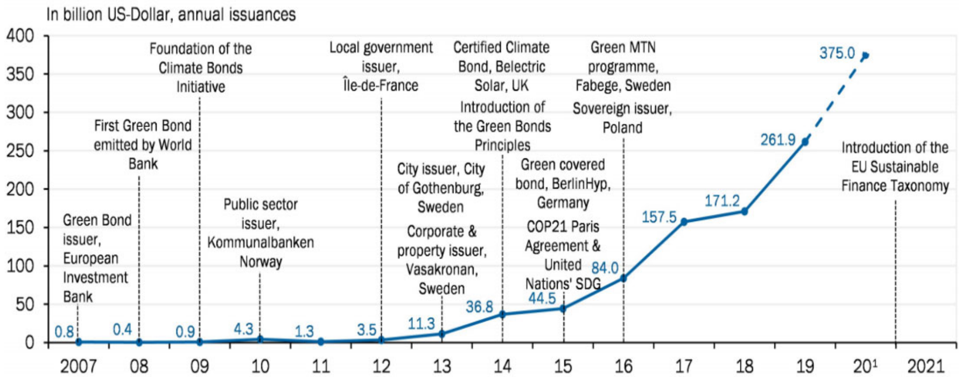
In another approach (Fender *et al.*, 2020), green bonds are considered fixed income securities whose proceeds are used to finance new or existing eligible green projects, such as projects that combat pollution, climate change or the depletion of biodiversity and natural resources.

According to Climate Bonds Initiative (2021a), "green bonds and loans are debt instruments used to finance projects, assets and activities that support climate change adaptation and mitigation. They can be issued by governments, municipalities, banks and corporates". The green label can be applied to any debt format, including private placements, securitizations, covered bonds, and sukuk, as well as green loans which comply with the Green Bond Principles (GBP) or the Green Loan Principles (GLP) introduced by the International Capital Market Association - ICMA (Climate Bonds Initiative, 2020).

Financial instruments that contribute to environmental sustainability have become a priority for many issuers, asset managers and governments alike, which determined a fast growth of the market for green bonds. Global issuance surpassed USD 250 billion in 2019 – about 3.5% of total global bond issuance -USD 7.15 trillion (Ehlers, Mojon and Packer, 2020).

The development of green bonds is illustrated in Figure 1.

Figure 1 Green bonds development

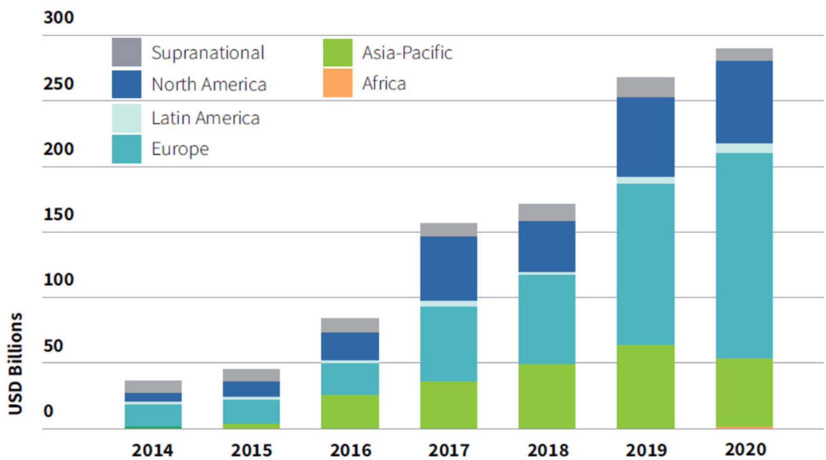


Source: (Liebich *et al.,* 2020)

The world's first green bond was issued by the European Investment Bank (EIB) in 2007. A year later, the World Bank has also issued its first green bond and since then, only supranational organizations did so in the following years (Liebich *et al.,* 2020). However, some government entities follow the same trend in Norway and France. In 2013, Vasakronan, a Swedish real estate company issued its first green bond. Starting with 2014, when International Capital Market Association (ICMA) released its Green Bond Principles (GBP), the green bond market became more uniform and transparent and, as a result, more green bond issuers joined in. Also, the new EU taxonomy brought even more uniformity to the market by imposing a unique classification system of sustainable economic activities. At the same time, the EU Green Bond Standard (EU GBS) improved the operating standards for the European green bonds market, stimulating it even more. Thus, national development banks and local governments adventured themselves on the green bond market, the first sovereign green bond being issued by Poland in 2016. As we can see in Figure 1, in 2019, the increase in green bonds was 90 billion USD or 53% higher than in 2018. The largest share of new green bonds comes from European issuers. If we sum the values of issuances during 2007-2019, more than 120 billion USD were issued.

The Climate Bonds Interactive Data Platform is the first sustainable debt data tool of its kind that allows us to analyze the evolution of this market. According to this platform, in 2020, a year dominated by COVID-19 pandemic, green issuance increased in the second half of 2020 and reached a surprising new record of USD 290.1bn by the end of December, compared to the prior record of USD 266.8bn registered in 2019. In March 2020, the COVID-19 pandemic quickly impacted on the issuance of all types of bonds (green bonds, social bonds and sustainability bonds). However, the issuance of government support packages in the second quarter of the year has persuaded issuers to timidly return to the market. Naturally, many public sector issuers focused on social and/or sustainability bonds in order to immediately counteract the economic crisis generated by the pandemic, their action determining a decrease in green bonds. Still, in spite of global economic uncertainty, by September 2020, green bonds issuers found their courage and took action that resulted in the most prolific third quarter recorded for green bonds' issuances (Climate Bonds Initiative, 2021b).

Figure 2. Volume of issued green bonds by region, 2014-2020

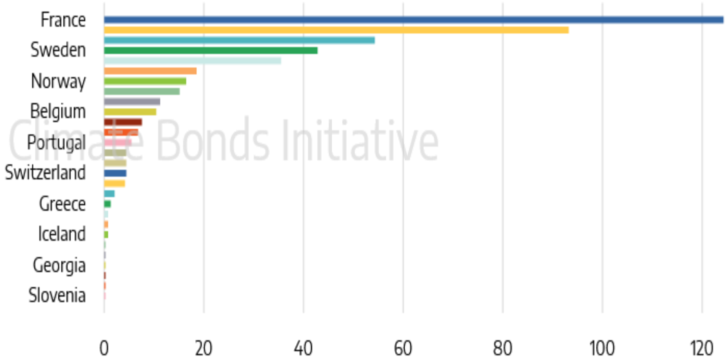


Source: (Climate Bonds Initiative, 2021b)

Thus, in Figure 2, we can see the increasing volume of the issued green bonds, by regions, for the period 2014-2020 and we notice that Europe was the largest source of green debt in 2020, responsible for USD156bn or 48% of the total, followed by North America and Asia-Pacific. European issuance was led by government backed entities and non-financial corporations, each contributing with 25%.

Figure 3 highlights the evolution of issued green bonds in European countries. From the total of USD468.8bn, the first place is occupied by France with 124.3, followed by Germany with USD93.3bn and Sweden with USD43bn. Even though the platform provides data for all European countries, we can notice that on top are three EU member states. According to Climate Bonds Initiative (2021b) the amount of green bonds originating from Germany more than doubled, from USD18.7bn in 2019, to USD41.8bn in 2020.

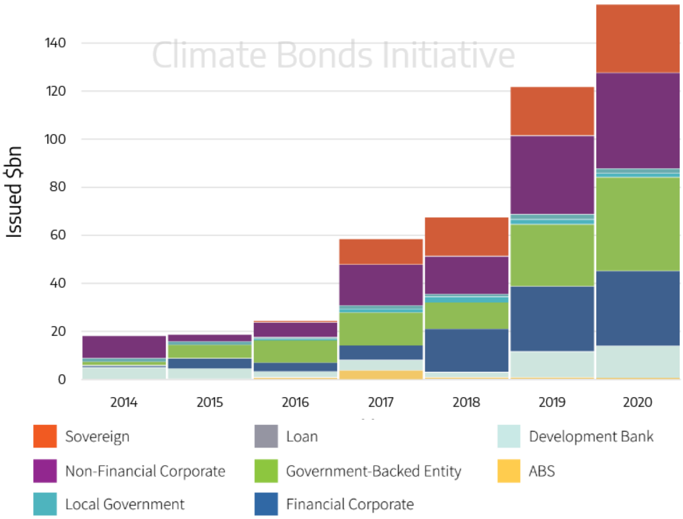
Figure 3. Volume of issued green bonds by European countries, 2014-2020



Source: (Climate Bonds Initiative, 2021c)

At global level, 2020 was characterized by growth in public sector green bonds issuers, while private sector green bonds volumes either remained static or shrunk (Climate Bonds Initiative, 2021b). In the case of Europe, we observe (Figure 4) that public sector issuers experienced a smaller decline than private sector ones, during the first half of 2020, a situation that is explainable because public entities usually have less flexible investment plans and, as a result, are less exposed to market changes, especially on a short-term. Another possible explanation could be that an investment project developed by a state-owned enterprise is less likely to be postponed or cancelled due to COVID-19 than in the case of a private project investment. Among private sector issuers, non-financial corporate proved to be the most resilient during the first half of 2020, maintaining their position as top green bond issuers.

Figure 4. Volume of issued green bonds in Europe by issuer type, 2014-2020



Source: (Climate Bonds Initiative, 2021c)

Most green bond issuers agree with the Green Bond Principles (GBPs) that have been developed by the private sector. These principles highlight the key elements of green bond issuance, which are the use of proceeds for environmentally sustainable activities; a procedure for determining project eligibility; a transparent and controlled management of the proceeds; and an annual reporting system on the use of the proceeds (Ehlers, Mojon and Packer, 2020). Also, climate bond standards laid down in Climate Bonds Initiative (2019) had brought more details to these elements, including which investments qualify as green or the accounting methodology that could be used for proceeds allocated to green projects.

A major step in creating official standards for green bonds is the EU green bond standard established by the Technical Expert Group on Sustainable Finance (European Commission, 2020a), based on the EU sustainable finance taxonomy (European Commission, 2020b). Similarly, to green bond principles, the EU standards are based on the use of proceeds for environmental protection projects. However, EU standards are focusing much more on eligibility criteria for green projects and on official authorization and supervision of independent reviewers in order to bring more control and credibility meant to attract green bond investors. Even though EU decided that compliance with these standards will be voluntary, there is a high probability that they are going to become a *de facto* requirement for green bond issuers in the EU common market.

Also, the project-based approach that marks green certifications and EU standards brings some advantages. For instance, many entities are given the incentives to issue green bonds and to initiate green projects based on investments in technologies that promise long-term environmental benefits. The rapid development of the green bond market also proves that this approach was successful in creating a sustainable growth consciousness among all market players and that investors are interested much more than before in climate-related financial instruments.

Resuming, EU continued developing a taxonomy of sustainable activities, proposed creating an EU Green Bond Standard, and, in December 2019, it announced its climate-neutral growth strategy based on a set of political initiatives called EU Green Deal that is the base for its sustainable financial action plan.

At the same time, in the context of COVID-19 pandemic, the European Commission decided to improve even more the EU sustainable finance strategy, a process that is expected to be completed by June 2021. These improvements to the already existing strategy are meant to create the adequate legal framework meant to facilitate sustainable investments in the private and the public sector and, thus, to accelerate the achievement of the European Green Deal goals. So, the new and improved strategy will provide the right policy tools for the transition towards environmentally sustainable businesses in Europe, while recovering from COVID-19 pandemic (European Parliament, 2021).

The legal framework designed to support the renewed EU strategy comprises the new Corporate Sustainability Reporting Directive (CSRD) that was adopted by the Commission in April 2021, other sustainability amendments of rules on fiduciary duties, suitability assessment and on product governance. The new proposed directive is going to revise the 2018 Non-Financial Reporting Directive (NFRD). According to the new rules, all listed and large European companies will have to provide detailed, reliable sustainability information to investors based on precise reporting standards (European Commission, 2021).

Also, we can see the importance of sustainable development through green investments by looking at the EU Multiannual Financial Framework (MFF) for the period 2014-2020, when 20% of the budget, corresponding to EUR 206 billion, was spent on climate change mitigation and adaptation. Even more, for a green recovery, in the next MFF for the period 2021-2027, the European Commission proposed to increase the share to at least 25% of the budget, which would amount to EUR 320 billion (Eurostat, 2020, p.242). The recovery plans also have to demonstrate compliance with a carbon-neutral EU by 2050 and to respond to the new climate targets for 2030, which supposed to cut carbon emissions by at least 55% by 2030, compared with 1990 levels.

All these EU actions and decisions demonstrate the efforts that are meant to bring a much needed environmental protection boost to our planet and our lives.

4. CONCLUSIONS

The aim of our paper was to examine the potential link between the pandemic and the economic decline of the EU-27 common market in order to emphasize the evolution of the use of green finance instruments and to prove the need for a better, more articulated sustainable financial strategy meant to encourage environmental protection.

Given that in recent years some countries registered economic growth while reducing gas emissions, we support the idea that policy makers should continue to follow their medium and long-term green finance strategies and abandon fossil fuel investments in favor of green ones and move closer towards the objectives of Paris Agreement.

We agree with the affirmation of McDaniels (2020) that at this time it is difficult to evaluate the impact of the pandemic on green finance (e.g. green bonds and loans). In this respect, our paper presents some limitations regarding data availability because data regarding GHG emissions was available only until 2018 and the data platform for green bonds offers information for European countries, without the possibility to extract data only for EU member states. Thus, it is obvious that an up-to-date and truthful assessment of green bonds' use is vital for having a clear imagine of the progress registered in this field.

In conclusion, our research led us to the following recommendations. Firstly, EU needs to collect reliable data in order to precisely know the progress made in prioritizing green finance investments and their impact on the economy and the environment. Secondly, EU countries that registered economic development while decreasing GHG emissions need to continue on this path and share their expertise with developing countries and encourage them to do the same, together walking towards enviromental progress and safety.

In the future, our research will contribute to an even better analysis of green finance evolution and its link to sustainable development by using a quantitative model that will comprise not only normal periods of time, but also crisis periods, such as COVID-19 one.

References

1) C40 Cities Climate Leadership Group, (2020). *Technical Report: The case for a green and just recovery*. [online] Available at: https://c40.my.salesforce.com/sfc/p/#36000001Enhz/a/1Q000000gRCH/24OgSbRwj1hZ305yJbyPMZJQKhXXWNYE8k8sr2ADsi8 [Accessed 05.04.2021].
2) Cigu, E. (2020). The Role of Green Finance. An Overview. In: M. Tofan, I. Bilan and E. Cigu, eds., *European Union financial regulation and administrative area – EUFIRE 2020*. Iași: Alexandru Ioan Cuza University Publishing House, pp. 657-669.
3) Climate Bonds Initiative, (2019). *Climate Bonds Standard V3.0.* [online] Available at: https://www.climatebonds.net/climate-bonds-standard-v3[Accessed 10.05.2021].

4) Climate Bonds Initiative, (2020). *Green Bonds Global State of the Market 2019*. [online] Available at: https://www.climatebonds.net/resources/reports/green-bonds-global-state-market-2019 [Accessed 10.05.2021].
5) Climate Bonds Initiative, (2021a). *ASEAN Sustainable Finance State of the Market 2020*. [online] Available at: https://www.climatebonds.net/resources/reports/asean-sustainable-finance-state-market-2020 [Accessed 10.05.2021].
6) Climate Bonds Initiative, (2021b). *Sustainable Debt: Global State of the Market 2020*. [online] Available at: https://www.climatebonds.net/resources/reports/sustainable-debt-global-state-market-2020 [Accessed 10.05.2021].
7) Climate Bonds Initiative, (2021c). *Green Bond Data Platform*. [online] Available at: https://www.climatebonds.net/market/data/ [Accessed 10.05.2021].
8) Ehlers, T., Mojon, B. and Packer, F. (2020). Green bonds and carbon emissions: exploring the case for a rating system at the firm level. *BIS Quarterly Review*. [online] Available at: https://www.bis.org/publ/qtrpdf/r_qt2009c.htm [Accessed 15.04.2021].
9) European Commission, (2020a). *Technical expert group on sustainable finance (TEG)*. [online] Available at: https://ec.europa.eu/info/publications/sustainable-finance-technical-expert-group_en [Accessed 29.04.2021].
10) European Commission, (2020b). *Taxonomy: Final report of the Technical Expert Group on Sustainable Finance*. [online] Available at: https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf [Accessed 29.04.2021].
11) European Commission, (2021). *EU Sustainable Finance (April Package).* [online] Available at: https://ec.europa.eu/info/files/sustainable-finance-communication-factsheet_en [Accessed 5.05.2021].
12) European Environment Agency - EEA, (2020). *Annual European Union greenhouse gas inventory 1990–2018 and inventory report 2020*. [online] Available at: https://www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2020 [Accessed 15.04.2021].
13) European Environment Agency - EEA, (2021). *Total greenhouse gas emission trends and projections in Europe.* [online] Available at: https://www.eea.europa.eu/data-and-maps/indicators/greenhouse-gas-emission-trends-7/assessment [Accessed 15.04.2021].
14) European Parliament, (2021). *Renewed Sustainable Finance Strategy / Before 2021-1.* [online] Available at: https://www.europarl.europa.eu/legislative-train/theme-a-european-green-deal/file-renewed-sustainable-finance-strategy [Accessed 05.05.2021].
15) Eurostat, (2020). *Sustainable development in the European Union – Monitoring report on progress towards the SDGs in an EU context – 2020.* [online] Available at: https://ec.europa.eu/eurostat/web/products-statistical-books/-/ks-02-20-202 [Accessed 05.05.2021].
16) Fender, I., McMorrow, M., Sahakyan, V. and Zulaica, O. (2020). Reserve management and sustainability: the case for green bonds?, *BIS Working Papers*, No 849. [online] Available at: https://www.bis.org/publ/work849.htm [Accessed 15.04.2021].

17) Forster, M. P., Forster, I. H., Evans, J. M., Gidden, J. M., Jones, D. C., Keller, A. C., Lamboll, D. R., Le Quéré, C., Rogeli, J., Rosen, D, Schleussner, C.-F., Richardson, B. T, Smith, J. C. and Turnock, T. S. (2020). Current and future global climate impacts resulting from COVID-19. *Nature Climate Change,* 10, pp. 913–919. https://doi.org/10.1038/s41558-020-0883-0.
18) Hepburn, C., O'Callaghan, B., Stern, N., Stiglitz, J. and Zenghelis, D. (2020). *Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?*, Smith School Working Paper 20-02.
19) IMF, (2020). *World Economic Outlook, October 2020: A Long and Difficult Ascent*. [online] Available at: https://www.imf.org/en/Publications/WEO/Issues /2020/09/30/world-economic-outlook-october-2020 [Accessed 01.04.2021].
20) International Platform on Sustainable Finance, (2020). *Annual Report.* [online] Available at: https://ec.europa.eu/info/files/international-platform-sustainable-finance-annual-report-2020_en [Accessed 05.04.2021].
21) Kabaivanov, S. and Markovska, V. (2019). Making a Difference: Accounting for the Impact of Management Decisions in Environmental Management. *Scientific Annals of Economics and Business*, 66(2), pp. 131-139. doi:http://dx.doi.org/10.47743/saeb-2019-0014.
22) Klioutchnikov, I. and Kliuchnikov, O. (2021). *Green finance: Pandemic and climate change.* The International Conference on Innovation, Modern Applied Science & Environmental Studies (ICIES2020), E3S Web Conf. Volume 234. [online] Available at: https://doi.org/10.1051/e3sconf/202123400042 [Accessed 01.04.2021].
23) Liebich, L., Nöh, L., Rutkowski, F. and Schwarz, M. (2020). Current developments in green finance. *Arbeitspapier, No. 05/2020*, Wiesbaden: Sachverständigenrat zur Begutachtung der Gesamtwirtschaftlichen Entwicklung,
24) Liu, Z., Ciais, P., Deng, Z., Lei, R., Davis, J. S., Feng, S., Zheng, B. et al. (2020). Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic. *Nature Communications,* 11, article number: 5172, doi:10.1038/s41467-020-18922-7.
25) McDaniels, J. (2020). *Implications of the COVID-19 Pandemic for Global Sustainable Finance.* UNEP Inquiry. [online] Available at: https://unepinquiry.org/publication/implications-of-the-covid-19-pandemic-for-global-sustainable-finance/ [Accessed 05.04.2021].
26) Mori, H., Takahashi, Y., Zusman, E., Mader, A., Kawazu E., Otsuka T., et al. (2020a). *Implications of COVID-19 for the Environment and Sustainability*. Hayama, Japan: Institute for Global Environmental Strategies. [online] Available at: https://www.iges.or.jp/en/pub/covid19-e/en [Accessed 05.04.2021].
27) Mori, H., Zusman, E., Kojima, S., Waters, N.A., Mader, A., Onogawa, K. et al. (2020b). *Implications of COVID-19 for the Environment and Sustainability (Version 2): Perspectives from the Triple R (Response, Recovery, Redesign) Framework*. Hayama, Japan: Institute for Global Environmental Strategies. [online] Available at: https://www.iges.or.jp/en/pub/covid19-ver2-e/en [Accessed 05.04.2021].
28) Mukanjari, S. and Sterner, T. (2020). Charting a "Green Path" for Recovery from COVID-19. *Environmental and Resource Economics*, 76, pp. 825–853. [online] Available at: https://doi.org/10.1007/s10640-020-00479-0. [Accessed 05.04.2021].

29) OECD, (2020). *Making the Green Recovery work for jobs, income and growth*. [online] Available at: https://read.oecd-ilibrary.org/view/?ref=136_136201-ctwt8p7qs5&title=Making-the-Green-Recovery-Work-for-Jobs-Income-and-Growth_&_ga=2.262680076.1084097397.1620849321-600719310.1620849321[Accessed 05.04.2021].
30) Popescu, A. I. and Dornean, A. (2020). The Role of Green Finance in Environmental Protection. Evidence from the EU. In: M. Tofan, I. Bilan and E. Cigu, eds., *European Union financial regulation and administrative area – EUFIRE 2020*. Iași: Alexandru Ioan Cuza University Publishing House, pp. 755-769.
31) UNDP COVID-19 Futures Platform, (2021). *Impacts of COVID-19 on raising ambition of national climate pledges under the Paris agreement, or Nationally Determined Contributions (NDCs)*. [online] Available at: https://data.undp.org/content/covid-impact-on-ndc/ [Accessed 10.05.2021].
32) UNEP Inquiry, (2015). *The Financial System We Need. Aligning the Financial System with Sustainable Development*. [online] Available at: https://unepinquiry.org/publication/inquiry-global-report-the-financial-system-we-need/# [Accessed 05.04.2021].
33) United Nations, (2015a). *Transforming our World: The 2030 Agenda for Sustainable Development*. [online] Available at: https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf [Accessed 07.05.2021].
34) United Nations, (2015b). *The Paris Agreement*. [online] Available at: https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf [Accessed 07.05.2021].
35) Volz, U. (2020). Investing in a green recovery: the pandemic is only a prelude to the looming climate crisis. *Finance&Development*. [online] Available at: https://eprints.soas.ac.uk/33515/1/investing-in-a-green-recovery-volz.pdf [Accessed 05.04.2021].
36) Wiśniewski, M. and Łyskawa, K. (2020). Development Impact Bonds in Financing Flood Risk Management. *Scientific Annals of Economics and Business*, 67(4), 437-452. doi:http://dx.doi.org/10.47743/saeb-2020-0022
37) World Business Council for Sustainable Development, (2020). *The consequences of COVID-19 for the decade ahead (Vision 2050 Issue Brief)*. [online] Available at: https://www.wbcsd.org/Overview/About-us/Vision-2050-Time-to-Transform/Resources/The-consequences-of-COVID-19-for-the-decade-ahead-Vision-2050-Issue-Brief [Accessed 05.04.2021].
38) World Economic Forum, (2020). *World Economic Forum website*. [online] Available at: https://jp.weforum.org/agenda/2020/06/gure-to-risetto-no/ [Accessed 05.04.2021].

THE ECONOMIC CONSEQUENCES OF ORGANISED CRIME: AN OVERVIEW

ANCUȚA ELENA FRANȚ
Alexandru Ioan Cuza University of Iași
Iași, Romania
ancuta.frant@uaic.ro

Abstract
This paper consists in an overview of the economic effects of organised crime. The topic, although of an importance largely acknowledged, has received little detailed attention. Organised crime is a phenomenon which severely affects our present-day society. Despite the efforts made to reduce it, organised crime remains at high levels. It is without doubt that the economic effects of organised crime are significant. However, quantifying these effects is not an easy task, as organised crime has multiple forms and performs a great variety of illegal activities. Also, when analysing the costs of organised crime, we must refer to the costs generated by crime control activities, carried out at national level and, also, at international scale. These crime control actions include activities aimed at preventing, prosecuting, and sanctioning the members of organised crime. Overall, the costs of organised crime, be it national or transnational, are hard to estimate. Given the situation, experts argue that it is better to estimate, if possible, the minimum costs, related to specific crimes (for example, drug trafficking, human trafficking, corruption within certain categories of public offices). An important issue which we intend to analyse is whether there is a difference between the costs generated by the Mafia-type organised criminal structures and organised criminal groups which consist mainly of networks, structured. Also, we assess that it is necessary to determine how states should cooperate, to quantify (at least approximately) the effects of transnational organised crime, as this implies a systematic international cooperation. All these evaluation processes are needed, because knowing the economic effects of organised crime, in all its forms, helps authorities to identify the most vulnerable areas and, therefore, choose the best methods to fight and to sanction organised crime, and, maybe the most important, to prevent organised crime.
Keywords: *economic effects; organised crime; transnational organised crime.*
JEL Classification: K420

1. THE IMPORTANCE OF QUANTIFYING THE ECONOMIC CONSEQUENCES OF ORGANISED CRIME

There is no doubt that, in the present-day society, organised crime poses a severe threat to the security of people and communities. Despite this undeniable fact, there is a lack of precise figures to quantify the negative impact that organised crime has upon the society. This leads to a blurred image referring to the consequences of organised crime.

From the very beginning, we must point out that this study does not refer to the profit obtained by criminal structures through their illegal activities. There are studies which refer to this specific issue (European Commission, 2020). This paper analyses an aspect which has been less studied, namely the economic effects of organised crime on the society. In other words, we want to know how much money is being spent (by individuals, by corporations and by public authorities) to repair the damage caused by organised crime or how much they lose, because of the criminal activities of organised structures.

It is wide known that the impact of organised crime is high; still, some may wonder exactly how high these consequences are? Especially, a clear answer to this question is important for those who have never personally faced the effects of organised crime.

Also, a measurement of the consequences of organised crime is very important when it comes to assessing the right measures needed to fight organised crime. The strategies adopted at national and international level to fight organised crime can be very costly. In this context, it is important to justify spending public money, and the justification can be properly based on the negative impact of organised crime. But it is important to explain why such a great amount of financial and human resources are needed to counter the activities of organised crime. After all, if we are not sure that the consequences of organised crime are important, why do we need to spend huge financial and human resources to repress organised crime? Some may argue that smaller efforts would be enough.

It is important to highlight the fact that, when speaking of the consequences of organised crime, economic consequences are not the only type of consequences which can occur. Often, there are consequences in terms of health injuries or life losses, which, essentially, cannot be quantified. Still, there are some financial aspects related even to this kind of consequences (for example, the health care expenditure), which can be counted, when analysing the economic effects of organised crime (Levi *et al.*, 2013).

Anyway, even if we accept that there are some effects of organised crime which cannot be properly quantified, a major part of these effects can be expressed in economic terms. Having such an estimation, even if it is just an approximate one, is helpful in our quest to understand just how dangerous organised crime is for our society. After all, economic dimension offers a universal standard, which can provide an appropriate dimension for a certain phenomenon, even in what concerns organised crime.

Given the arguments presented above, we can observe that it is important to quantify the impact of organised crime, to understand the scale of this enemy that the present-day society is fighting with. Even if the figures are only approximately obtained, it would still be an important gain in the process of choosing the right type of fight against criminal structures. We specify that we will mainly refer to the European Union, because we have mainly found studies which offer approximate figures in refer to European Union.

2. THE DIFFICULTY TO QUANTIFY THE ECONOMIC CONSEQUENCES OF ORGANISED CRIME

As we have pointed out above, it is very important to quantify the negative impact that organised crime has upon society, to understand the real dimension of organised crime and to prepare the right strategy in order to repress this phenomenon. When in comes to obtaining the results of the quantifying process, we find that is hard to achieve the desired quantification. There are several reasons for this.

One of these motives is related to the obscurity of organised crime. As the officials involved in fighting against organised crime only discover and punish a part of the activities performed by criminal organisations, there is a lack of data regarding the effects, which leads to the impossibility to assess the real economic consequences of this phenomenon.

Also, it is important to mention that, sometimes, even if information was obtained, it was later proved that this information was false, totally, or partially. In other words, we can say that there is an uncertainty about the accuracy of the information regarding the consequences of organised crime (Levi *et al.*, 2013).

Another difficulty in quantifying the effects of organised crime comes from the fact that, sometimes, the negative effects do not occur immediately, and it is hard to foresee when (or if) they will occur. This kind of eventual effects are frequently related to corruption, which is so often a companion of organised crime. For example, it is possible that the construction of public structures (like roads or buildings) to be entrusted to companies which do not meet the legal standards, by corruption. These companies may be run by organised crime, and it is possible that, in such a case, a white – collar criminal organisation is involved. The poor quality of the buildings or of the roads made with the involvement of organised crime may not be visible right away. It is possible that only after a few years the buildings collapse or the roads form potholes because the constructor did not respect all the conditions needed, to ensure the legal quality of the structures. In such cases, for example, it is extremely hard, if not impossible, to assess how many people would be injured or would die, if, for example, a building collapsed. Also, if the roads form potholes, it is almost impossible to calculate the overall costs for repairing the cars damaged by the road`s bad condition, not to mention the fact that public money will be spent to repair such roads (Levi *et al.*, 2013). These examples show that organised crime is versatile, and the effects of its illegal actions may occur in the future, at an indefinite moment, which brings additional difficulties to the already difficult task of assessing the economic consequences of organised crime.

It is also very difficult to quantify the non – pecuniary damage caused by organised crime (the so-called *moral damage*). We do not only refer to the moral damage which accompany a direct effect of organised crime (for example, the moral damage of a person who has suffered a physical injury because of organised crime). There are some moral effects of organised crime which occur on people who are not *personally* confronted with criminal structures, and we refer to the anxiety of people living in areas where criminal organisations thrive. Indeed, how can we quantify the fear that a person may feel every time he or she leaves home for going to work or to school, knowing that he or she may be attacked by members of a criminal organisation? This kind of moral consequences are among the effects of organised crime which are the hardest to assess, and they are connected to the fact that the negative effects of organised crime spread on the society.

Another type of cost generated by organised crime refers to the cost of fighting against organised crime. For decades, states have been spending huge amounts of money, to annihilate criminal structures. This money is used to cover all technical and human resources which are needed, as organised crime has constantly proved to be a formidably enemy of law enforcement structures. As organised crime has grown more and more into transnational organised crime, states have created international structures, to use appropriate methods to approach the ever more sophisticated criminal activities performed by criminal structures. This has necessarily led to even more money being spent in the seemingly never-ending fight against organised crime. The amount of money spent by public agencies (national or international) in fighting against organised crime is easier to determine than other categories of costs related to organised crime, because, usually, there is a transparency regarding public money. However, it is possible to make erroneous assessments regarding the public money involved in fighting against organised crime, especially because there are so many ways in which public structures try to counteract organised crime. For example, the measures taken by authorities are not directed only to discover the members of organised crime and to punish them, but also to prevent organised crime from involving in criminal activities, which relies on different kind of actions than the \`classic\` actions performed by police. For example, informing potential victims of human trafficking about the dangers of organised crime is not usually counted when analysing the costs of fighting against organised crime. Still, such an activity may be costly. For example, there can be public information campaigns in schools or through mass-media, and all these involve some costs (Sumnall, Bates and Jones, 2017; Stuart, 1974). Often, non-governmental organisations are involved in the struggle to prevent people to interact with organised crime (for example, in campaigns against the illegal drug use). The costs of these non-governmental structures are not usually considered when trying to calculate how much society spends on fighting against organised crime. The examples which we have presented show that, even though it should be easy to count the amounts of money involved in fighting against organised crime, there are still some difficulties which make it hard to assess exactly how much society is spending in the effort to fight against criminal structures.

Also, we must not forget that the concept of *organised crime* is very volatile. Despite the welcomed clarifications brought in by international treaties, for example United Nations` so-called Palermo Convention (United Nations, 2004), difficulties may occur in analysing the effects of the activities performed by different types of criminal structures, especially when their actions are not usually associated with organised crime (Franț, 2020). For example, organised crime related to artificial intelligence is less prominent than organised crime related to drugs or human trafficking. As a result, when gathering data about the economic effects of organised crime, there are often considered only the consequences of the more visible criminal organisations, which act in those fields traditionally linked to organised crime. Also, there is the tendency to consider that organised crime necessarily involves large number of people, but, as according to official definitions, an organised group can have only three members (United Nations, 2004).

Some studies mention that the data gathered in reference to organised crime often takes into account *only* the crimes which are widely discussed in the political speeches and in mass-media, for example, illegal drug trafficking, human trafficking, illegal immigration (Levi *et al.*, 2013).

Also, we must highlight the fact that the consequences of some activities performed by organised crime are simply easier to measure than the consequences of other types of activities. For example, it is easier to estimate the value of the fee which would have been due for smuggled goods, than to assess the economic consequences of a criminal structure involved in creating false identity cards.

The aspects shown above prove that there are various reasons which generate difficulties in quantifying the economic consequences of organised crime.

3. A SOLUTION FOR ESTIMATING THE ECONOMIC CONSEQUENCES OF ORGANISED CRIME

Although it is hard to quantify the economic consequences of organised crime, it is important to obtain even an approximate figure, because this leads to a clear image of the effects of criminal structures. Also, this would help authorities to correctly distribute the resources, in proportion to the severity of the consequences.

However, some studies point out that it is extremely hard to make an estimation of the mid-point costs of organised crime (Levi *et al.*, 2013). We have presented above some of the reasons which justify such a conclusion. Although it would certainly be extremely helpful, it seems that it is impossible to establish an average figure in what regards the economic consequences of organised crime.

Given this situation, researchers recommend that efforts are made in order to estimate the *minimum costs* of criminal structures (Levi *et al.*, 2013). This minimum figure seems easier to obtain, and this should be our target, when searching for the economic consequences of organised crime.

In accord with this conclusion, we have searched for data referring to the minimum costs of the activities performed by organised crime in some of the best-known areas where this kind of criminality is committed. Further, we will present our findings.

3.1 The minimum economic costs of organised crime involved in drug trafficking

Drug trafficking is one of the main areas where organised crime performs its activities. By its nature, drug trafficking necessarily implies many people, needed to ensure that the drugs are produced, transported, and passed on to the consumers. Because the success of these operations relies on a good organisation, this leads to strong criminal structures acting in the illicit drug market. In effect, almost all illicit drug consumption is ensured by organised crime, which acts on a national scale and, more often, on an international scale. The actors on the scene of drug trafficking are highly motivated by the huge profits obtained because of these illegal activities (Levi *et al.*, 2013).

In what regards the economic costs of organised crime acting in drug trafficking, we have found an estimation of the minimum costs for the year 2013, in the European Union. In that year, the minimum cost of EU cannabis expenditure was between 7 and 10 billion EUR, the minimum cost of cocaine expenditure was 9 billion EUR, and the minimum cost of synthetic drugs expenditure was 1.5 billion EUR. As regards the costs of law enforcement interventions, the minimum was 34 billion EUR.

We can see from the figures presented above that the costs are at a very high level, even if these are only the minimum figures. Faced with these numbers, we are naturally pushed into thinking that all this amount of money could be used for other purposes, for example for education and for helping people to obtain a legal and decently paid working place.

As regards the types of expenses which were considered for obtaining the minimum values that we have presented, these include, for example: drug treatment, health costs, drug-related deaths, the costs of law enforcement institutions acting against production and possession of drugs and against selling drugs. In estimating the costs related to health care, neo-natal care and treating HIV linked to illegal drugs are also considered (Levi *et al.*, 2013).

Apart from highlighting the huge dimension of costs related to drugs, we want to emphasize the fact that the economic consequences of drug trafficking are not delivered as a whole sum. Instead, the overall economic consequence is composed of different sums, each related to some type of illegal drug and to some type of activity. This illustrates the complexity of the issue, as the whole picture of the costs is more like a puzzle, with many compounds which need to be put together, to obtain a certain image.

We can see from the figures above that the largest part of the economic consequence of drugs is related to cannabis, which, indeed, holds the biggest Europe's illegal drug market. Also, cannabis is the most widely used illicit drug in the world (EMCDDA and EUROPOL, 2019). This may be a consequence of the fact that cannabis consumption (as herbal form - *marijuana* or resin - *hashish*) is perceived as being less dangerous than cocaine or heroin consumption. Given this situation, people are more likely to indulge themselves in cannabis consumption. Also, maybe enforcement authorities are more likely to be somewhat lenient with cannabis trafficking. In addition, in some countries or some regions of a country the cannabis consumption is legal, and this leads to a blurred image of what the attitude towards cannabis consumption and, further, towards cannabis trafficking, should be. However, the big scale of the economic consequences of cannabis trafficking must be a warning sign and must urge authorities to pay much attention to the measures needed to lower the negative economic effects related to trafficking this kind of drug.

Some of the costs generated by illicit drug market come from unexpected sources. For example, in the Netherlands, the electricity provider Netbeheer Nederland detected a significant energy theft which was assumed to be linked with 2600 cannabis growing places. This illegal operation generated a loss for the energy provider of about 60 million EUR and for the Government of about 135 million EUR, according to European Monitoring Centre for Drugs and Drug Addiction (EMCDDA and EUROPOL, 2019).

3.2 The minimum economic costs of organised crime involved in human trafficking

Human trafficking is probably the most emotional area of all areas where organised crime performs its activities. Also, human trafficking is a politically salient subject, which makes it a subject heavily analysed in mass-media and in political speeches. Despite the great public interest on this issue, it is difficult to estimate the economic consequences of human trafficking. There are several reasons for this. One of the reasons is that the number of people who are trafficked in a certain period in EU and in the world is not known and it is extremely hard to estimate this number. Another reason is that the attempts made to estimate the number of people who are victims of human trafficking usually fall under two extreme tendencies: one that refers only to the people who are known to have been harmed by human trafficking, and one that takes into account all people who have the potential to have been harmed by human trafficking, including all immigrants, thus surpassing the accepted meaning of the expression *trafficked persons* (Kopp, 2012).

Despite the difficulties in calculating the economic effects of human trafficking, some studies have managed to estimate that, at the level of the year 2013, the minimum cost of human trafficking in European Union was 30 billion EUR (Levi *et al.*, 2013).

3.3 The minimum economic costs of organised crime involved in other types of criminal activity

Although not as much visible for the public as drug trafficking or human trafficking, there are other areas where organised crime performs activities, in search for the profit. We will briefly refer to payment card fraud and intellectual property theft.

As regards payment card fraud, we have found data that shows that, in 2011, the total amount of fraud in the European Union was 1.16 billion EUR. It is important to mention that a great proportion of payment card fraud is committed for transactions which take place outside European Union (mainly the United States of America), because, outside European Union, there are some low security standards, which favour such type of criminal activity (Levi *et al.*, 2013).

Intellectual property theft, although can be committed by an individual, usually involves organised structures, to ensure high profit. Intellectual property usually refers to counterfeiting (the infringement of registered trademarks) or to piracy (the unauthorised copying and use of material protected by copyright). It was estimated that the economic effects of intellectual property theft reach a minimum of 50 million EUR each year, in the European Union, in what regards counterfeiting (Levi *et al.*, 2013).

4. ABOUT THE ENVIRONMENTAL CONSEQUENCES OF ORGANISED CRIME

A special category of consequences which result as an effect of organised crime refers to the environmental consequences of the illegal activities performed by criminal structures. Because organised crime is focused on obtaining high profit, sometimes at all costs, of course, protecting environment is its last concern. And this is an important issue, as some of the activities carried out by organised crime have a major potential in damaging the environment.

For example, growing cannabis is an activity which has negative environmental effects, like deforestation, soil erosion and water security problems (by contaminating the water supply and reducing the water supply, as cannabis growth requires big water supply, about two times bigger than those required for wine grapes). Cannabis is also largely cultivated indoors, as this reduces the risk that the enforcing agents find out about the illegal plantations. When grown indoor, cannabis needs, besides large quantities of water, large amounts of electricity (with electricity ensuring the requested high temperatures and strong light for an optimal growth). The soil must be fertile, so fertilizers are used. Also, chemicals like herbicides, pesticides and fungicides are used, to obtain cannabis of the best quality. The chemicals which are used reach the terrestrial or aquatic environment, and this can lead to a severe chemical pollution (EMCDDA and EUROPOL, 2019).

Apart from the environmental consequences which are a side effect of the illegal activities performed by organised crime, there are some criminal organisations for which committing environmental crimes is their object of activity. For example, some criminal structures are specialised in the illegal dumping of the hazardous and other kind of waste generated by the legal activities carried out by various corporations (for example, pharmaceutical and cosmetical companies). Sometimes, the corporations which generate the waste are aware of the illegal nature of the dumping activity, which makes them a part of organised crime or, at least, accomplices for criminal structures (Ashworth and Vizuete, 2017; Levi *et al.*, 2013).

As far as our research could reach, we did not find an estimation for the environmental consequences of organised crime. One of the main reasons for this is that it is extremely hard to obtain reliable data in this field. For example, in what regards indoor cultivation of cannabis, it is impossible to make an estimation of their number, due to the obscure nature of the growing sites. Still, some studies point out that the number of the clandestine places of growing cannabis may be extremely high. For example, in The Netherlands it was estimated that, in 2018 - 2019, there were about 30000 growing sites for cannabis (EMCDDA and EUROPOL, 2019). This is a hint that the environmental effects of drug trafficking may be extremely high, and this is another reason which urges authorities to find appropriate solutions.

5. CONCLUSIONS

In the present – day society, organised crime is a severe threat to the security of people and communities. This is a leitmotif which is widely used in political speeches and mass-media. To understand the gravity of the menace posed by the activities of criminal structures, we must, first, quantify its negative effects. While most studies focus on the profit gained by organised crime, fewer studies try to assess the economic consequences of the illegal actions of criminal structures. However, achieving such knowledge is important, because, when speaking of the negative effects of organised crime, the high profit obtained by criminal structures is not necessarily an indicator of the cost which society bears because of organised crime. In order to gauge the impact of organised crime in society, we need more specific figures, aimed at indicating exactly how much society suffers because of criminal structures. Although the negative effects of organised crime may vary in their nature (for example, these effects may consist in moral suffering), it is useful to use a standard measure, to obtain a clear image. And this standard measure can be obtained if we analyse the economic consequences of organised crime. Further, some of the consequences which are not primarily pecuniary can be converted in monetary terms (for example, moral suffering can be expressed in an economic form through the so-called *moral damage*), and this enables us to quantify the negative impact of organised crime. With a coherent image of the effects of organised crime, authorities can coordinate a better distribution of forces, and this can lead to making important steps in counteracting and preventing organised crime.

References

1) Ashworth, K. and Vizuete, W. (2017). High Time to Assess the Environmental Impacts of Cannabis Cultivation. *Environmental Science & Technology*, 51(5), pp. 2531-2533. [online] Available at: http://dx.doi.org/10.1021/acs.est.6b06343 [Accessed 25.07.2021].
2) European Commission, (2020). *Report from the Commission to the European Parliament and the Council, Third report on the progress made in the fight against trafficking in human beings (2020) as required under Article 20 of Directive 2011/36/EU on preventing and combating trafficking in human beings and protecting its victims*. [online] Available at: https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:52020DC0661 [Accessed 26.07.2021].
3) EMCDDA and EUROPOL (2019). *EU Drug Markets Report 2019*. Luxembourg: Publications Office of the European Union.
4) Franț, A. E. (2020). The Difficulties in Regulating the Fight Against Transnational Organised Crime. In: *European Finance, Business and Regulation – Proceedings of EUFIRE 2020*, pp. 351-360. Iași: „Alexandru Ioan Cuza” University Publishing House.
5) Kopp, P. (2012). Human Trafficking and International Financial Flows. *Draining Development*. Washington DC: World Bank Press, pp. 171–202. [online] Available at: https://openknowledge.worldbank.org/bitstream/handle/10986/2242/668150PUB0EPI0067848B09780821388693.pdf?sequence=1&isAllowed=y [Accessed 26.07.2021].
6) Levi, M., Innes, M., Reuter, P. and Gundur, R. V. (2013). *The Economic, Financial & Social Impacts of Organised Crime in the European Union.* Brussels: European Union. [online] Available at: https://www.europarl.europa.eu/RegData/etudes/etudes/join/2013/493018/IPOL-JOIN_ET(2013)493018_EN.pdf [Accessed 26.07.2021].
7) Sumnall, H.R., Bates, G. and Jones, L. (2017). *Evidence review summary: drug demand reduction, treatment and harm reduction.* Liverpool John Moores University: Public Health Institute. [online] Available at: https://www.emcdda.europa.eu/system/files/attachments/6237/EuropeanResponsesGuide2017_BackgroundPaper-Evidence-review-drug-interventions.pdf [Accessed 28.07.2021].
8) Stuart, R. B. (1974). Teaching facts about drugs: Pushing or preventing. *Journal of Educational Psychology,* 66(2), pp. 189–201. [online] Available at: \ https://doi.org/10.1037/h0036275 [Accessed 27.07.2021].

9) United Nations – UN, (2004). *United Nations Convention against Transnational Organised Crime and the Protocols thereto.* [online] Available at: https://www.unodc.org/documents/treaties/UNTOC/Publications/TOC%20Convention/TOCebook-e.pdf [Accessed 28.07.2021].

THE CORPORATE DIPLOMACY INSTRUMENTS FOR AN IT LEADER. A GENERAL ASESSMENT

IOANA GUTU
Alexandru Ioan Cuza University of Iasi
Iasi, Romania
gutu.ioana@yahoo.com

Abstract
When taking into consideration the IT industry, everyone is a leader, its own leaders, leaning towards the best result of his mind, the ultimate innovation. The post-modern national environment becomes the host of the new fragments of the traditional state-to-state diplomacy, where the converted new actors are not only government and ministries, but also non-state entities that uphold the supraterritorial relations, and so conducting the new international economic play scene. IT industry is one of the new market players that govern the world business reality, and when faced with globalization and international standards, it favors a set of new diplomatic rules that are being undertaken by leaders within large conglomerates, by setting new rules and changing traditional diplomatic behaviors. Inside the IT companies, the face of economic diplomats is widely known and recognized under the shape of leaders, mainly transformational leaders that have the ultimate task of favoring innovation among followers by setting and conducting tradition. Corporate diplomacy therefore is being undertaken piece by piece by every leader inside each IT company, as part of a greater plan, of surviving international threats and create precedent among products and services. The paperwork is set for developing a study that reveals the leadership and innovation attitudes and behaviors within the software development companies in Iasi, Romania; the research instrument is a 44 questions questionnaire that analyses the internal workplace innovation atmosphere that might be a result of the transformational leadership specific methods. Research reveals the fact that the software development as part of the IT industry from Iasi shows a general homogeneous distribution when considering age, gender, management position and education, in both areas, innovation and leadership, sustaining the hypothesis where corporate diplomacy favors international homogeneity among specific industries across the world.
Keywords: *leadership; diplomacy; innovation.*
JEL Classification: M15

1. GENERAL VIEW

Globalization is the main driver when about transforming the international economic relations pattern around the world, by individually subtracting spheres like economic, social, or political and re-characterize them. As Friedman states, globalization is not only a phenomenon or a passing trend, but a new international system that affects both domestic politics as well as international relations to virtually every country (Friedman, 2000). Therefore, this new international current applies to each national and international playing actor, by country, industry and economic importance. Scholte encourages the suggested idea, since in his opinion, globalization implies the relation among growth and people, seen from a supra-territorial point of view (Scholte, 2000).

Modern diplomacy becomes, as Satow (1979) previously defined it, an application of both tact but also intelligence, to have the ability of conducing official relations between governments and independent states' actors, such as national and international resident companies, that repost and subscribe to national but also international policies. As a profession, diplomacy is characterized by undergoing changes in terms of role expectation, qualification but also, most important, behaviors, meaning what is or is not supposed to do. The participation of non-state actors becomes more prominent in industrial countries, but also within developing countries, where young population predominates. Hence the expression of IT business leaders as used within the title of the current paperwork does not pertain to a specific economic type, does not reflect a specific state related diplomacy, but is more related to an economic diplomacy specific industry trend line; among the three best well-known industries that developed recognizable leadership drives are IT, communication and automotive. For this paper, we selected the IT industry, namely the software development branch, which was studies in terms of leadership behavior and innovative results. Whether the two dimensions intersect and positively correlate, is a question that will be answered further.

2. LEADERSHIP - TYPOLOGY AND DIMENSIONS

Proposed by Conger and Kanungo in 1988, but previously proposed by Bass in 1985, the fundamental characteristics of transformational leadership theory were operationalized into a series of questionnaires, among which could be mentioned the TLQ as Transformational Leadership Questionnaire and MLQ as Multifactor Leadership Questionnaire (Conger and Kanungo, 1988). To this study, the second form has been undertaken, since Bass's theory, scales and subscales are widely used within literature, and demarcate more clearly each of the four transformational leadership characteristics (Hemsworth, Muterera and Baregheh, 2013). Even though MLQ was developed to measure all the three leadership styles, as transformational, transactional and laissez faire, since the current research refers to the IT industry, that shows one of the most explosive trend-lines when measuring the speed of cybernetic innovation, for the purpose of this study, the transformational leaders were considered, if their trainees and followers.

Charisma is one of the four components of leadership, high order, meaning that since it belongs for transformational leadership, it can also be seen as multidimensional, specific for the style itself (Bass, 1985). Charisma is a necessary component for the transformational leaders, meaning that it must be embedded into an IT leader character, since they are charismatic individuals that not only motivate, but encourage their followers to engage in various uncommon changes, seen as internal transformation opportunities, that not only benefit for the follower on an individual level, but also to the entire group, team, department but also, organization. This type of leaders can be described as possessing a strategic vision and have a native ability for motivating followers to achieve major goals. Charismatic leaders can be recognized when emerging within major changes specific to an organization, while motivating, strengthening the self-confidence, sharing convictions and being assertive in respect with the followers needs and approaches (Conger, 1999). The current study proposes that among the entire IT industry, the software development component registers most of the charismatic leaders, as part of the recognizable transformational leadership specific of this branch, whose general features are being unveiled when answering to the proposed questionnaire. Since charismatic leaders display confidence, could convince and to inspire, they display a specific enthusiasm when the followers enable innovative results.

Morality, as a second component of transformational leadership, bring into light the ethical conduct (Burns, 1978) interpreted as a high degree of respect towards others, colleagues on similar management levels or followers, by being honest, showing integrity and sharing with others the importance of high ethical standards and strong values. Considered to be in the presence of a moral leader, one would be treated with respect, since a figure leaders would express concern for its safety and well-being. Moral leaders are fair and just while making decisions and have the tendency of sacrificing themselves for the group benefit (Sankowsky, 1995). The current research searches to observe if there is a psychosocial pattern for the IT leaders from Romania, assuming they display moral behaviors, since the innovative results the industry achieves seems to follow this direction.

As a third dimension, the intellectual empowerment has the role on encouraging leaders' creativity and innovation, by methods like brainstorming, questioning the status quo, examining the task clarity and relevance, but also by identifying practical solutions to existing problems. As Bass and Avolio recognize, the leadership pattern under the name of intellectual stimulation, the intellectual empowerment stands under the same theoretical background, but only with a singular different aspect: the followers are not passive information recipients and the leader is not deferring tediousness (Bass, 1985; Avolio and Bass, 2002). The current study stands under the premise that software developing leaders intellectually empower their followers, by actively challenging them to develop and improve their knowledge. The transformational process request as a fundamental condition the active participation, ever since one follower is given a share of individual consideration to innovate and achieve goals.

Individual consideration, as the last of the four essential leadership features, suggests that to transform a follower, on an individual level he/she has needs that must be met; for this reason, to be successful, any follower must at first be equipped with required resources and only further, follow the transformational process. Practically, a transformational leader needs to spend time with each of the followers, on an individual level, by offering them consideration and personal attention, and understanding individual needs. The process includes personal encouragement and attention, by showing equal treatment, and making each individual feel necessary, valuable, and important for the process of achieving organizational goals. These concepts are not completely different from Bass proposal of giving followers individual consideration (Bass, 1985).

Table 1. MLQ Subscales within Literature

MLQ Questionnaire	Cronbach's Alpha Rowold (2005)	Cronbach's Alpha Sen and Rajshekar (2012)	Cronbach's Alpha Avolio and Bass (2002)	The current research
Idealized Influence (Attributes)	0.97	0.71	0.77	0.90
Idealized Influence (Behavior)	0.89	0.64	0.7	0.87
Inspirational Motivation	0.85	0.74	0.83	0.89
Intellectual Stimulation	0.93	0.72	0.75	0.88
Individual Consideration	0.77	0.68	0.80	0.85

Source: own result

To this study, transformational leadership was measured with the help of MLQ 5X Questionnaire (Table 1); by applying it to the software development IT Branch from Iasi, Romania, 175 responses were gathered. Considering the SPSS 2.0 software, results show that MLQ scales and subscales have a high internal consistency, not contrary to what the literature specifies in regard with the current questionnaire.

3. THE LINK BETWEEN LEADERSHIP AND INNOVATION

Organizational success can only be measured through the competitive advantage on the internal/external (inter)national markets. To approach industry leaders and governments representatives, business leaders must retain sets of diplomatic skills that will empower them to negotiate and develop further strategic approaches. Corporate diplomacy, therefore, sets rules and creates meeting backgrounds for public and private leaders to inspire and be inspired.

Leadership has been identified by literature (Saad and Mazzarol, 2010) to be a determinant element for the organizational innovative processes, since a transformational leader not only inspires followers to streamline, but also engages within ordinary group requirements to achieve the desired organizational goals. As Jung and Sidik claim, an organizations' innovativeness degree is strongly influenced by the leadership behaviors, when considering any given management level (Jung, Chow and Wu, 2008; Sidik, 2012). A strategic leadership and innovation model was developed in 2008 by Carneiro, who included three main requirements for a leader to be: information, innovation (organizational) challenges that would be driven by a demanding need for change (Carneiro, 2008). Considering the three pillars as previously described, results show that leadership increases both followers innovative efforts and innovations, as quantifiable results (Muenjohn and McMurray, 2016).

Innovations define a specific factor that increases in value and/or utility the existence of a tool and or specific process. Selman sees transformational leaders as innovators, while the organizations they work within that adapted specific production systems and processes, need to be flexible and present markets with products or services that are price competitive (Selman, 2002). As Mbizi prove, it is indeed a matter of capturing markets shares; therefore, innovation is important in improving customer loyalty and cultivate long term customer value for both large and small organizations (Mbizi *et al.*, 2013). However, leadership when about organizational innovativeness, leadership becomes an indispensable factor, if not a requirement per se.

Economic diplomacy is not only a privilege that leaders from large groups and organizations must follow and achieve, but it is a set of diplomatic riles and skills that one must develop individually and build ever since early education; it has been proven that even SME managers, that most often can be also found occupying the owner's position, rely upon their own organizational culture, as built, and develop activities through the eyes of their own leadership.

4. METHODOLOGY AND RESULTS

Staff employed in all size Software development companies in Iasi, Romania were approached. Since the current research is ongoing, for the purpose of this article, partial results will be engaged. Therefore, the partial response rate yielded 175 usable questionnaires. The questionnaire was comprised of the Workplace Innovation Scale – WIS, developed by McMurray and Muenjohn (Muenjohn and McMurray, 2016) and part of the MLQ 5X in regard with the transformational organizational leadership, as proposed by Bass and Avolio (Bass and Avolio, 1995). The research tries to measure the four dimensions of workplace innovation and analyze if there is a connection with the organizations' leadership, namely transformational leadership. A 5 Item Likert Scale (1-5) totally agree/disagree was considered to best fit this specific research.

When analyzing the internal consistency of both questionnaires (Table 2), as a whole and by items, Cronbach's Alpha has a value >8, meaning that the internal consistency of the entire instrument is very good.

Table 2. WIS and MLQ Internal Consistency

Items	Cronbach's Alpha	No. of Items
WIS (Average value)	**0.961**	**24**
Organizational Innovation	.908	5
Innovation Climate	.899	6
Individual Innovation	.902	8
Team Innovation	.827	5
MLQ (Average Value)	**0.972**	**20**
Idealized Influence (Attributes)	.906	4
Idealized Influence (Behavior)	.873	4
Inspirational Motivation	.890	4
Intellectual Stimulation	.883	4
Individual Consideration	.851	4

Source: own results

Out of 175 respondents, the descriptive analysis reveals a step further towards identifying who the transformational leader is and whether he does(not) qualify as a practitioner of corporate diplomacy for the benefit of his organization. It is common knowledge that IT industry is a masculine world, since a large share of owners and employee belong to this genre. But, as the education degree in most of the small and medium economies shows an ascendent trendline, while the IT industry is subject to an innovational process never occurred before in history, more and more female genre representatives seem to join. This workflow seems to happen in Romania also, since out of 175 respondents, 90 were males and 85 females; but, the current result is subject to a drawback, since the predisposition of males to respond questionnaires and pay attention to details out of their activity range is lower; therefore, we consider this result to be partially true, the software development industry is still a males world, only that they do not have a predisposition for consuming time on no immediate benefit extracurricular activities.

The average programmer is subject to an HR internal evaluation once in 6 months; during this time, the leadership capacity is monitored, along with workflow habits, solving problems ability, and communication. The reason for this type of evaluations reside in one specific feature of the industry: the employment retention which is (very) low. For this reason, team leaders are scarce, and the only defense a company has is promoting for internal management positions. As Results will further show (Tables 3 and 4), an average IT leader has no more than 5 years in work experience in the given industry.

Table 3. Position within an organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Top Management	34	19.4	19.4	19.4
	Middle Management	50	28.6	28.6	48.0
	Non-management positions	91	52.0	52.0	100.0
	Total	175	100.0	100.0	

Source: own results

Table 4. Descriptive analysisi years of experience within the field

		Frequency	Percent	Valid Percent	Cumulative Percent
	0-3	76	43.4	43.4	43.4
	4-7	50	28.6	28.6	72.0
	8-11	29	16.6	16.6	88.6
	> 11	20	11.4	11.4	100.0
	Total	175	100.0	100.0	

Source: own results

When taking into consideration age, it seems that results support our previous theory. IT industry is considered to be young, therefore a large share of the people who work for it have a age range that starts 14, concentrates on age group 21-30 and evens after a subject is more that 31 years old.

After expressing risks and concerns in regard with questionnaire responses and industry background, according to the blunt results obtained, we can create a psycho-demographic profile of the average worker, manager and leader within the software development industry in Iasi, Romania.

All the three organizational (non) managerial positions considered seem to prove a symmetrical distribution from a genre point of view; namely, top management positions, as long with middle management and also non-managerial positions (but aspiring to reach one of the previous) has a rather uniform distribution; while there are more female representatives on top management positions, it appears that on a new entry level, they also prevail. These results were confirmed with the help of Chi-Square Test, there Sigma is 0.192>0.05, meaning that there are no differences of genre repartition considering hierarchical positions.

If considering the experience in the field, 43.4% of the respondents have 0-3 years of experience, meaning that the industry is young and the workforce necessary is high. If taking as an example the top management positions, we will see that 14.7% are part of the aforementioned group, while 32.4% have 4 to 7 years of experience, and only 23.5% have more than 11 years of working in the field.

Finally it can be retained the fact that the years of experience do not necessary reflect the management position within an organization, but this aspect is a trigger for applying for it.

If considering age and management position, the conclusion draws the further line: for the top management age rate prevails for 31-40 years old range, while the middle management and non-managerial positions are subject to people aged between 21-30 years old.

If taking into consideration the study level, it can be easily seen that the management position within an organization still reflects the studies level of its subjects, a feature common to almost every industry, not only IT. As for this conclusion, non-management positions requite high school of during bachelor steps, while if bachelor graduated, is likely to be able to hold a middle management position (1.2%: 1.8%). If masters was graduated, again the rule confirms itself, since the average individual will be part of a middle or top management position.

It is symptomatic to observe that non-managerial positions are specific for individual of masculine or feminine genre, evenly dispersed, with age between 14-30, that are currently enrolled for high school or bachelor education.

Middle management positions are again evenly dispersed from a gender point of view, an average manager is being educated at a bachelor level, has 31 to 40 years old and has 4-11 years of experience within the field.

Top management IT members are equally gender distributed, have more than 11 years of experience in the field and most of them have a Masters' education level; they are usually aged more than 40.

Since leadership is such a buzz word within the undertaken industry, it is to be assumed that the organizational leadership specific to the studied organizations is nothing else than transformational, since the industry potential and requirement fit to the book for the description of a transformational leader. As expressed previously, management positions within the software development industry often coincide with the upheld management positions. Therefore, we are ready to create the psycho-demographic profile of the IT leader, by taking into consideration the minimum requirements: male or female by chance, the software developer leader has a Bachelor education and an experience in the field of at least 4 years, it is aged more than 21 and acts both independently and in groups, by triggering cooperation and enhancing innovation.

Whether this profile of an IT leader fits the corporate diplomacy specifics is to be seen. Saner and Yiu (2003) describe the corporate diplomat as the person who should seek for new business opportunities, enable business stability, and safeguard the corporate reputations. Its main concern must be the business conduct of the company he represents, but mostly, the corporate diplomat must have the social ability of developing social networks, both internal and external from the organization.

According to this definition, we note that Saner and Yiu describe a corporate diplomat according to the business interests and the industry the organization is part of, national and/or international (Saner and Yiu, 2003). From a personal skills point of view, the corporate diplomat fits very well the profile of the software developer leader that was previously analyzed.

The last question that needs to be answered is whether an IT corporate diplomat is favoring innovation and innovativeness of the employees, and whether IT corporate diplomacy is a trigger for innovations specific of the field. This question is to be answered with the help of the statistical analysis SPSS 2.0 when a larger number of questionnaires will be answered, and database will be complete.

5. FINAL REMARKS

Few studies have explored the link between transformational leadership and corporate diplomacy, with innovation as a result for the involved organizations. Software development leaders, according to the size and (inter)national goals of the organizations have the generally defined role of favoring and even enhancing innovations, by nurturing the innovativeness of the members of their teams. The current study partially addresses these connections through in-depth examination, by using a quantitative method – the questionnaire. Further research may consider expanding this study and develop a model that enhances the IT corporate diplomats, as transactional leaders, to favor organizational innovation, by creating a revealing concept-items equation.

ACKNOWLEDGEMENTS

This work was co-financed from the European Social Fund, through the Human Capital Operational Program, project number POCU / 380/6/13/123623 "Doctoral students and postdoctoral researchers ready for the labor market"

References

1) Avolio, B. J. and Bass, B. M. (2002). *Developing potential across a full range of leadership*. Mahwah, N.J.: Lawrence Erlbaum Association.
2) Bass, BM. (1985). *Leadership and Performance Beyond Expectations*. New York: Free Press.
3) Bass, B. M. and Avolio, B. J. (1995). *The Multifactor Leadership Questionnaire*. Palo Alto, CA: Mind Garden.
4) Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
5) Carneiro, A. (2008). When leadership means more innovation and development. *Business Strategy Series*, 9(4), pp. 177.

6) Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *Leadership Quarterly,* 2(10), pp. 1-10
7) Conger, J. A. and Kanungo, R. A. (1988). *Charismatic leadership*. San Francisco: Jossey-Bass Publishers.
8) Friedman, T. (2000). *The Lexus and the Olive Tree: Understanding Globalization.* San Francisco: Macmillan Publisher.
9) Hemsworth, D., Muterera, J. and Baregheh, A. (2013). Examining Bass's transformational leadership in public sector executives: A psychometric properties review. *The Journal of Applied Business Research*, 29(3), pp. 853-862
10) Jung, D., Chow, C. and Wu, A. (2008). Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. *The Leadership Quarterly,* 19(5), pp. 370-389.
11) Mbizi, R., Hove, L., Thondhlana, A. and Kakava, N. (2013). Innovation in SMEs: A review of its role to organisational performance and SMEs operations sustainability. *Interdisciplinary Journal of Contemporary Research in Business*, 4(11), pp. 370-389.
12) Muenjohn, N. and McMurray, A. (2016). The impact of leadership on workplace innovation in Thai and Vietnamese SMEs. *The Journal of Developing Areas*, 50(5), pp. 479-486.
13) Rowold, J. (2005). *Multifactor Leadership Questionnaire.* [online] Available at: https://www.mindgarden.com/documents/MLQGermanPsychometric.pdf [Accessed 15.05.2021].
14) Saad, M. S. M. and Mazzarol, T. (2010). *The impact of leadership on organizational innovation performance among Malaysia's multimedia super corridor (MSC) SME*. [online] Available at: https://cemi.com.au/sites/all/publications/Shamsuri%20and%20Mazzarol%20ICABR%202010.pdf [Accessed 24.05.2021].
15) Saner, R. and Yiu, L. (2003). *International economic diplomacy: mutations in Post-modern Times*. [online] Available at: http://www.businessdiplomats.com/images/articles/files/Postmodern_diplomacy.pdf [Accessed 15.05.2021].
16) Sankowsky, D. (1995). The charismatic leader as narcissist: Understanding the abuse of power. *Organizational Dynamics*, 4(23), pp. 70-78.
17) Satow, E. M. (1979). *Guide to diplomatic practice*. New York: Longman.
18) Scholte, J. A. (2000). Globalization, Governance and Corporate Citizenship. *The Journal of Corporate Citizenship*, 1, pp. 15-23.
19) Selman, J. (2002). Leadership and Innovation: Related circumstances and change. *The Innovation Journal: The Public Sector Innovation Journal*, 7(3), pp. 1-9.
20) Sen, G. and Rajasekhar, D. (2012). *Social Protection Policies, Experiences, Challenges.* [online] Available at: https://unrisd.org/80256B3C005BB128%2F(httpAuxPages)%2F79014486757840 74C12573D3004D25FF%2F%24file%2FIndiaWeb.pdf#page=85 [Accessed 24.05.2021].
21) Sidik, I.G. (2012). Conceptual Framework of Factors Affecting SME Development: Mediating Factors on the Relationship of Entrepreneur Traits and SME Performance. *Procedia Economics and Finance*, 4(1), pp. 373-383.

BRAND ASSOCIATIONS
IN RELATION TO CONTENT MARKETING

ALEXANDRA RALUCA JELEA
Alexandru Ioan Cuza University of Iași
Iași, Romania
alexandra.jelea19@gmail.com

MIRCEA ALEXANDRU ROȘU
Alexandru Ioan Cuza University of Iași
Iași, Romania
mircea.roshu@gmail.com

Abstract
This paper aims to find the brand associations that are formed when being exposed to the brands Volvo and Apple. The focus is on whether the respondents have positive or negative emotions regarding these two brands. The second part of the article looks at how the two companies promote their products in the online environment and whether their messages are aligned with the public's perceptions. The study aims to analyse the marketing strategies for both businesses, focusing on content marketing. Our study aimed to see if huge, well-known corporations like Apple and Volvo pay attention to how they are viewed by the general population. We wanted to check if their online presence is focused on reinforcing some of their brand features, as well as how they promote the changes in their particular industries. By conducting qualitative research, we observed that there are differences in people's perceptions of brands. Some unfavourable brand connotations were discovered in our study; for example, both brands were considered as pricey, and some survey participants stated that Apple products are overvalued. Both Apple and Volvo decided not to address this, according to their content marketing analysis.
Keywords: *brand association; brand; content marketing.*
JEL Classification: M31

1. BRAND ASSOCIATIONS IN RELATION TO CONTENT MARKETING

When talking about brand associations, we want to understand more consumer perceptions and associations since it's the first step to understanding brand preferences and choices. The brand is recalled by the customer through the unique set of attributes and experiences that make the brand special.

A brand association is a mental link between a product and an idea (Finkle, 2018). When a person thinks of a brand, associations such as "soft" for Cottonelle or "athletics" for Nike come to mind. Brand associations are neuroscientific links between a brand and other items in our minds, such as people and places (James, 2005, pp. 14-24).

The mind is a network of concepts that are linked together. It's like a set of data that people use to think. So, when we are thinking of an object, subconsciously we think of other things too (Chaser and Wolfe, 2010).

For example, when you think about your aunt, you might also think of her name, her residence, how she makes you feel when she's around, the activity she's known for, and other people who are linked to her, such as your uncle and cousins. Brands are treated in the same way by the brain.

This research tries to see if a brand's online marketing efforts are the starting point for consumers when making an association. The second part of the study will look at how Apple and Volvo present themselves in the online environment, how they choose to communicate, how they present their offerings. This analysis considers the findings from our survey, trying to link our findings with the content each brand publishes. To do this, we have studied the websites, the social media activity and even some innovative ad campaigns which have proven to be very successful. Our findings suggest that the focus of the marketing for both companies is to reinforce the positive associations that people have already formed towards their brands.

2. DATA & RESEARCH METHODOLOGY

The research problem is to find out the brand associations formed in people's minds and to compare them to the advertisements used by marketers. The purpose of this research is to make a comparison between consumers associations and emotions of the brands with the commercials used by them.

To do that, we focused our attention on two brands that are from different fields but have a major impact on today's world. We want to observe the perception of the two brands on an international level.

The main objectives of this research are:

O1. Exploring the brand associations formed when seeing the word "Volvo".

O2. Exploring the brand associations formed when seeing the word "Apple".

O3. Exploring the emotions regarding Volvo brand.

O4. Exploring the emotions regarding Apple brand.

2.1 Methodology

The research started by analysing which brands we would like to continue our investigation and concluded that we should choose two brands from different categories: Volvo - for the car infrastructure and Apple - for technology and innovation (Ramsøy, 2014, pp. 1-8).

The method used in this research is the qualitative research and the tool used is a questionnaire. This method was used to gather information about the respondent's feelings, emotions and to learn more about their behaviour and personal experience.

The questionnaire consisted of 19 questions and was distributed online.

The target population is consisting of students from all around the world. The sample considered consists in 30 respondents, 15 females and 15 males. We chose this category because we want to see how the younger generation perceives these brands.

2.2 Findings

2.2.1 *Volvo brand association*

For measuring brand associations, we asked the respondents what are the first 5 words that come to their mind when seeing the word "Volvo". We split them into two categories based on their gender to see if there are any major differences.

Table 1. Words resulting from seeing the Volvo brand. Feminine

	1st word	2nd word	3rd word	4th word	5th word
Respondent #1	safety	massive	family	black	masculine
Respondent #2	elegance	safety	originality	design	great
Respondent #3	cars	foreign	brand	international	European
Respondent #4	safety	smart	car	nice	design
Respondent #5	car	Scandinavia	cold	outdoors	snow
Respondent #6	car	safety	speed	trucks	transportation
Respondent #7	car	familycar	America	gasoline	black
Respondent #8	cars	strong	quality	safe	power
Respondent #9	efficient	reliable	quality	Sweden	grey
Respondent #10	cars	phones	camera	selfie	expensive
Respondent #11	Edward Cullen	Twilight	car	trip	vampire
Respondent #12	Sweden	car	old-fashion	cheap	quality
Respondent #13	car	4x4	expensive	mountain	trip
Respondent #14	safety	reliable	family-car	eco-friendly	expensive
Respondent #15	safety	luxury	design	Indian	Sweden

Source: computed by authors

From Table 1, the boxes in red mean that the words have been repeated by other respondents, while the white ones are mentioned only one time.

We observed that the most repeated words are car, safety, quality, design, Sweden, expensive, family-car, reliable. From these words we get the idea that the respondents are familiar with the brand, and they know that the main area of manufacturing for Volvo are cars. Not only do they know that Volvo is manufacturing cars, the word on the second place for frequency is "safety", which means that the respondents view the brand as a safe car that comes from Sweden. When looking at the words with a low frequency we found some very interesting connections, for example: Twilight, Edward Cullen and vampire. This is an association formed in the consumer minds, and especially women, because in the movie “Twilight”, Edward Cullen, the main character which was a vampire was driving a Volvo car.

Table 2. Words resulting from seeing the Volvo brand. Masculine

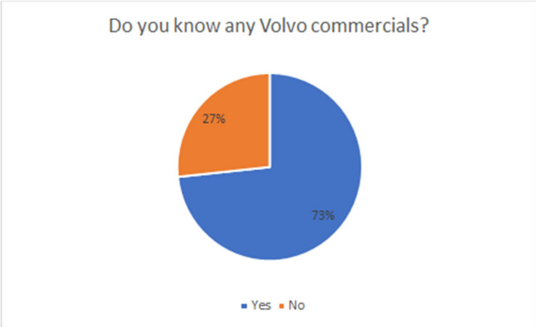
	1st word	2nd word	3rd word	4th word	5th word
Respondent #1	car	safety	3 point safety belt	road	trip
Respondent #2	cars	cheap	circle	bad	foreign
Respondent #3	cars	volvic	road	family	petrol
Respondent #4	safety	effieciency	reliability	simplicity	functionality
Respondent #5	cars	safety	Sweden	lorries	expensive
Respondent #6	car	safety	expensive	affordable	Swedish
Respondent #7	safety	tough	strong	reliable	nice
Respondent #8	speed	looks	services	safety	security
Respondent #9	reliability	car	safety	family	strong
Respondent #10	car	safety	expensive	functional	tire
Respondent #11	cars	efficient	safety	speed	fast
Respondent #12	car	fast	convenience	safety	expensive
Respondent #13	safety	accessibility	taxes	functionalities	wheel
Respondent #14	horsepower	speed	affordability	safety	maintenance
Respondent #15	cars	safety	strong	family	circle

Source: computed by authors

In comparison to females, we can observe in Table 2 that males focus more on technical options of Volvo, they repeat the words: safety, car, expensive, functionalities, reliability, speed, fast. The idea emerging is that men are more focused on technicalities like speed, how reliable the car is, how strong the car is, how affordable it is. If we check the words with a small frequency, we can observe that they also reflect the practical part of a car: tire, tough, services.

From the two tables with the word’s frequency for females and males it is visible that they have different associations formed because they are inclined more onto different sides: for women they pay more attention to design while men pay more attention to functionalities.

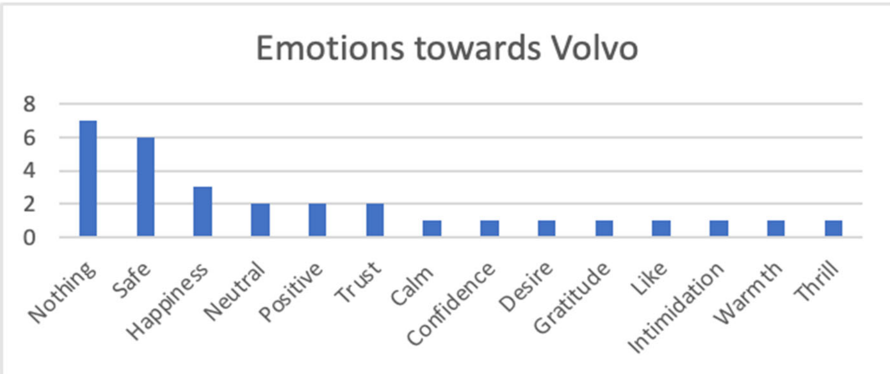
Figure 1. Brand awareness chart - Volvo



Source: computed by authors

Secondly, we analysed the level of awareness of the brand, so we asked the respondents if they know any Volvo commercials. The answer is represented by the pie chart in Figure 1. It is observable that the respondents are familiar with the brand since 73% said that they know Volvo commercials. When asked about the associations formed after watching a commercial, we observed that females are more inclined to safety, family while males remember more technical options or the famous Jean-Claude Van Damme commercial that was with two Volvo trucks.

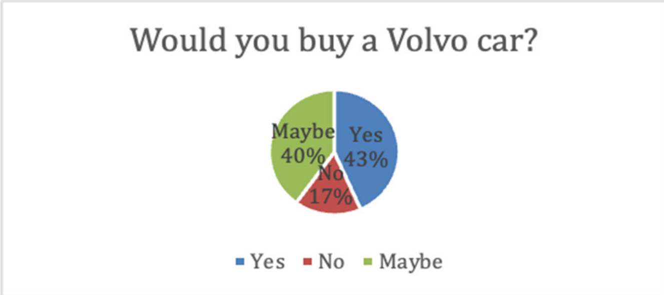
Figure 2. Emotions towards Volvo brand



Source: computed by authors

Emotions are built around the brand and for Volvo, the majority has no feelings for it, on the second place we can see that the respondents feel safe, followed by happiness (Figure 2). We also have respondents feeling intimidation but that may be because of the price of a Volvo. Overall, the brand has positive and neutral emotions.

Figure 3. Buying decision - Volvo



Source: computed by authors

Even though the emotions towards the brand are positive, most of the respondents will buy a Volvo car if they have the money for it, but a big proportion is still undecided (Figure 3).

Analysing the brand Volvo has resulted in a positive emotion towards it and as most of their commercials say the respondents feel safe.

2.2.2 *Apple brand association*

We continue the paper with the second part of our research for the brand Apple. We interpret first the association of words created when hearing the Apple brand.

Table 3. Words resulting from seeing the Apple brand. Feminine

	1st word	2nd word	3rd word	4th word	5th word
Respondent #1	technology	performance	quality	innovative	trend
Respondent #2	overrated	expensive	Steve Jobs	marketing	low battery
Respondent #3	Jobs	upmarket	different	reliability	America
Respondent #4	expensive	user-friendly	elegance	quality	trend setter
Respondent #5	expensive	boring	spread	basic	design
Respondent #6	innovation	quality	reliability	Iphone	expensive
Respondent #7	style	music	product	colors	status
Respondent #8	intuitive	design	simplicity	expensive	chargers which break
Respondent #9	expensive	camera	photos	good-looking	fancy
Respondent #10	Iphone	expensive	quality	innovation	design
Respondent #11	Mac	Iphone	Slim	Silver	expensive
Respondent #12	quality	popular	expensive	innovation	business

	1st word	2nd word	3rd word	4th word	5th word
Respondent #13	innovative	multimillion dollar enterprise	Steve Jobs	expensive	design
Respondent #14	expensive	mainstream	nice camera	photos	design
Respondent #15	Iphone	Macbook	electronic devices	reputation	American

Source: computed by authors

As we can observe in Table 3, the most repeated words are expensive, quality, design, Steve Jobs, innovation, and iPhone. These words show the fact that women have an association with Apple regarding style, the amount of money they ask for their products, the person that was the founder and a very strong image for the brand, Steve Jobs. While these are the words with a high frequency when looking at the ones with lower frequency, we can observe words like “multimillion-dollar enterprise”, nice camera, silver, slim, American. All of these are characteristics of Apple products plus the fact that it is an American company.

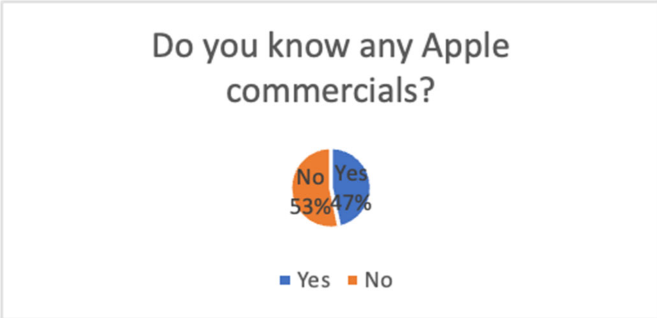
Table 4. Words resulting from seeing the Apple brand. Masculine

	1st word	2nd word	3rd word	4th word	5th word
Respondent #1	quality	technology	design	brand	expensive
Respondent #2	smart	fast	consistent	old	new
Respondent #3	expensive	restricting	ecosystem	simplicity	mainstream
Respondent #4	innovation	high-tech	premium	iphone	elegance
Respondent #5	over-hype	expensive	boasting	overrated	innovation
Respondent #6	expensive	phone	computers	Steve Jobs	macbook
Respondent #7	expensive	overrated	brand	fancy	picture
Respondent #8	expensive	iphone	brand	money	simple
Respondent #9	expensive	shatters	camera	memory	money
Respondent #10	fancy	expensive	integration	phone	photo
Respondent #11	Iphone	expensive	technology	innovation	easy
Respondent #12	intuitive	restrictive	fast	battery	elegant
Respondent #13	overrated	technology	phone	innovative	brand
Respondent #14	expensive	design	screen	iwatch	products
Respondent#15	brand	apple	Steve Jobs	products	Macbook

Source: computed by authors

Observing the responses of men while asking about Apple associations, the words that were repeated the most are expensive, brand, technology, innovation, overrated, iPhone (Table 4). These words describe the functionality of the brand, for example men find it as an expensive brand, but so do women. The difference here is related to technology since men focus more on these characteristics. They find Apple as an overrated brand. From the words with lower frequency the ones worth mentioning are battery, elegant, screen, memory, and apple. Men are inclined more to the features the brand can offer.

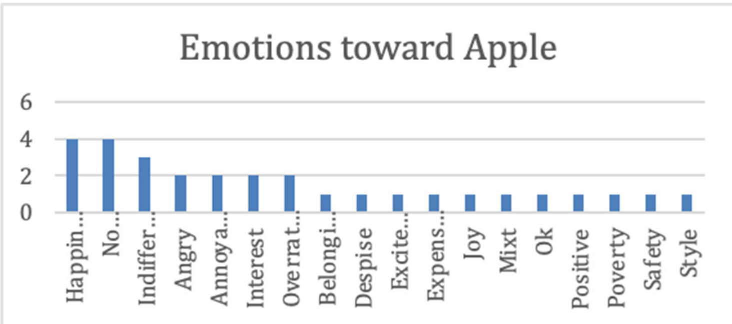
Figure 4. Brand awareness chart - Apple



Source: computed by authors

From Figure 4 we discover that not so many of the respondents are familiar with commercials from Apple, yet the ones that are familiar comment on the fact that the products are reliable, innovative and have a high quality. We can assume that the most seen commercial is the one about iPhones since most answers contain remarks on the camera plus the elegant design they present.

Figure 5. Emotions towards Apple brand

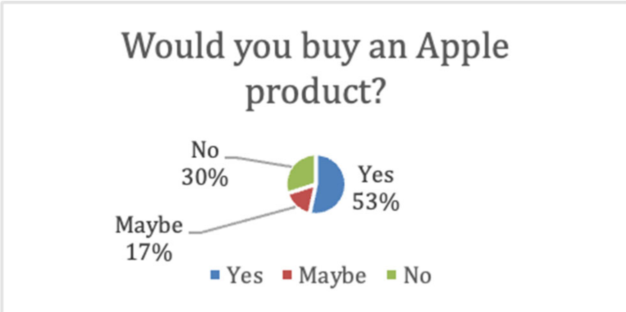


Source: computed by authors

When analysing the overall feeling the respondents have for the Apple brand, they are mixed, the majority says happiness and no feeling, but we also have indifference (Figure 5). These incline to be positive emotions. Some of the respondents said that they are angry and annoyed, but those can be related with the price of the Apple products since they are expensive. However, these are negative emotions.

Since we observed that money is an important factor in the buying decision process and present in the brand associations, we asked the respondents if they would buy an Apple product if they could afford it. The majority answered with yes, which implies that there is a desire for this brand, but there was also a rather big percentage of people that wouldn't buy any Apple product even if they have the money for it (Figure 6).

Figure 6. Buying decision - Apple



Source: computed by authors

Overall Apple is perceived as producing high-quality products that are expensive and address a certain category of people.

2.2.3. ***Apple content marketing***

Without a doubt, Apple is one of the most well-known and successful brands in the world. One defining characteristic that certainly stands out is that Apple has been one of the fastest growing companies in terms of both revenue and popularity ever since the first iPod was released, back in 2001. Another huge hit for them was the release of the first iPhone in 2007 as this is thought to have revolutionized the smartphone market. Make no mistake, even before this Apple was a successful business known for their Mac line of computers and laptops. However, with the release of their mobile devices, they have been widely regarded as the most innovative company in the world and, even though there are lots of people who argue against this, they have managed to gather a huge following and millions of loyal fans around the world.

Apple fans comprise an important part of Apple's marketing strategy. The company knows what the fans expect and continues to tailor its products to the expectations of their followers, not by completely revolutionizing their product line-up, but by improving it in small increments. These small leaps in technology are enough to get people talking, while also making it so that thousands of people wait in line for hours and even days just to get the latest release. What is more astounding is that it is exactly these fans who are the best promoters of the brand's products and they are willing to spend a lot of money just so they can upgrade their current devices? Some consider these people naïve and Apple products overrated arguing that products from other companies offer more computing power, better features, more advanced technologies for lower prices. Despite this, fans genuinely believe that Apple products can make their life better, easier and definitely cooler. Apple has caught on to this trend and it leverages it to market their products with uncanny success. They keep emphasizing the fact that their products stand out both through their design and their utility, and the fans are quick to point out that this is true.

One thing which stands out in Apple's marketing strategy is that they don't follow along with everyone in the industry. While most tech companies run adds online, on social media and on television, they have chosen their own route, focusing more on product placement, and creating hype through positive reviews.

In terms of product placement, Apple is notorious for having its devices be featured in popular TV shows and movies. This allows Apple products to be in the public eye, being used by the coolest heroes, the funnies characters and by well-known celebrities. This continues in the case of reality shows that follow the lives of the rich and famous and, without a doubt, these people use an iPhone as it is the fashionable thing to have. Obviously, the viewers will want to purchase the same phone as their favourite celebrity or athlete.

Getting positive reviews is another important part of the marketing efforts. This approach is quite cost effective as it implies just providing a free sample for the tech insiders or influencers in exchange for a positive review. Persuading these people that the product is good ensures that they will share their impressions with their followers. Another part of this approach is getting the loyal Apple fans to share their thoughts and provide content with the use of a free trial. Having regular people endorse your products is pure gold in terms of content marketing as a study (Nielsen Global, 2012) found that 92% of consumers trust recommendations they get from friends and family. In addition, 70% of shoppers trust testimonials or reviews from other consumers. Apple's reliance on promoting its products through its loyal fan base is a great strategy. This doesn't only increase sales, but also creates awareness and anticipation for each new release.

Another key point in Apple's marketing strategy is not competing in terms of prices. This means that the company does not pay attention to the prices of the competition, rather it feels comfortable on setting its prices according to its own policies. That is why Apple products tend to cost quite a bit more than devices which have similar specs, because Apple focuses on their unique value proposition (UVP) and that is exquisite design that is very functional, requires minimal setup and simply beautiful packaging.

Just thinking at how Apple markets its range of laptops, we can clearly see a difference between the pricing of Macbooks and that of other laptops (Finnie, 2007). While the competition always feels it must outdo Apple products by cramming in more powerful components and extra features, Apple is content to focus on everything else about the product. The design of the MacBook is top notch, the features are more than enough for most users, the battery life is the best in class, the operating system is very streamlined and stable. In addition, Apple also offers the MacBook in a variety of configurations so that the fans can purchase it depending on their needs. Each offering has its own price and people are more than happy to pay extra for a larger screen or extra storage capacity as they feel that it is worth the extra expense.

Being a tech company, Apple understands technology and its implications better than most people. They have conducted extensive studies regarding consumer behaviour and through these, they have understood that at some point the consumers become overwhelmed with technical information. The company has therefore decided to keep its marketing language as simple as possible in terms of technical terms and jargon as this prevents customer confusion. While other companies bombard the marketing space with tons of information regarding the technical specifications of their products, Apple has decided to focus instead on presenting the benefits of their devices, how these will help the consumer accomplish his/her tasks and the enjoyment of using a capable product. The main takeaway is that Apple manages to sell complex technology without the use of complex terms and phrases. By doing this, they are the clear embodiment of the principle laid out by Leonardo da Vinci: “Simplicity is the ultimate sophistication”.

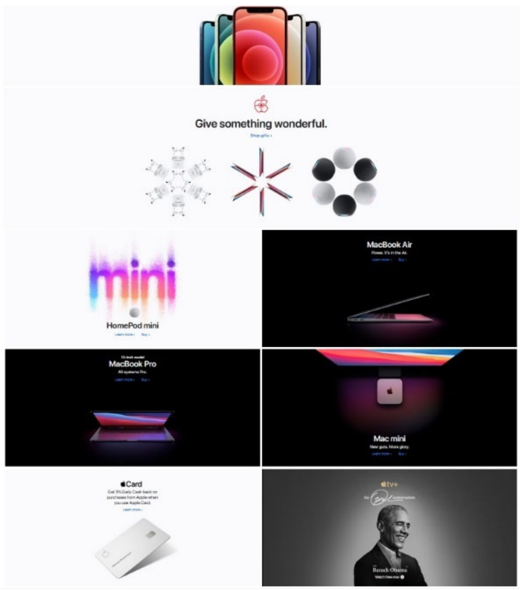
This simplicity has captured the imagination of the public and it has generated lots of sales. Just looking at the commercials that Apple was running as it was fighting for dominance of the US market, it is clear to see that they were focused on showing why the Mac is a sleek machine that is very useful for daily life. Between 2006 and 2009, they ran an advertising campaign called “Get a Mac” comprised of several short videos that pitted a Mac against a PC.

The commercials used two characters, one embodied the PC while looking all business and almost nerdy, while the other looks casually cool. In each spot, they engage in friendly banter where the benefits of the Mac stand out in day to day live. For example, in one of the ads, the Mac character acknowledges that it isn’t as good at spreadsheets as the PC, it beats it in other aspects that matter more in day-to-day life such as listening to music, reading, managing pictures and video, creating a website. Another theme where the Mac comes out on top is its quick installation. While a PC needs to be assembled by hooking up the monitor and other peripherals and set up in terms of software, the Mac is ready to go right out of the box. Because the processing unit and the monitor are one piece, all the user needs to do is plug in the keyboard and mouse. The operating system and all the necessary software is already installed and ready to be used without the need to perform difficult and time consuming operations. The focus is conveying to the audience in terms of daily use, a Mac is much more rewarding compared to a PC. This also lines up to the strategy of not focusing on the specifications and features, instead focusing on the benefits the user will be enjoying and how his/her life will improve.

The focus is on large, clear pictures and exact, concise explanations for each feature and its benefits. This is achieved without going into detail about the technical solutions that were implemented. It is hardly a surprise then that our study found that most people tend to use words like "design, quality, technology, innovation" when they think about Apple products.

The focus of the content is on the user experience – "the ultimate desktop experience". Yes, the performance of the processor and the graphics unit is mentioned, but as it isn't the focus, there are no figures to show exactly how powerful these parts are. Of course, if the customer is interested in these, they can be found further down the page. However, to reach the technical details, the user first must scroll through a gallery of high-quality images accompanied by short bits of easily digestible information that makes the reader feel comfortable. The main theme of the Apple.com website is simplicity, and it is achieved by having lots of clear pictures, small bits of text and a great layout that lends itself to being quickly scanned. Why is this a good idea? Because research (Nielsen, 1997) has shown that 79% of web users only scan the pages they are visiting, while only 16% take the time to read word by word.

Figure 7. Apple home page



Source: computed by authors

Each product is accompanied by a short, exciting bit of text that resonates with the customer perception of the said product. For example, the new iPhone 12 slogan is “Blast past fast”, emphasizing speed with a short, catchy phrase. This has been an ongoing theme with the iPhone as in the past it was supposed to put the power of an Apple desktop computer in a phone. The MacBook Pro slogan is “All systems Pro.” to suggest that everything about this device has been configured to cater to the needs of the professional. The Mac mini is “New guts. More glory” to suggest that the internal components have been updated over the outgoing model, thus achieving better performance. If we were to click on the product page of the Mac mini, we are greeted by a block of large text that reads:

“The Apple M1 chip takes our most versatile, do-it-all desktop into another dimension. With up to 3x faster CPU performance. Up to 6x faster graphics. And our most advanced Neural Engine for up to 15x faster machine learning. Get ready to work, play, and create on Mac mini with speed and power beyond anything you ever imagined.”

The information focuses on what the user must gain with the new iteration of the mini. A three times faster CPU, six times faster graphics, 15 times faster machine learning, a list 0 benefits that doesn’t dive into technical details, yet still captures the attention of the reader. The mini seems to be good for everything as it can handle work, play and creative apps with unheard of power and speed. Scrolling down the page we get to find out more about each benefit with easy-to-understand information and details that get you excited. Here is just a sample of the content: “It’s here. Our first chip designed specifically for Mac. Packed with an astonishing 16 billion transistors, the Apple M1 system on a chip (SoC) integrates the CPU, GPU, Neural Engine, I/O, and so much more on a single tiny chip. With incredible performance, custom technologies, and industry-leading power efficiency, M1 is not a next step for Mac – it is another level entirely”.

First, the M1 chip is designed by Apple for the Mac and nobody else has this technology. In addition, the chip is so advanced that it can perform the actions of the CPU, the GPU and other technologies, while keeping a small form factor. If this doesn’t convince you that this product is amazing, you are invited to learn more about its capabilities. Further down we get to learn about the quality of the graphics that the M1 can offer. The main features – 8-core GPU and 6x faster graphics – are clearly highlighted and these, in theory make the “world’s fastest integrated graphics in a personal computer”. It is important to notice that, as with the pricing, Apple doesn’t compare its product with alternatives from its competitors. All the provided statistics compare the current product with the last generation product, showing just how much the technology has been developed and improved.

The simplicity approach is carried throughout the entire line-up of Apple products. They have a sleek and minimal design, with limited colour choice and short, easy to remember names. This makes it easy for the consumer to exactly identify the product that ne needs. In addition, the company also focuses on limiting the number of products that they sell at one time. They believe that by offering too many choices, the consumer will feel overwhelmed and find it too difficult to choose the right product for their needs. This could also lead to loss of sales as a confused prospective buyer might just give up on purchasing entirely if he loses track of the benefits. That is why Apple tends to only sell two new models of the iPhone at one time, two versions of the MacBook (Air and Pro), three models of the iPad (mini, Air and Pro), and so on. If we look at the competition, we can clearly see that most other companies don't follow the same principle. Just think of Samsung's smartphone line-up. They focus on putting out as many models as possible, trying to cover every niche of the market and every price segment.

Another part of Apple's marketing strategy focuses on the customer experience. Purchasing an Apple product is an experience because the company has researched every aspect of the buyer's journey. Comparing product versions, trying out the devices in the Apple store, ordering and receiving the product, taking the product out of its packaging, and even setting it up has been studied so that the entire experience can be fine-tuned. Take for instance the visit to the Apple store. The space has been designed to make the visitor feel like they are in a high-tech, yet open and friendly space. The colours are monochromatic, the layout of the stands is simple and efficient, the windows are large. The idea behind all this effort is to make the visitor feel welcome and to encourage him/her to try out all the devices. The staff are always there to help and answer questions. All in all, all the design and effort that goes in to making Apple products is reflected in how the Apple store is decorated and functions.

Taking the Apple product out of its packaging is yet another important piece of the experience. Don't think so? Just think of how many "unboxing" videos show up on YouTube and Facebook with every new Apple release. The company has taken the time to perfect its boxes, both on the inside and on the outside. The materials have a premium feel and the products, and their accessories fit exceptionally well inside and removing each item feels special. The main advantage is that they have practically outsourced a large part of their content creation as users are so excited to record and share the unboxing. People will compete to be the first to release a video with the entire experience, because they know that Apple fans will want to know what to expect, thus generating lots of views on social media platforms.

The experience of buying an Apple product is a strong generator of emotion. Emotion also plays an important part in other parts of the company's marketing strategy. For example, a simple animation or short video can be used to ramp up anticipation prior to a new product release.

Another example would be the release of the iPad. Apple wanted the main emotion associated with their new product to be enjoyment. That is why the first adds consisted of images and videos of people simply using the iPad in the comfort of their home and relaxing by browsing the web, reading books, sorting through their photos and finding cool new apps. Like with their other products, they chose not to focus on specs, but merely on the joy of using a device that can provide lots of entertainment throughout the day. The people behind these ad campaigns knew that inspiring positive emotions would generate more sales. One study (Murray, 2013) shows that our decision-making process is strongly influenced by emotion and that is especially true when we are buying something. It found that people rely on emotions (experiences and feelings), rather than facts when acquiring. In addition, positive feelings about a company have a greater impact on our buying decisions than judgement-based thoughts that might rely on facts and objective information. That is why Apple focuses on creating content that makes its target audience feel good. A great example would be the ad for Wonderscope, an augmented reality iOS app for kids. This shows children enjoying an app that was designed for the iPad, which allows them to create and experience stories using fictional characters that come to life. The setting is always a happy home where the parents are happy to share in the excitement. All these details make the audience feel positive emotions that might determine some people to simply go out and buy an iPad for their children so they can also experience the magic, no matter the cost.

Apple's approach to marketing certainly deserves more attention as it is an interesting case study on how a company can achieve huge success while seeming to not put much effort into promoting its products. Their complete approach to the customer experience has managed to create a huge following and many loyal fans throughout the world. While some still regard apple products as expensive and overrated, the company has managed to create a cool brand personality that emphasizes innovation, quality, beautiful design. People want to be associated with a brand that displays these attributes and that is why Apple has enjoyed such economic success.

2.2.4. *Volvo content marketing*

Volvo is another brand that is simply shines in terms of their content marketing. As is the case with Apple, Volvo has a strong following and, as our study has shown, their fans have a few certain perceptions that the company continues to nurture through their marketing strategies. Just looking at the most common words associated with the brand we can clearly see that, for both women and men, the first thing that comes to mind is safety. Other associations are quality, expensive, family car, functionality. Volvo knows exactly how the public perceives them and they have made it their mission to keep making cars that won't let people down.

Buying a new car is an event in people's lives and, therefore, the run up to it a long process that implies months of research. For most people, choosing a new car can prove challenging because there are lots of brands that compete for the same segments offering lots of options both in terms of styling, performance, and safety. The stiff competition makes is difficult for a relatively small brand such as Volvo to stand out among huge car manufacturers such as Volkswagen, Toyota, Mercedes and others. Going head-to-head with the marketing budgets of these giants was not a great idea, so the people at Volvo decided to forgo speaking about technical characteristics and focus instead on emotion. They wanted to connect with the prospective buyers by talking about the experience of driving a Volvo. They managed this with a spot called "Moments" that was released in 2017 for the launch of the XC60 SUV model. The 3-minute video shows a mother encouraging her young daughter before her first day of school.

The main point that the mother makes is that the little girl will always be in control of her life. Then she goes on to imagine specific moments in her future, starting with making friends, finishing school, travelling the world, meeting a partner and starting her own family. The entire piece manages to spark a myriad of emotions up until the moment in which she is driving in her Volvo and gets distracted. The car then assumes control and saves the life of a child crossing the street by applying the auto emergency brake.

This deeply emotional story manages to get people talking about family safety when it comes to transportation. The Managing Director of Volvo Car Canada Ltd, Alexander Lvovich had this to say about the ad: "We created this emotional story, and when you have this reaction, it triggers a discussion… I can't tell you how many people approached me and discussed the piece and how it made them think about not just Volvo, but transportation and their families in general" (Grimm, 2020). The benefit of this campaign is that it stayed in the public's mind and, when the individual is ready to buy a new car, the Volvo brand will be among the first that is considered.

Another great piece of content that Volvo employed for promoting the XC60 SUV is called "The Parents". This video focuses on the family car aspect, which we also identified through our study, but safety is also in the forefront. This time we get to see a couple who is trying to keep up with busy family life and taking care of young children. This is exhausting work and when the parents get overwhelmed, they need all the help they can get. In this spot, the car helps prevent an accident caused by driver fatigue by engaging its safety features like lane keep assist and driver alerts. The closing line reads: "The car that looks after you, like you look after others".

What makes "The Parents" stand out is that it showcases a very relatable story that also remains in the public's memory. With marketing like this, it is no wonder that our study found that the main emotion that is associated with the Volvo brand is safety. Of course, the company has been instilling their association with safety ever since they introduced the three-point safety belt as standard equipment in their cars in 1959. Being something to be very proud of, this achievement has been included in a marketing campaign called "A Million More". This consists of a series of short clips that start by having some people read the reactions of the public and the media to the introduction of the seat belt. Back in the day, the public's perception of the seat belt was completely different: "a violation of human rights", "it's better to be thrown out than to be trapped inside", "wearing a seatbelt is a terrible idea". The video then goes on to show a few testimonials of victims of car accidents and all of them believe that the seatbelt saved their lives. Each person has a name and a short story about his/her crash, all featured in under two minutes.

Starting an ad with messages like those above is certainly attention grabbing. In just 2 minutes, Volvo manages to show how their introduction of the seatbelt has managed to save over a million lives. The objective of this marketing campaign was to show how committed the company is to improve the safety features found in their cars. The last part of the video lists the new standard features that they plan to implement going forward: "In 2020, we introduced speed limits on all our new cars" and "As the next step, we will introduce in-car cameras to prevent intoxicated and distracted driving". These statements align with the mission statement laid out by Håkan Samuelsson, President and CEO of Volvo Cars: "Our vision is that no one should be killed or seriously injured in a new Volvo car".

Continuing the path, which was laid out by the mission statement, Volvo decided it was time to ramp up its efforts in promoting its commitment to safety. It did so by launching another campaign, this time aimed at a female audience, named "The E.V.A. Initiative".

This campaign aims to draw attention to the fact that women are more likely to be injured in accidents. The reason behind this observation is that the standard dummies that are used in crash tests to see how the human body responds to the forces generated during an accident are modelled after the male body. The differences in weight and build between the two genders are not sufficiently considered when designing safety features in automobiles and this leads to a higher injury rate for female occupants. To fight this discrepancy, Volvo has decided to share all its technology and research with all other car manufacturers.

Volvo has decided to share the research it has gathered over the span of 40 years by building an online library that is free to use for all interested parties. The scope would be to encourage the entire auto-motive industry to focus on building safer vehicles. This approach is sure to catch the attention not only of the female audience who is very concerned about safety, but also of other audiences that did not prioritize safety when purchasing a new car. Why would Volvo give away its resources? Because it gets them noticed, it reinforces their commitment to safety and, as they say, "Because we always put people first". Such a catchy phrase at the end of the ad makes the company far more likeable and it suggests to the audience that the business is not part of the industry just for the sake of profits.

Like Apple, Volvo stands out through a minimalist, yet luxurious design. This approach can be found in all their cars, but also on their website. Just like

Apple's website, Volvo has simple layout for their homepage. Large, crisp images of some of their cars and small pieces of copy that invites the visitor to find out more. At the time of this article, the website is focused on showcasing the company's range of electric or hybrid vehicles named "Recharge". Again, this aligns with the mission announced in 2017 of making Volvo cars kinder to the environment. According to the Chief Executive, all future models will be built to use an electric motor: "On the 5th of July this year, we announced our strategy towards electrification, saying all new Volvos from 2019 will have an electric motor. By 2025, the company aims to have sold one million electrified cars and it will launch five fully electric models between 2021 and 2025".

The final part of the homepage is reserved for conveying the core values of Volvo. It does this by asking "why Volvo?", followed by three short paragraphs. Each of these explains how the company has decided to evolve in terms of transportation, electrification, and safety.

While our study was aimed at finding out how people perceive Volvo cars, when discussing the content marketing of the company without bringing up their promotional materials for trucks would be a mistake. As you may know, Volvo is also a truck manufacturer, and it has the same commitment in terms of safety for their heavy vehicle range. While most people are not interested in the trucking industry, in 2015 Volvo managed to get everyone talking about their trucks. They did this with a short film that quickly went viral around the world – The Epic Split featuring Jean Claude Van Damme. This video is the highlight of their B2B campaign that is designed to showcase the safety and technology that is built into Volvo trucks. They wanted to show that they trust their driver assistance features so much that a person could remain suspended between two moving behemoths. In addition, they also showed that they are continuing to develop technologies that can help increase the safety of all traffic participants by helping truck drivers stay focused for longer periods of time. To convince the principal users of their vehicles, they launched a series of funny, yet informative videos that showcased how a Volvo driver's life is improved.

The first video is called "The Technician" and it shows a technician that is buried in the desert so only his head is above the ground. He starts to explain what has been done to improve the drive train of Volvo trucks. As this is happening, a huge vehicle drives over his head without hurting him. Another video shows how easy it is to steer a Volvo truck by doing an experiment involving a hamster that is used to turn the wheel. To further prove the driving precision, they use "The Ballerina Stunt" which has an athlete walk on a wire suspended between two trucks that are driving side by side. Each of these got millions of views on YouTube and got people talking about the risks involved in the trucking industry.

The next step in their content marketing strategy was to focus on stories. For this they followed around a group of truckers and recorded their day-to-day routine and how their job affected their family life. This approach quickly grabbed the attention of the public, sparking a discussion about the challenges that the people in the industry face. Volvo showed that it is committed to making their lives easier through their technological developments and committed to keeping them safe while driving for long hours.

3. CONCLUSIONS

Our research intended to analyse whether large, well-known companies, such as Apple and Volvo pay close attention to how they are perceived by the public. We wanted to see whether their online presence is focused on reinforcing some of their brand characteristics and how they go about promoting the developments that they are responsible for in their respective industries.

The survey we used to gather the data showed that the public does indeed associate the two brands with their company missions. People did recognize Volvo as probably the car manufacturer that focuses the most on occupant safety, while Apple was perceived to be a highly innovative technology company.

Our study did show that some brand associations were negative – for example both brands were perceived as expensive, while some survey participants did mention that they thought that Apple products are overrated. The analysis of their content marketing showed that both Apple and Volvo decided not to address this.

Apple focused on their unique value proposition, believing that their loyal customers would know how much the products were worth. Their marketing also ignores pricing wars with other brands entirely, as this is a way in which they communicate to the public that they are at the forefront of innovation, that they do not pay attention to what others are doing and, instead, they are focusing on improving their products and consumer experience. This experience is what drives most of Apple's marketing strategy. They focus on making the consumer feel special whenever he or she is purchasing an Apple device. This in turn, leads to lots of user generated content that drives excitement for each new release, creating a sense of anticipation for the next big thing in technology.

Volvo is also unapologetic for their pricing. They acknowledge that their cars have a premium feel, but their focus is safety. With this is mind, they are confident in asking higher prices for their automobiles because they know that conscientious customers value safety above everything else. Their marketing communicates that Volvo has been the industry leader in automotive safety since 1959, when they introduced the safety belt. This has now become mainstream safety technology and mandatory worldwide. They argue that the technologies they develop will continue to be adopted by other manufacturers, but they will always be the industry leader. Their many public initiatives that aim to promote road safety make them stand out as a truly considerate car manufacturer, one that prioritizes people's safety over their own profits. The consumers have noticed this and are prepared to pay a premium price for the safest vehicle on the market.

To conclude, there is no doubt that big brands do focus on promoting their vision and values through their marketing efforts, emphasizing their defining characteristics. By doing this, they manage to stand out in competitive markets and gather a loyal following. The consumers know what they are getting when buying their products, and this simply reinforces the brand image already set in place. In time, the marketing campaigns have educated the public on the unique value proposition offered by both brands, and thus they are able to charge higher than average prices for their products.

References

1) Chaser, A. and Wolfe, J. (2010). *Brand Rewired: Connecting Branding, Creativity, and Intellectual Property Strategy.* Hoboken, New Jersey: Wiley Publishing.
2) Finkle, C. (2018). *What is a Brand Association?.* [online] Available at: https://brandmarketingblog.com/articles/branding-definitions/brand-association/ [Accessed 07.05.2021].
3) Finnie, S. (2007). *Mac vs. PC cost analysis: How does it all add up?* [online] Available at: https://www.computerworld.com/article/2541666/mac-vs--pc-cost-analysis--how-does-it-all-add-up-.html [Accessed 14.04.2021].
4) Grimm, J. (2020). *The Complete Guide to Branded Content*. [online] Available at: https://www.pressboardmedia.com/magazine/complete-guide-to-branded-content [Accesed 07.05.2021].
5) James, D. (2005). Guilty through association: brand association transfer to brand alliances. *Journal of Consumer Marketing*, 22(1), pp. 14-24.
6) Murray, P. N. (2013). *How Emotions Influence What We Buy.* [online] Available at: https://www.psychologytoday.com/intl/blog/inside-the-consumer-mind/201302/how-emotions-influence-what-we-buy [Accessed 14.04.2021].
7) Nielsen Global, (2012). *Consumer Trust in Online, Social and Mobile Advertising Grows.* [online] Available at: https://www.nielsen.com/us/en/insights/article/2012/consumer-trust-in-online-social-and-mobile-advertising-grows/ [Accessed 23.04.2021].
8) Nielsen, J. (1997). *How Users Read on the Web.* [online] Available at: https://www.nngroup.com/articles/how-users-read-on-the-web/ [Accessed 07.05.2021].
9) Ramsøy, T. Z. (2014). Brand preference affects the threshold for perceptual awareness. *Journal of Consumer Behaviour,* 13(1), pp. 1–8.

THE INTERDEPENDENCE BETWEEN CORRUPTION AND DIGITAL PROGRESS WITHIN EU COUNTRIES

ANCA ELENA LUNGU
Alexandru Ioan Cuza University of Iași
Iași, Romania
ancalungu01@gmail.com

ANDREEA IOANA BOGOSLOV
Lucian Blaga University of Sibiu
Sibiu, Romania
andreea.bogoslov@ulbsibiu.ro

Abstract
Nowadays, the rapid evolution and overall complexity of the phenomena facing society brings to the fore the need for digitalization. As a matter of fact, the digital progress represents one of the main concerns of the EU Member States, as achieving good results in this area can provide the foundations for undeniable competitive advantages. On the other hand, corruption became an intensified problem in many countries, and the effects it has on all processes are certainly negative. Most of the time, states with a high level of corruption face the inability to overcome their own condition, while change seems impossible. Such a situation can also be found in terms of digitization.
Based on the previously mentioned aspects, the present article aims to identify the existence of potential influences that corruption could exert on the digitalization progress, considering the current context of the EU Member States. To achieve the established purpose, the research involved reviewing existing literature on the considered topic, correlating data and developing a statistical regression model.
The statistical analysis was performed based on the most recent available information on the Corruption Perceptions Index (CPI) and the Digital Economy and Society Index (DESI), so that the reference year was 2020. The results obtained reveal possible associations between the variables of interest, which can be materialized in the existence of corruption influences on the digital evolution.
Keywords: *The Corruption Perceptions Index (CPI); DESI Index; Digitalization.*
JEL Classification: D73, O10, O33

1. INTRODUCTION

The nowadays society can be characterized by a permanent dynamism and, in this context, the rapid evolution and overall complexity of the phenomena facing society brings to the fore the need for digitalization. The actual pandemic accentuated the requirements for a digital environment and, due to this, firstly, it is important to understand the evolution of these aspects within the European countries and, secondly, to highlight the main issues related to a non-digital society.

As a matter of fact, the digital progress represents one of the main concerns of the EU Member States, as achieving good results in this area can provide the foundations for undeniable competitive advantages. On the other hand, corruption became an intensified problem in many countries, and the effects it has on all processes are mainly negative. Most of the time, states with a high level of corruption face the inability to overcome their own condition, while change seems impossible. Such a situation can also be found in terms of digitalization.

The purposed goal of the research endeavour is to identify the existence of potential influences that corruption level could exert on the digitalization progress, considering the EU Member States. Toward achieving this, both theoretical and empirical demonstration will be required. The research involved reviewing existing literature on the considered topic, correlating data, and developing a statistical regression model.

2. LITERATURE REVIEW

With the purpose of identifying the existence of potential impact of corruption on the digitalization level within the EU countries, a review of the specialty literature on the main exposed topics is prerequisite. Within the following sub-sections, the fundamental ideas on the digitalization and corruption will be presented, while considering the European Union as the main subject of interest.

2.1 The Digital Progress of EU Member States

The current global context poses all economies and societies many challenges directly linked to increasing competitiveness. In this regard, one of the main directions of action refers to the rapid technological advance and the simultaneous progress of the states, by digitalizing all the driving factors that underlie their development.

Debates over the adoption of digital technologies as integrated part of processes and actions often differentiate between *digitization* and *digitalization*. In general terms, we refer to digitization as the simple conversion of processes or data, while digitization constitutes an overall transformation of what is identified by the traditional paradigm of acting. Despite these aspects, we will subsequently refer within this section to the digitalization process of the EU Member States, as it represents one of the main stated objectives in obtaining a favourable global position.

At the European Union level, the digital progress is constantly measured through the Digital Economy and Society Index – DESI Index. Considering five main dimensions, namely *Connectivity*, *Human Capital*, *Use of the Internet*, *Integration of Digital Technology* and *Digital Public Services*, the index in question provides remarkable results on the position of EU Member States.

Over time, based on the results of the DESI Index, it has been found that the progress of the countries included in the analysis, although constant, is not similar. According to the most recent available information, there are countries that position themselves as leaders in digitalization among European countries, while states such as Romania, Greece, Hungary, and Slovakia registered scores well below the European average (European Commission, 2020).

On the other hand, the differences are observed when each dimension is distinctively analysed. Although there are states whose digital progress is not very advantageous, the obtained results are extremely favourable on certain dimensions. Table 1 highlights the results of the DESI Index for 2020, based on data from 2019.

Table 1. DESI Index 2020

Country	DESI	Connectivity (25%)	Human Capital (25.0%)	Use of Internet (15.0%)	Integration of Digital Technology (20.0%)	Digital Public Services (15.0%)
Finland	72.30	59.20	78.40	76.30	67.00	87.00
Sweden	69.73	64.35	71.70	75.90	62.20	79.30
Denmark	68.88	64.90	61.20	75.10	65.10	87.10
Netherlands	67.73	60.39	64.20	75.30	65.70	81.00
Malta	63.73	58.70	65.90	65.90	54.90	78.10
Ireland	61.80	45.73	56.40	62.10	74.30	80.60
Estonia	61.05	51.81	66.60	65.40	41.20	89.30
Belgium	58.69	52.04	50.30	61.10	65.90	71.70
Luxembourg	57.92	63.30	58.20	58.90	38.25	73.70
Spain	57.55	60.80	47.50	60.80	41.30	87.30
Germany	56.10	59.40	56.50	61.60	39.60	66.40
Austria	54.30	47.22	56.70	54.00	40.50	80.80
Lithuania	53.88	48.89	43.80	57.30	49.50	81.40
France	52.20	49.80	47.50	53.00	42.10	76.70
Slovenia	51.21	50.22	48.30	51.70	41.00	70.80
Czechia	50.81	44.94	48.70	54.10	49.60	62.40
Latvia	50.71	61.65	35.10	54.00	28.30	85.10
Portugal	49.57	53.85	37.80	48.10	40.90	75.10
Hungary	47.56	59.82	41.90	56.00	25.30	57.80

Country	DESI	Connectivity (25%)	Human Capital (25.0%)	Use of Internet (15.0%)	Integration of Digital Technology (20.0%)	Digital Public Services (15.0%)
Croatia	47.54	41.11	49.20	55.40	41.40	55.80
Slovakia	45.18	47.50	41.80	53.40	32.50	55.60
Poland	44.95	51.33	37.30	49.60	26.20	67.40
Cyprus	43.99	38.45	35.80	54.51	34.50	69.00
Italy	43.66	49.99	32.40	44.54	31.30	67.50
Romania	39.96	56.20	33.10	35.97	24.88	48.40
Greece	37.34	33.41	34.80	46.15	28.21	51.50
Bulgaria	36.43	38.52	33.90	36.61	17.84	61.80

Source: authors own processing of data available on Eurostat

The discrepancies between the EU Member States, related to the digital progress registered are undoubtedly questionable. Analysing the main barriers and drivers of the digital transformation of Ukraine business structures, Strutynska, Dmytrotsa and Kozbur (2019) identified certain obstacles that can be also found throughout the EU. With a general perspective, among the main considerations can be mentioned the following:

- Existence of business barriers between EU Member States and the rational functioning of e-commerce;
- Reduced digital literacy of the population;
- Lack of legislative infrastructure;
- Inexistence of digital rights public understanding.

Vironen and Kah considered the barriers to digitalization from a rural-urban divide perspective, identifying, among the key obstacles, the lack of adequate fast and super-fast infrastructures, as well as adequate digital skills in rural areas. (Vironen and Kah, 2019)

In a recent comparative study on the digital evolution of companies in the EU and USA, European Investment Bank (2020) highlighted several major barriers specific to Europe, including:

- Unfavourable distribution of enterprise size, materialized in the existence of many small companies, which consider labour market regulations, lack external financing and trade regulations as barriers to investment and, consequently, to digitalization;
- Lack of staff with appropriate digital skills;
- Lack of access to finance, being a barrier especially for SMEs;

- Existence of strong barriers to investment for new innovative market participants.

The issues mentioned above, although by focusing on certain areas of interest, are just some of the obstacles that can underpin the differentiation of digital progress between EU Member States or at regional level. Surely, the subject can be extended, as it is expected that each country to encounter specific barriers with respect to digitalization.

We are thus aware of the existence of gaps and obstacles regarding digitization withing the EU countries. However, before analysing the effect, we consider it appropriate to focus on some potential causes that determine the existence of these barriers.

2.2. Corruption – Spotlight on European Union

In general terms, with an extremely broad overview, corruption is often defined as the act of abusing one's power to obtain benefits that serve personal purposes. Although public opinion often relates acts of corruption to the political environment and its actions, it can take various forms, with the possibility of taking place at any level of the economy, if the main actor is the human being. Human behaviour, morality and ethics can be considered as determining factors in mediating or stopping corruption, but in any such activity we distinguish at least two hanged individuals, which implies the existence of distinct meanings that act to achieve a common goal.

Recognized as a real phenomenon facing the whole world, often with negative connotations from the perspective of the produced effects, corruption has been analysed from multiple perspectives over time. Interest on the influences of corruption has been highlighted both among leading researchers and through multiple actions undertaken by specialized institutions and qualified representatives. Most existing studies reveal the major negative effects of corruption, which affects not only the economy but also the overall society.

With a long-term perspective, the validity of which is still preserved today, Kaufman and Gray (1998) drew some specific conclusions with respect to the impact of corruption, generically called *the economic costs of corruption*, summarized as follows:

- In developing and transition countries, bribery is more widespread, but there are undeniable differences between and within regions;
- Bribes lead to increased transaction costs, while causing an increased level of insecurity in the economy;
- In general, bribery leads to inefficiency of economic results as a whole, on multiple areas of action;
- Bribery imposes a regressive tax, which burdens especially small businesses, thus being unfair;
- The legitimacy of the state is destroyed by corruption.

In the last two decades, research focusing on the study of corruption and its effects at EU level has intensified. A positive correlation between the size of the government and the level of corruption in different countries was identified (Rose-Ackerman, 1999; Svensson, 2005). Márquez, Salinas-Jiménez and Salinas-Jiménez (2011) suggest the existence of similar corruption levels between neighbouring countries due to the conformable environments in terms of institutions. Based on an empirical study conducted by including 25 EU Member States, Graeff and Svendsen (2013) observed the negative impact of corruption on poorer European countries. In addition, researchers suggest the existence of a detrimental effect that corruption has directly on wealth.

Furthermore, research interest has often been focused on analysing the situation after the economic crisis of 2008. In this regard, Obydenkova and Arpino (2018) determined the existence of a positive association between corruption and trust in the EU before the economic crisis, the relationship disappearing after 2008. In other words, before 2008, states experiencing a lower level of national corruption had less confidence in international institutions, such as the EU, and on the opposite side, states with a higher level of corruption expressed greater confidence in international institutions.

The recent considerations of the World Bank Group reiterate the aspects mentioned above and characterize corruption as one of the main challenges in achieving its predetermined goals by 2030 and eradicate extreme poverty and increase prosperity for the poorest 40% of the developing world (The World Bank, 2021). The vision in question is outlined by the fact that the effects of corruption are differentiated in terms of intensity, this mainly affecting vulnerable and poor populations/groups of individuals.

According to the European Commission, corruption is associated to security threats, as it could facilitate crime and terrorism; represents an obstacle in terms of economic growth; it increases business uncertainty, slowing down processes and often generating additional costs. Moreover, the phenomenon of corruption is estimated to cause costs of around EUR 120 billion per year in the European economy (European Commission, 2021).

The ability to measure a phenomenon with negative effects can lead to the establishment of measures to eradicate it or reduce its effects. Recognizing the importance of these aspects, the worldwide decisive factors are constantly undertaken indisputable efforts to assess corruption.

The Transparency International provides a representative indicator that measures the corruption level around the world. The Corruption Perception Index proffer a clear image on the degree of corruption by taking into consideration aspects as: bribery, diversion of public funds, frequency of officials using public office for private gain without facing consequences, ability of governments to contain corruption and enforce effective integrity mechanisms in the public sector, etc. (Transparency International, 2020). Each analysed aspect can contribute to understanding the national context in different countries and the discrepancies among them. Table 2 highlights the results of the Corruption Perception Index for 2020 in the European Union.

Table 2. Corruption Perception Index within the EU countries, 2020

Country	Corruption Perception Index 2020	Country	Corruption Perception Index 2020
Bulgaria	44	*Portugal*	61
Hungary	44	*Spain*	62
Romania	44	*France*	69
Croatia	47	*Ireland*	72
Slovakia	49	*Estonia*	75
Greece	50	*Austria*	76
Italy	53	*Belgium*	76
Malta	53	*Germany*	80
Czechia	54	*Luxembourg*	80
Poland	56	*Netherlands*	82
Cyprus	57	*Finland*	85
Latvia	57	*Sweden*	85
Lithuania	60	*Denmark*	88
Slovenia	60		

Source: authors own processing of data available on Transparency International

As the technology represents a key-issue in developing the actual society, identifying the main problems affecting the implementation of the digital technologies becomes compulsory. To achieve a competitive advantage, the European countries should certainly eradicate the problems they face, and corruption can be considered one of them.

3. METHODOLOGY

The main goal of the present article is to identify the existence of potential influences that corruption level could exert on the digitalization progress, considering the EU Member States. To achieve the established purpose, the research question was established: *Is the corruption level influencing the digitalization process within the EU countries?*

The research involved both theoretical and empirical demonstration. Firstly, reviewing the specialty literature on the considered topic contributed to create the purpose of the empirical demonstration. Based on the literature and on available data, a statistical regression model was performed. For the selected sample of 27 European countries, two major indicators were analysed: DESI Index, provided by European Union and Corruption Perception Index, provided by Transparency International. The year under analysis is 2020. For the empirical demonstration IBM SPSS 21 statistical software was preferred.

4. RESULTS AND DISCUSSIONS

Understanding the discrepancies in terms of digitalization between countries requires a special focus on the national context. To identify if the corruption level can affect the digitalization process, a statistical regression model was carried out. The dependent variable and the independent variable were selected according to the specialty literature. For testing the research hypothesis, namely, the corruption level influences the digitalization within the EU countries, and performing the regression model, preliminary criteria were verified. Subsequently, the following statistical hypothesis were settled:

H0: There is no relationship between the dependent variable (DESI Index) and the independent variable under analysis (Corruption Perception Index) within the EU countries.

H1: There is a significant relationship between dependent variable (DESI Index) and the independent variable under analysis (Corruption Perception Index) within the EU countries.

The relationship between variables was tested. Table 3 illustrates the entered/removed variables.

Table 3. Variables Entered/Removed

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	CPI_2020[b]	.	Enter
a. Dependent Variable: DESI_2020			
b. All requested variables entered.			

Source: statistical output based on the used data

According to the *Model Summary* output (Table 4), with a 95% probability, there can be stated is a very strong correlation between the dependent variable (DESI Index) and the independent variable (Corruption Perception Index). Additionally, we agree that 70.5% of the dependent variable variance can be explained by the independent variable.

Table 4. Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.840[a]	.705	.693	5.46395
a. Predictors: (Constant), CPI_2020				

Source: statistical output based on the used data

By analysing the ANOVA output (Table 5), we can state, with a 95% probability, that the independent variable predicted the dependent variable in the case of our model (the significance coefficient =0.00, < 0.05).

Table 5. AVOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1784.141	1	1784.141	59.761	.000[b]
	Residual	746.368	25	29.855		
	Total	2530.509	26			
a. Dependent Variable: DESI_2020						
b. Predictors: (Constant), CPI_2020						

Source: statistical output based on the used data

Based on Table 6, the regression equation can be stated:

$$(DESI\ 2020 = 16.388 + 0.583\ (CPI\ 2020)$$

Table 6. Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.388	4.916		3.334	.003
	CPI_2020	.583	.075	.840	7.731	.000
a. Dependent Variable: DESI_2020						

Source: statistical output based on the used data

With a 95% probability, for the selected sample it can be stated that, if the level of corruption is constant, the digitalization level is 16.388% (*b0 coefficient*). A decrease in corruption level by one unit will result in a 0.583 increase of the digitalization process, if all the other conditions remain constant (*b1 coefficient*).

Following the empirical analysis, we can conclude:

(1) the null hypothesis (H0), which supported there is no relationship between the dependent variable (DESI Index) and the independent variable under analysis (Corruption Perception Index) within the EU countries was rejected.

(2) The H1 hypothesis, which supported that there is a significant relationship between dependent variable (DESI Index) and the independent variable under analysis (Corruption Perception Index) within the EU countries, was confirmed.

Finally, we agree that a high level of corruption can affect the implementation of the digitalization in the EU countries. For example, on the EU level, the most uncorrupted countries (Denmark, Finland, and Sweden) have the highest scores on the digitalization. On the opposite side of the hierarchy, in countries like Romania, Bulgaria and Greece, which are characterized by high scores on the Corruption Perception Index, the implementation digital technologies is more difficult to realize.

5. CONCLUSIONS

Even if the relationship between the implementation of the digital technologies and the corruption level was not so deeply studied by the specialty literature, the present research article highlighted the necessity of acting in this direction. Achieving the established goal of the present paper implied both reviewing the literature and carrying out an empirical demonstration.

The statistical analysis was performed based on the most recent available information on the Corruption Perceptions Index (CPI) and the Digital Economy and Society Index (DESI), so that the reference year was 2020. The results obtained reveal possible associations between the variables of interest, which can be materialized in the existence of corruption influences on the digital evolution.

As the digitalization process in a complex one, one of the limits of the present research is represented by the narrow-analysed factors, namely the corruption. For this reason, we are taking into consideration to extent the research to other important aspects that are affecting the digitalization within the EU countries.

References

1) European Commission, (2020). *Digital Economy and Society Index (DESI) 2020 - Integration of digital technology.* Bruxelles: European Commission.
2) European Commission, (2021). *Policies – Corruption*. [online] Available at: https://ec.europa.eu/home-affairs/what-we-do/policies/organized-crime-and-human-trafficking/corruption_en [Accessed 05.06.2021].

3) European Investment Bank, (2020). *Who is Prepared for the New Digital Age?*. [online] Available at: https://www.eib.org/attachments/efs/eibis_2019_report_on_digitalisation_en.pdf [Accessed 01.06.2021].
4) Graeff, P. and Svendsen, G. (2013). Trust and corruption: The influence of positive and negative social capital on the economic development in the European Union. *Quality & Quantity: International Journal of Methodology,* 47(5), pp. 2829-2846.
5) Gray, C. W. and Kaufman, D. (1998). Corruption and Development. *World Bank PREM Notes,* No. 4, pp. 7-10.
6) Márquez, M. A., Salinas-Jiménez, J. and Salinas-Jiménez, M. (2011). Exploring differences in corruption: The role of neighboring countries. *Journal of Economic Policy Reform,* 14(1), pp. 11-19.
7) Obydenkova, A. V. and Arpino, B. (2018). Corruption and Trust in the European Union and National Institutions: Changes over the Great Recession across European States. *Journal of Common Market Studies,* 56(3), pp. 594-611.
8) Rose-Ackerman, S. (1999). *Corruption and government.* Cambridge: Cambridge University Press.
9) Strutynska, I., Dmytrotsa, L. and Kozbur, H. (2019). The Main Barriers and Drivers of the Digital Transformation of Ukraine Business Structures. *ICTERI*, pp. 50-64.
10) Svensson, J. (2005). Eight Questions about Corruption. *Journal of Economic Perspectives*, 19(3), pp. 19-42.
11) The World Bank, (2021). *Combating Corruption*. [online] Available at: https://www.worldbank.org/en/topic/governance/brief/anti-corruption [Accessed 07.05.2021].
12) Transparency International, (2020). *Corruption Perception Index*. [online] Available at: https://www.transparency.org/en/cpi/2020/index/nzl [Accessed 05.05.2021].
13) Vironen, H. and Kah, S. (2019). Meeting the challenges of digitalisation: implications for regional and rural development. *EU European Policies Research Centre, University of Strathclyde*, pp. 1-24, [online] Available at: https://www.eprc-strath.eu/public/dam/jcr:d31b925c-c8da-4200-acfb-e27f6f949efb/EPRP%20111_Meeting%20challenges%20of%20digitalisation.pdf [Accessed 13.05.2021].

PUBLIC PROCUREMENT AND CORRUPTION IN EASTERN EUROPE

DAN LUPU
Alexandru Ioan Cuza University of Iași
Iasi, Romania
dan.lupu@uaic.ro

Abstract:
The Europe 2020 strategy incorporates public procurement as having an extremely important role in areas such as transport, health, and energy. Consequently, the public procurement market has a major role in the efficient spending of public money and in promoting economic competitiveness. At the same time, this market varies between 8 and 12 percent of GDP in Eastern Europe. Corruption, especially in Eastern Europe, is a negative phenomenon, which strongly affects the public procurement market. This article analyses the phenomenon of corruption in connection with the public procurement market for three Eastern European countries: Hungary, Poland, and Romania. After presenting the main features of public procurement systems, the article analyses their main advantages and disadvantages and the negative impact of corruption. As policy implications, to limit corruption in public procurement, it is necessary to highlight the increase of the role of transparency, the professionalization of civil servants, and last, but not least, the depoliticization of public institutions.
Keywords: *public procurement; corruption; Eastern Europe.*
JEL Classification: H10, K22

1. INTRODUCTION

The connection between the public administration and the economy of a state is made through public procurement, i.e. the value of annual purchases of products, works or services. It is the involvement of public authorities in this process that makes this activity important, and especially the characteristics of the processes, success factors and participants (Dragos and Neamtu, 2020). At EU level, public procurement is essential for the independence of public administration functions. The financial values for public procurement in the period 2014-2020 were over 1000 billion euros and will increase for the next financial year to over 1275 billion. As a percentage of GDP, public procurement exceeds 15% in the EU, and 8% in Eastern European countries. The EU has undertaken a comprehensive reform of the entire system through its public procurement policies. The main directions of implementation are generated by increasing the efficiency of the use of public funds, equal opportunities for the participating economic operators, achieving a sustainable and sustainable economic growth. The tools with which this objective can be achieved are cost-benefit analysis, transparency of the whole process, good governance. However, the most important analysis tool remains transparent for public procurement. By using transparency, the citizens have access to information, to the better monitoring of the entire process and implicitly to the proper application of the legislation in the field. Transparency also strongly influences the behavior of participants in the public procurement process, a transparent and fair process with beneficial effects.

The efficiency of the use of public funds is another important component for public procurement. The public administration is interested in obtaining the necessary products and services at the lowest price in this process (Asandului *et al.*, 2021). However, Eastern European public procurement systems face several structural problems: cumbersome bureaucratic procedures, cumbersome and excessively high legislation; insufficient preparation of participants in the process; using the lowest price criterion; structural deficiencies at the level of the central institution; excessive conditions of participation; the strong manifestation of corruption and politics (Lupu, 2019). The phenomenon of corruption manifested itself in Eastern Europe during communism. Moreover, after the fall of the old regime, corruption remained relatively stable if it did not develop, although there are considerable efforts to combat it. The causes of failures in the fight against corruption could be represented by the imposition from abroad of the objectives to be achieved, the resistance of the local political factors; general formulation of objectives to be achieved; inadvertence between anti-corruption programs and local mentalities. The field of public procurement is one of the sectors most affected by corruption in Eastern Europe. Significant amounts of money are lost through at least dubious public procurements and whose return is non-existent (Bauhr *et al.,* 2020). This study aims, based on the literature and statistical data, to identify the impact of corruption on the public procurement process in 11 Eastern European countries. The methodology used for the analysis is a panel type. After this introductory part, the study continues with literature review, the third part is given by results, and the last part ends with conclusions.

2. LITERATURE REVIEW

Government contracts have a high value and a long execution time. These things make them valuable business opportunities that can generate even more business that is important in the future. These characteristics make the competition for public procurement to be strong at all levels (local, national or international). However, these characteristics can also generate corruption, which once installed can hardly be eradicated. The effects of corruption in the public procurement field distort the market, destroy companies and jobs, and affect trust in public authorities. Representing over 10% of GDP, the potential for bribery in public procurement is extremely high. The increased complexity of bribery mechanisms makes it difficult for authorities to identify them. Ways to combat bribery in public procurement involve a better understanding of the mechanisms and methods of bribery and the development of new surveillance and sanction mechanisms. Ehlermann-Cache analyses OECD countries and the application of bribery prevention standards in public procurement; the author presents the bribery techniques, prevention, detection, and sanction activities implemented by most OECD states (Ehlermann-Cache, 2007).

Ateljevic and Budak analyse the implications of corruption on public procurement in Western Balkan countries and show that although they want to join the EU, and implicitly comply with European law and reduce the phenomenon of corruption; however, progress is insignificant, continuing the old practices of bribery (Ateljevic and Budak, 2010). Grødeland and Aasland analyse anti-corruption policies in Europe and show that they have had less expected success due to local factors, old informal practices and negative perceptions of the law (Grødeland and Aasland, 2011). Hessami analyses 29 OECD countries for the period 1996-2009 and shows that the phenomenon of corruption affects both poor and rich countries; corruption especially affects the composition of public spending (Hessami, 2014). Dastidar and Mukherjee develops a theoretical model to assess the impact of corruption in public procurement and concludes that in the presence of corruption we reach a higher price and lower quality for the goods and services offered (Dastidar and Mukherjee, 2014). Pirvu analyses the phenomenon of corruption in Romania in the period 2009-2013 and identifies a profile for "political" companies, companies involved only in public procurement, which use bribes to win business only with public authorities (Pirvu, 2015).

Bosco analyses the determinants for corruption in Europe and shows that it is also linked to economic, political, and cultural indicators; the adoption and application of European legislation in the field also has an important role in the development of the corruption phenomenon (Bosco, 2016). Fazekas and Cingolani analyse at microeconomic level over 3 million public procurement contracts for the period 2009-2014 and for 29 European countries (Fazekas and Cingolani, 2017). The authors analyse whether the introduction of new financial regulations, made under EU pressure, has effects on corruption in public procurement and conclude that in the short term, the effect is insignificant, but in the long term, it is important. Preda comparatively analyses the centralized public procurement system in the European Union, USA and Romania, presents the main advantages and disadvantages for this mechanism and shows the situations when its use is beneficial for public authorities (Preda, 2019). Ferwerda, Deleanu and Unger analyse the indicators that can signal in advance the occurrence of corruption in public procurement; the authors, after investigating a series of corruption cases in public procurement, conclude that the lack of transparency and the very large number of participating companies can predict the occurrence of corruption (Ferwerda, Deleanu and Unger, 2017). Bauhr, Czibik, de Fine Licht and Fazekas investigate over 3.5 million public procurement contracts for the period 2006-2015 and conclude that the best way to reduce corruption is to increase the transparency of the entire procurement process, both previously and after the award of the public contract (Bauhr *et al.,* 2020). Decarolis and Giorgiantonio analyses the corruption in the road construction sector from 2009-2015 and the main influencing factors; the authors show that direct effects (lawsuits) or indirect effects (increased costs or delays) can best be anticipated through discretionary firm selection mechanisms, usually combined with a very short lead time, subcontracting and choosing the bid at the lowest price (Decarolis and Giorgiantonio, 2020). The standardization of public procurement mechanisms at the level of the entire administration can lead to the reduction of the corruption phenomenon and its effects.

3. RESULTS

Public procurement is the dependent variable for our analysis, and it is calculated as a share of this indicator in GDP. For the public procurement calculation, the total value of the acquisitions made by the government and the local authorities was considered. Corruption, calculated by Transparency International's Corruption Perceptions Index (CPI), is the main explanatory variable. Our theoretical model will be one of the following:

$$\log(\text{Public\_procurement}) = \log(\text{corruption}) + \text{inflation} + \log(\text{GDPcapita}) \quad (1)$$

The data are processed for the eleven Eastern European countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia). The analysed period is between 2020-2019. The data source is IMF Finance Statistics, Transparency International, World Bank. The analysis methodology is of a panel type: descriptive statistics; testing the state of the series; ARDL panel equation. Table 1 presents the main statistical estimates for the 11 Eastern European countries analysed. The average public procurement for Eastern countries is 18.37% high, close to the European average of 19%. The maximum of 21.4% is found in Hungary and the minimum in the Czech Republic. The average corruption is 66.60, well below the European average of 81%. The maximum is represented by Estonia with 90.38, and the minimum by Bulgaria with 48.81.

Table 1. Descriptive statistics

	Public procurement	GDP capita	Inflation	Corruption
Mean	18.378	15610.35	1.737	66.605
Median	18.550	14970.07	1.783	66.745
Maximum	21.400	26216.43	6.113	90.384
Minimum	14.000	6713.330	-1.601	48.815
Std. Dev.	1.665	4679.847	1.740	10.044
Skewness	-0.674	0.191	0.236	0.276

	Public procurement	GDP capita	Inflation	Corruption
Kurtosis	2.856	2.478	2.531	2.678
Jarque-Bera	8.444	1.919	2.031	1.872
Probability	0.014	0.382	0.362	0.392

Source: own calculations

Table 2 shows the stationary analysis for the panel type series. The tests used to test the stationarity are four in number: Levin, Lin & Chu t (LLC); Im, Pesaran and Shin W-stat (IPS); ADF - Fisher Chi-square (ADF-F); PP - Fisher Chi-square (PP-F). The public procurement and GDP per capita series are series I (1), and the inflation and corruption series I (0).

Table 2. Results for Stationarity tests

	Level				First difference				Decision
Test/variable	LLC	IPS	ADF - F	PP	LLC	IPS	ADF - F	PP	
Public Procurement	-1.601 (0.054)	-0.007 (0.497)	23.491 (0.374)	58.426 (0.000)	-3.169 (0.000)	-1.298 (0.097)	32.368 (0.071)	48.625 (0.000)	I(1)
GDP capita	1.164 (0.877)	1.486 (0.931)	11.092 (0.973)	13.280 (0.925)	-4.650 (0.000)	-1.034 (0.150)	27.793 (0.182)	66.489 (0.000)	I(1)
Inflation	-4.677 (0.000)	-1.684 (0.046)	33.904 (0.050)	22.810 (0.412)					I (0)
Corruption	-2.648 (0.004)	-0.396 (0.345)	21.676 (0.483)	21.572 (0.485)					I (0)

Source: own calculations

Table 3 presents the results for long-term and short-term Panel ARDL (panel autoregressive distributed lag model) regression. In the long run, the relationship between variables is indirect: the lower the level of corruption, the higher the level of public procurement. Countries with high levels of corruption (low indicator values) also have low levels of public procurement. The other variable, GDP per capita, positively, and directly influences the level of procurement, the higher it is, the higher the public procurement.

In the short term, the relationship between variables is a functional one, the coefficient being -0.472 (between -1 and 0). The corruption coefficient is also positive (0.143), but lower than the long-term one. Thus, the relationship between public procurement and corruption is demonstrated both in the long run and in the short term. Likewise, for the GDP per capita ratio, it is lower, but it keeps its positive sign.

Table 3. Long Run Equation/ Short Run Equation Coefficient (Probability)

	Long Run Equation	**Short Run Equation**
Variable	Coefficient Prob.	Coefficient Prob.
Corruption	0.247 (0.000)	0.143 (0.006)
GDP capita	0.319 (0.105)	0.078 (0.074)
Inflation	-0.004 (0.000)	0.001 (0.281)
Cointegration equation		-0.472 (0.000)

Source: own calculations

To determine the direction of causality between variables, we will continue to use Pairwise Granger Causality tests, the results are detailed in table no.4. The corruption indicator influences public procurement (prob <0.05), but the inverse relationship, from public procurement to corruption is not significant (prob = 0.111).

Table 4. Labour Efficiency (Average cost of employee (SOE vs private firms)

	Public_procurement	**GDP capita**
CORR does not Granger Cause PUBPROC	5.648	0.005
PUBPROC does not Granger Cause CORR	2.253	0.111

Source: own calculations

The cause of these poor financial results of the Eastern SOE is poor governance (Asandului *et al.,* 2021). Although there are laws that make corporate governance mandatory for these companies, few of them even effectively implement these principles. The public shareholders and especially its defective involvement in the economic mechanisms make the management not an independent one. The worst thing, however, is that the losses caused by these SOEs are passed to the public budget, in the end having to suffer all citizens.

4. CONCLUSIONS

In public procurement, the phenomenon of corruption exists in all states, either developed or developing. However, some economic sectors are more susceptible to corruption due to the large amounts of public contracts, the very complex nature of the works, non-reimbursable funds from the EU. This article aims to investigate the impact of corruption on public procurement in Eastern European countries. The analysed period is 2010-2019 using the panel type methodology. The results show that there is a direct link between corruption and public procurement: the less corrupt a country is, the higher the public procurement percentages are. The present paper shows that in Eastern European countries inefficient public procurement is an important problem for the economic system with serious consequences for the economy. The suffocating bureaucracy and over legislation lead to the emergence and perpetuation of the negative phenomenon of corruption. A series of actions can be initiated to reduce corruption in public procurement: moving from analysing the public procurement process to the actual results obtained for all participants involved and increasing competition between participants in the process to ensure the best price, quality and delivery of goods.

References

1) Asandului, M., Lupu, D., Maha, L. G. and Viorică, D. (2021). The asymmetric effects of fiscal policy on inflation and economic activity in post-communist European countries. *Post-Communist Economies,* 33(7), pp. 899-919. https://doi.org/10.1080/14631377.2020.1867430.
2) Ateljevic, J. and Budak, J. (2010). Corruption and public procurement: example from Croatia. *Journal of Balkan and Near Eastern Studies,* 12(4), pp. 375-397. https://doi.org/10.1080/19448953.2010.531202.
3) Bauhr, M., Czibik, Á., de Fine Licht, J. and Fazekas, M. (2020). Lights on the shadows of public procurement: Transparency as an antidote to corruption. *Governance,* 33(3), pp. 495-523. https://doi.org/10.1111/gove.12432.
4) Bosco, B. (2016). Old and new factors affecting corruption in Europe: Evidence from panel data. *Economic Analysis and Policy,* 51(1), pp. 66-85. https://doi.org/10.1016/j.eap.2016.06.002.
5) Dastidar, K. G. and Mukherjee, D. (2014). Corruption in delegated public procurement auctions. *European Journal of Political Economy,* 35(1), pp. 122-127. https://doi.org/10.1016/j.ejpoleco.2014.05.003.
6) Decarolis, F. and Giorgiantonio, C. (2020). Corruption red flags in public procurement: new evidence from Italian calls for tenders, *Bank of Italy Occasional Paper,* No. 544, http://dx.doi.org/10.2139/ssrn.3612661.
7) Dragos, D. C. and Neamtu, B. (2020). Life-cycle thinking in EU public procurement: Moving beyond a simple ‘buzz word’. In: *The Challenges of Public Procurement Reforms,* pp. 14-49. Abingdon: Routledge.
8) Ehlermann-Cache, N. (2007). *Bribery in public procurement: methods, actors and counter-measures.* Paris: OECD Publishing.
9) Fazekas, M. and Cingolani, L. (2017). Breaking the cycle? How (not) to use political finance regulations to counter public procurement corruption. *Slavonic & East European Review*, 95(1), pp. 76-116. https://doi.org/10.5699/slaveasteurorev2.95.1.0076.
10) Ferwerda, J., Deleanu, I. and Unger, B. (2017). Corruption in public procurement: finding the right indicators. *European Journal on Criminal Policy and Research,* 23(2), pp. 245-267. https://doi 10.1007/s10610-016-9312-3.

11) Grødeland, Å. B. and Aasland, A. (2011). Fighting corruption in public procurement in post-communist states: Obstacles and solutions. *Communist and Post-Communist Studies,* 44(1), pp. 17-32, https://doi.org/10.1016/j.postcomstud.2011.01.004.
12) Hessami, Z. (2014). Political corruption, public procurement, and budget composition: Theory and evidence from OECD countries. *European Journal of political economy*, 34(1), pp. 372-389. https://doi.org/10.1016/j.ejpoleco.2014.02.005.
13) Lupu, D. (2019). Cost-benefit analysis for transport infrastructure projects: Eastern european cases. *Journal of Public Administration, Finance and Law,* 15(1), pp. 107-123.
14) Pirvu, D. (2015). Corruption: Profile of political companies in Romania. *Acta Oeconomica*, 65(1), pp. 65-82. https://doi.org/10.1556/032.65.2015.s1.5.
15) Preda, I. (2019). Analysis of Centralized Public Procurement in the European Union, the United States of America and Romania. *Revista de Management Comparat International,* 20(4), pp. 459-472.

FISCAL IMPLICATION OF POPULATION AGEING AND SOCIAL SECTOR EXPENDITURE IN ROMANIA

MIHAELA ONOFREI
Alexandru Ioan Cuza University of Iași
Iași, Romania
onofrei@uaic.ro

ANCA FLORENTINA VATAMANU
Alexandru Ioan Cuza University of Iași
Iași, Romania
anca.vatamanu@uaic.ro

ELENA CIGU (RUSU)
Alexandru Ioan Cuza University of Iași
Iași, Romania
elena.chelaru@uaic.ro

GIGEL PARASCHIV
University POLITEHNICA of Bucharest,
Bucharest, Romania
paraschiv2005@yahoo.com

Abstract
The entire context of economic turmoil has significantly overload public finances, increased deficits, and debt levels but most important, highlighted the value of understanding the sources of vulnerabilities that can lead to a systemic financial crisis. Even if the early identification of the sources of vulnerability is extremely important because this would allow the introduction of proactive policies, with direct implications on the consolidation of a sustainable way to act, the emphasis falls on the long-term implications, with presumption, on two primary variables: the demographic one (which takes into account the aging of the population) and globalization, which through the international competition, will increase mobility and exposure to external shocks. The research aimed to analysing the relationship between public finance challenges and the costs of population ageing (measured by healthcare expenditure) and invokes an element of novelty related to the international literature, more exactly, the importance of the mechanisms of management and control of the fiscal risk. Based on retrospective and prospective analyses, the study attempts to suggest mechanisms of management and control capable to manage some major concerns for fiscal sustainability, such as population ageing and the growing healthcare expenditure. The usefulness of the results concerns both the institutional levels and the decision-makers, stressing the priority of

consolidating the fiscal responsibility goals and the importance to follow policies that safeguard the well-being of nation.
Keywords: *public finance sustainability; healthcare expenditure; population ageing; sources of vulnerabilities.*
JEL Classification: H20, H30, H60, H51

1. INTRODUCTION

The population ageing is almost permanently invoked in any study that addresses the issue of social security. The importance of invoking population aging stems primarily from the fact that most social security systems, through their configuration, are extremely vulnerable to this phenomenon, some literature insights citing the link between demographic factors, pension, and health spending (Bazzana, 2020; Amaglobeli *et al.*, 2019; Nerlich and Schroth; Ewijk *et al.*, 2006).

Romania, along with many other countries in the European Union, faces fiscal challenges and vulnerabilities due to the economic crisis and recent pandemic crisis implication, deepening the pressure of fiscal consolidation and making the access to economic growth more difficult. The health status of the population of a country represents the basis for ensuring the continuity of activities within society, being a major concern of the state and an integral part of social policy (Williams *et al.*, 2019; Amaglobeli and Shi, 2016; Zaidi, 2010). The increasing trend of health spending is due not only to the need for health care, but also to the increase in the number and change in population structure. According to the National Institute of Statistics, the population of Romania, by home, was 22.089 million people, on January 1, 2021, decreasing by 0.5% compared to the same month last year, National Institute of Statistics mentions that the demographic aging process of the Romanian population accentuated compared to 1 January 2020, noting a slight decrease in the share of young people (0-14 years) and at the same time an increase (0.4 percentage points) in the share of the elderly population (65 years and over). Related to this, the European Commission report (2019), reveal that Romania's population is characterised by a declining growth with an ageing population and a rising share of older age cohorts.

The scope of this paper is to analyse the relationship between public finance challenges and the vulnerabilities related to the costs of population ageing (measured by healthcare expenditure), revealing not only the status of Romania from the point of age-related programs, but also the fiscal implication of social sector expenditure. *The research methodology* is related to the aim of the paper and is based on qualitative research (content analysis) and the method used for data collection is documentary research.

2. LITERATURE REVIEW

A key element of demographic changes is the effect on the state budget and based on the fact that most of the countries apply different taxes in terms of incomes or consumption, the necessity to put pressure on the public budget could impact differently and depend on the existing fiscal space of each country. Started from the point that some studies refer to the social sector in assessing sustainability (Pinheiro and Geraldes, 2007), to demographic perspectives (Alho, Svend and Jukka, 2008) and to population aging trends (Ewijk *et al.*, 2006), the accompanying worldwide change in demographics of human populations is linked to unanticipated economic, public health and public policy challenges. Undoubtedly, as long as fiscal policies remain unchanged and are not related to specific trends in the public health area, the decline in public economies could be deepening, and the mainstream scientific literature emphasizes the vital role of fiscal risk management related to population aging (Sander *et al.*, 2015; Ódor, 2014; Heller, 2013).

Population around the world becoming older and the policy concern is related to the national, but also to international level. Of course, policy concerns are related not only to public strategies capable to solve fertility rates, infant mortality, and premature deaths but also to economic fears and fiscal consequences. Even if according to Cylus *et al.* (2020) it is emphases that fiscal and societal consequences of population aging are exaggerated, and the process of population aging is slow, being insignificant as a principal driver for health spending, on the opposite side, the study conducted by Lee and Edwards (2002) on the profile of US, reveal that population aging will have important fiscal consequences and expenditures on social security and Medicare will increase. Related to the last point of view, Clements *et al.* (2018) agree that the world population could increase from 12% in 2018 to 38% in 2100 and this will put pressure on public finances, requiring high spending on age-related programs (pension and health).

However, while above-mentioned study indicates that population aging will have consequences for the public sector and health sector revenues, a study conducted in 2019, reveal that most people choose the paid work at older ages (Avendano and Cylus, 2019) and according to Milligan and Wise (2015) and Coile and Milligan (2017), it is argued that on average, at older ages, people still have heath capacity to work, meaning that the pressure on public finances could be mitigated. Undoubtedly, to address these challenges, public decision-maker, scientists and the entire institutional framework need to cooperatively build public strategies and to consolidate the research domains relevant to human aging.

The process of analyzing the evolution of public expenditures involves the necessity to study the influencing factors, linked to the demographic, political, economic, social, and military factors (Grigoli and Kapsoli 2018; De Meijer *et al.*, 2013; Zugravu, 2013). Of course, these factors are interconnected, being certain that the volume and structure of public spending are strongly influenced by the growth of the world's population, as well as its structural changes by age, and these demographic changes impacting the degree of economic development of each country. As the population ages, the need for specific transfers and services provided by the public sector will increase, which means that the budgetary impact of an aging population will be considerable. Despite the necessity to spend more money on health care, it is, of course, indicated to analyse the efficiency of health expenditure, once incentives for cost-efficiency are in place, a shift towards a more health-driven system could be encouraged by improving public reform in this area and specific regulations. In addition, it is required that health-specific activities to generate several categories of effect: medical, social and economic, which materialize efficient aspects of these costs (Kim and Lane; 2013).

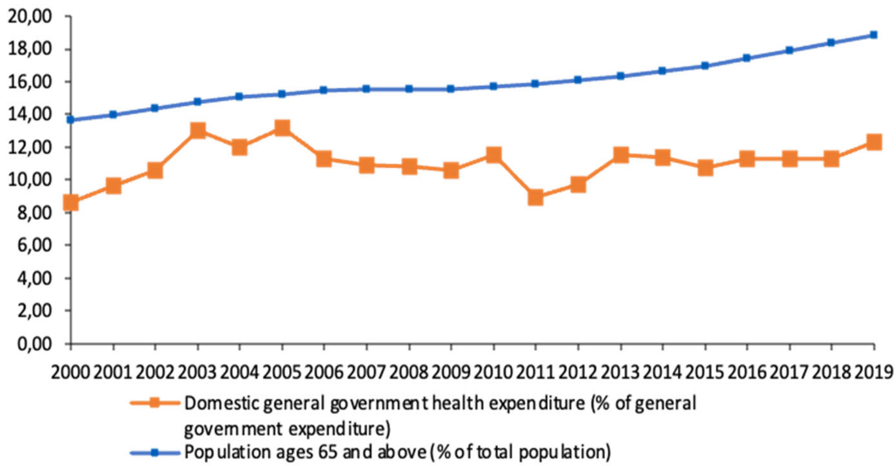
3. THE COSTS OF POPULATION AGEING AND PUBLIC FINANCE CHALLENGES AND VULNERABILITIES

In recent years, there has been a growing global trend for evidence-based health decision-making, with an emphasis on the economic context and statistical analysis. The procedure for the economic evaluation of new investments, treatments, or technologies in the field of health has become more important for political and administrative decision-making. As a result, economic, statistical, and clinical studies conducted to support and consolidate such decisions have increasingly included a component of assessing the costs and benefits of these investments, and decisions for the allocation of (limited) resources have begun to be taken based on economic evidence. Obviously, the issue of the impact of an aging population on social models is a policy challenge, is vast and includes the ongoing debate on modernizing social protection systems and extending working life (Kluge, Goldstein and Vogt, 2019; Kudrna, Tran and Woodland. 2019; Mester, 2018). According to the European Commission, as the population ages, the need for specific transfers and services provided by the public sector will increase. Therefore, the budgetary impact of an aging population is expected to be considerable in almost all Member States, becoming visible in the next decade, and on the basis of current policies, expenditure related to ages is projected to increase in the EU by about 4¾ points percentages of GDP on average by 2060 and by more than 5 percentage points in the euro area - mainly due to pension, health, and long-term care expenditure.

The legal basis of Romanian healthcare system characteristics and administrative organization is related to Law 95/2006, which represent the basis of social health insurance and private health insurance and establish the responsibilities for national/ central and district. Through the Ministry of Public Health and National Health Institute are assured the principles of the national level and the financial coverage are assured 100% of the population. As can be seen in table 1., there is a direct relationship between the status of population age and domestic general health expenditure, and even if Romanian National Health Strategy Reform 2014-2020 focus on reducing morbidity and mortality, but also improving the entire health infrastructure, several major projects are still required. An important effect of the aging population (65+) will be related, in the next period, to the increase in the number of elderly people requesting health care and specific care and results in three major economic effects: slowing economic growth, maintaining Romania's dependence on foreign capital, and increasing pressure on the state budget in the long run.

Furthermore, we confirm the point of view based on that health prolongs life and the rise in longevity leads to further demand for life-prolonging medical care. Thus, individuals face the key decision to divide its limited resources between the consumption of (health) services and the consumption of non-health (properties, vacations, fashion, etc.), and of course, the utility will depend on the amount of life (life expectancy, and quality of life). Overall, the trends in domestic general government health expenditure and population age 65 and above reveal that in the area of health care, major projects are still required (see Figure 1).

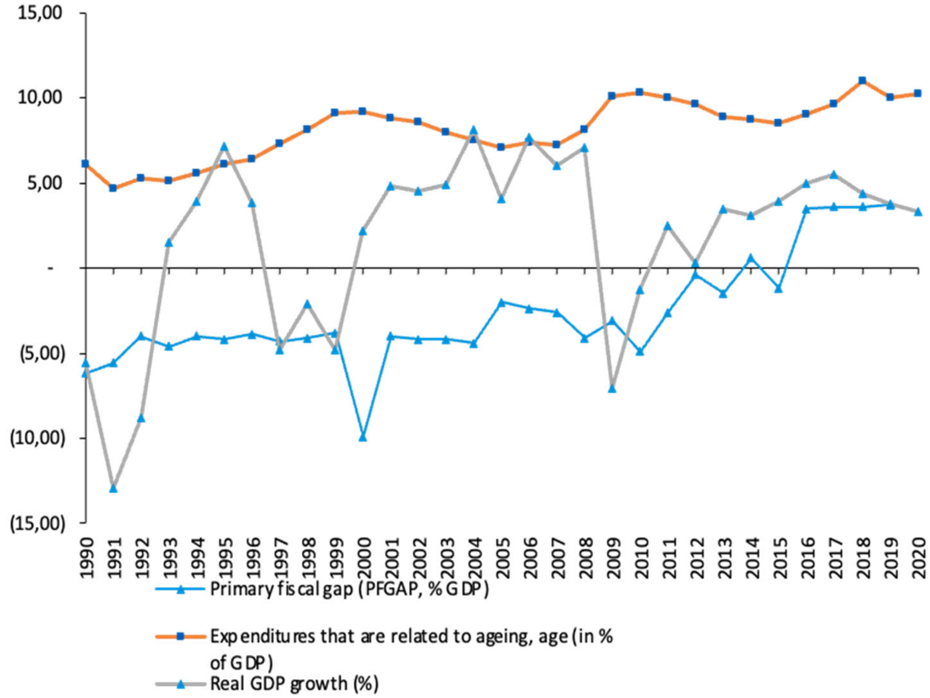
Figure 1. Domestic general government health expenditure and population age 65 and above



Source: computed by authors processing data of Eurostat (European Commission, 2021)

According to European Commission, the life expectancy of Europeans has exceeded 80 years, since 2014, as a result of progress in medicine, prevention, treatments and modern medical technology. Men live 78 years and women over 83 years. Unfortunately, in the case of Romania, Bulgaria, Latvia and Lithuania, life expectancy is still 75 years, 8 years lower than in France, Spain and Italy (83 years). According to Eurostat, the life expectancy of Romanians decreased by 1.4 years in 2020 compared to 2019, meaning that overall, the health outcomes are lagging behind EU standards. Therefore, due to demographic changes, the projected public expenditure on long care term increasing (see Figure 2).

Figure 2. Primary fiscal gap, expenditure related to ages and the dimensión of economic growth over the period 1990-2020



Source: computed by authors processing data of Eurostat (European Commission, 2021)

In 2009, the real economic growth rate in Romania was (-5.5%), the economic crisis involving one of the most severe corrections and the status of Romania being exceeded only by Baltic countries. The Romanian health status required new reforms capable to improve the efficiency of care delivery and to solve the age-related problems. The main challenges for public decisions makers are related to the existing fiscal space and despite the required health care spending level, to assure the solvability of public finance it is required solid public strategies capable to focus on efficiency of public spending. Moreover, we admit that the aging process of the population emphasizes the need for fiscal consolidation, which makes fiscal governance an important factor for fiscal performance, insofar as it can contribute to limiting prejudice about the sustainability of fiscal policies. This was acknowledged by the European Council, which, through the 2005 Stability and Growth Pact reform, called on the EU Member States to strengthen their internal fiscal governance through fiscal rules and institutions.

Table 1 reports the results of Johansen's cointegration test (Johansen, 1988; Johansen and Juselius 1990) and reveals the status of Romanian fiscal sustainability. The results suggest that we cannot talk about the 'fiscal synchronization' hypothesis, wherein revenue and expenditure decisions are taken simultaneously, and public finance sustainability is not assured. In this case, with a negative trend of health services, with an aging population, and a very restricted fiscal room for maneuver, Romania must make additional efforts to ensure fiscal sustainability and take care of what it means to care for future generations.

Table 1. Johansen test on co-integration between revenues and expenditures (1990-2020)

Revenues and Expenditures					
Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
			No		
	No Trend	No Trend	Trend	Trend	Trend
Trace	0	0	0	0	0
Max-Eig	0	0	0	0	0

Critical values based on MacKinnon-Haug-Michelis (1999)

Source: computed by authors

When we test the relationship between government public revenue and public expenditure, it is assumed that government does not want either high revenue deficit or fiscal deficit to finance expenditure. In this case, assuming the way to fiscal sustainability. However, the results displayed in table 1, reveal that over the period 1990-2020, the sustainability of Romanian public finances was not assured, and we cannot talk about the 'fiscal synchronization' hypothesis, wherein revenue and expenditure decisions are taken simultaneously.

Both the national institutional framework and the international specificity have repeatedly recognized the need to manage the issue of the impact of population aging on national and European social models. Currently, given the impact of the Covid 19 pandemic, the challenges of an aging population could be exacerbated. There is a need to develop a targeted and well-coordinated policy response to the crisis, which is seen as an opportunity to make concerted efforts to overcome the recession through measures, to support economic activity in the short term, through reforms to strengthen investment in an economy and more sustainable society and by placing the costs of aging populations on a sustainable path. Investments to promote vocational training and human capital will contribute to the effort to mitigate the short-term impact of the crisis and to prepare for the aging of society. In summary, socio-cultural challenges of population aging are related to the following:

- The pension reform system should continue and be related to demographic changes, the pay-as-you-go system should be reconsidered as long as the number of contributors exceeds the number of beneficiaries.
- Public health reform deepening and long-term care system consolidation
- Structural reform and fiscal consolidation
- Solid mechanisms of management and control of the fiscal risk.

To avoid the collapse of public welfare systems, it is required equilibrium between the privatization of pension systems and public strategies capable to sustain a reasonable standard of living. Obviously, the priority must be related to the implementation of measures that do not place Romania on a slower growth path in terms of employment and productivity, as this may affect its ability to manage the consequences of an aging population. After overcoming the health crisis, the long-term outlook will depend on the determination to consolidate sound public finances, and on the continuation of reforms driven by demographic change, which will be even more important for restoring confidence as part of the strategy to exit from the crisis period. Equally important is strengthening the structural reform agenda to meet the demographic challenge. This means a significant increase in the employment rate and especially the encouragement and support of baby boomers to stay in the labour market instead of retiring early, as previous generations tended to do. The intergenerational context is particularly important and dictates the itinerary for the development of sustainable policies. The context of the aging population also depends on the size of social progress achieved in various fields: medicine, quality of life, social protection, and is due to reduced mortality, especially in the elderly and increasing the average life expectancy.

4. CONCLUSIONS

This paper aimed to analyse the relationship between public finance challenges and the vulnerabilities related to costs of population aging, revealing not only the status of Romania from the point of age-related programs but also the fiscal implication of social sector expenditure. As this paper reveals, population aging is a real phenomenon, it has evolved considerably in complexity and interconnectivity with other components of the social system, and it is also linked to fiscal status. The ongoing process of population ages implies challenges and vulnerabilities in terms of public strategies and a direct implication on the state budget.

The paper discloses the existence of the relationship between the status of population age and domestic general health expenditure and reveals that even if Romanian National Health Strategy Reform 2014-2020 focuses on reducing morbidity and mortality, or improves the entire health infrastructure, several major projects are still required. An important effect of the aging population (65+) will be related, in the next period, to the increase in the number of elderly people requesting health care and specific care and results in three major economic effects: slowing economic growth, maintaining Romania's dependence on foreign capital, and increasing pressure on the state budget in the long run. Furthermore, it confirmed the point of view stated by Friedrich et al., 2020, which argues that health prolongs life and the rise in longevity leads to further demand for life-prolonging medical care.

The main challenges for public decision-makers are related to the existing fiscal space and despite the required health care spending level, another challenge it is related to the necessity to assure the solvability of public finance. Additionally, the research emphasizes that the aging process of the population deepening the need for fiscal consolidation, which makes fiscal governance an important factor for fiscal performance. The results of Johansen's cointegration reveal the status of Romanian fiscal sustainability and suggest that we cannot talk about the 'fiscal synchronization' hypothesis, wherein revenue and expenditure decisions are taken simultaneously and public finance sustainability it is not assured. Based on these results, we admit that with a negative trend of health services, an aging population, and a very restricted fiscal room for maneuver, Romania must make additional efforts to ensure fiscal sustainability and take care of what it means to care for future generations. It seems that the socio-economic changes imposed by the transformation of the Romanian economy into a market economy have generated changes in the field of quality and structure of the active population and the aging of the population has a strong influence on the labour market, meaning of reducing the number of the young active population, increasing the number of elderly people who either participate in economic activity or become beneficiaries of social assistance.

References

1) Alho, J. M., Svend E. H. J. and Jukka L. (2008). *Uncertain Demographics and Fiscal Sustainability*. Cambridge: Cambridge University Press.
2) Amaglobeli, M. D. and Shi, W. (2016). *How to assess fiscal implications of demographic shifts: A granular approach*. International Monetary Fund: IMF Fiscal Affairs Department 2016/002. https://doi.org/10.5089/9781475536072.061
3) Amaglobeli, M. D., Chai, H., Dabla-Norris, M. E., Dybczak, M. K., Soto, M. and Tieman, A. F. (2019). *The future of saving: The role of pension system design in an aging world*. International Monetary Fund: IMF Staff Discussion Note SDN/19/01.

4) Avendano, M. and Cylus, J. (2019). Why it's important, how it affects health, and the policy options to support health capacity for work. In: A. Sagan, C. Normand, J. Figueras, J. North and C. White, eds., *Working at older ages*. Copenhagen: European Observatory on Health Systems and Policies. [online] Available at: https://www.ncbi.nlm.nih.gov/books/NBK550593/[Accessed 06.04.2021].
5) Bazzana, D. (2020). Ageing population and pension system sustainability: reforms and redistributive implications. *Economia Politica*, 37(1), pp. 971-992. https://doi.org/10.1007/s40888-020-00183-8.
6) Clements, B., Dybczak, K., Gaspar, V., Gupta, S. and Soto, M. (2018). The Fiscal Consequences of Shrinking and Ageing Populations. *Ageing International*, 43(4), pp. 391-414.
7) Coile, C., Milligan, K. and DA, W. (2017). Health capacity to work at older ages: Evidence from the United States. In: W. DA, eds. *Social security programs and retirement around the world: the capacity to work at older ages*. Chicago: University of Chicago Press, pp. 1-52.
8) Cylus, J., Williams, G., Normand, C. and Figueras, J. (2020) Economic, fiscal, and societal consequences of population aging–looming catastrophe or fake news?. *Croatian medical journal*, 61(2), pp. 189-192.
9) De Meijer, C., Wouterse, B., Polder, J. and Koopmanschap, M. (2013). The effect of population aging on health expenditure growth: a critical review. *European journal of ageing*, 10(4), pp. 353-361.
10) European Commission, (2019). *Romania Health Care & Long-Term Care Systems.* [online] Available at: https://ec.europa.eu/info/publications/joint-report-health-care-and-long-term-care-systems-and-fiscal-sustainability-country-documents-2019update_en [Accessed 06.04.2021].
11) European Commission, (2021). *Eurostat.* [online] Available at: https://ec.europa.eu/eurostat/data/database [Accessed 06.05.2021].
12) Grigoli, F. and Kapsoli, J. (2018). Waste not, want not: the efficiency of health expenditure in emerging and developing economies. *Review of Development Economics*, 22(1), pp. 384-403.
13) Johansen, S. and Juselius, K. (1990). Maximum likelihood and inference on Cointegration: with applications to the Demand for Money. *Oxford Bulletin of Economics and Statistics*, 52(1), pp. 169-210.
14) Johansen, S. (1988). Statistical analysis of cointegrating vectors. *Journal of Economic Dynamics and Control*, 12, pp. 231–254.
15) Heller, P. S. (2013). *Assessing a government's exposure to fiscal risk*. John Hopkins University.
16) Kim, T. K. and Lane, S. R. (2013). Government health expenditure and public health outcomes: A comparative study among 17 countries and implications for US health care reform. *American International Journal of Contemporary Research*, 3(9), pp. 8-13.
17) Kluge, F. A., Goldstein, J. R. and Vogt, T. C. (2019). Transfers in an aging European Union. *The Journal of the Economics of Ageing*, 13(1), pp. 45-54.
18) Kudrna, G., Tran, C. and Woodland, A. (2019). Facing demographic challenges: Pension cuts or tax hikes?. *Macroeconomic Dynamics*, 23(2), pp. 625-673.

19) Lee, R. and Edwards, R. (2002). The fiscal effects of population aging in the US: Assessing the uncertainties. *Tax policy and the economy*, 16(1), pp. 141-180.
20) MacKinnon, J., Haug, A. and Michelis, L. (1999). Numerical Distribution Functions of Likelihood Ratio Tests for Cointegration, *Journal of Applied Econometrics*, 14(5), pp. 563-77.
21) Mester, L. J. (2018). *Demographics and their implications for the economy and policy*. Cato Institute's 35th Annual Monetary Conference: The Future of Monetary Policy. Washington, D. C.
22) Milligan, K. and Wise, A. D. (2015). Health and work at older ages: using mortality to assess the capacity to work across countries. *Journal of Population Ageing*, 8, pp. 27–50. doi: 10.1007/s12062-014-9111-x.
23) Nerlich, C. and Schroth, J. (2018). The economic impact of population ageing and pension reforms. *The Economic Bulletin Articles*, 2, pp. 85-109.
24) Ódor, Ľ. (2014). Fiscal Risk Assessment at the CBR: A Conceptual Framework. *Council for Budget Responsibility Discussion Paper*. [online] Available at: https://www.rozpoctovarada.sk/download2/RiskatCBR_DP_012014_01.pdf [Accessed 06.04.2021].
25) Pinheiro, M. and Geraldes, V. (2007). MISS: A Model for Assessing the Sustainability of Public Social Security in Portugal. *Banco de Portugal Occasional Paper No. 71*. [online] Available at: http://www.bportugal. pt/en-US/ [Accessed 06.04.2021].
26) Sander, M., Oxlund, B., Jespersen, A., Krasnik, A., Mortensen, E. L., Westendorp, R. G. J. and Rasmussen, L. J. (2015). The challenges of human population ageing. *Age and ageing*, 44(2), pp. 185-187.
27) Van Ewijk, C., Draper, N., Rele, H. and Westerhout, E. (2006). *Ageing and the Sustainability of Dutch Public Finances*. The Hague: CPB Netherlands Bureau for Economic Policy Analysis. [online] Available at: https://www.cpb.nl/sites/default/files/publicaties/download/ageing-and-sustainability-dutch-public-finances.pdf [Accessed 02.04.2021].
28) Williams A, G., Cylus, J., Roubal, T., Ong, P. and Barber, S. (2019) Sustainable health financing with an ageing population: will population ageing lead to uncontrolled health expenditure growth? In: A. Sagan, C. Normand, J. Figueras, J. North and C. White, eds., *The economics of healthy and active ageing series.* Copenhagen (Denmark): European Observatory on Health Systems and Policies
29) Zaidi, A. (2010). Fiscal and pension sustainability: Present and future issues in EU countries. *Policy Brief Series*, the European Centre Vienna.
30) Zugravu, B. G. (2013) *Public Financial Policies*. Tritonic Publishing House.

REORGANIZATION OF THE LEGAL PERSON –
A SOLUTION IN THE CONTEXT OF THE COVID-19 PANDEMIC

OLGA ANDREEA URDA
Alexandru Ioan Cuza University of Iași
Iași, Romania
olga.alexandru@uaic.ro

IONUȚ ALEXANDRU TOADER
Alexandru Ioan Cuza University of Iași
Iași, Romania
toader.alex@yahoo.com

Abstract
The reorganization of the legal person represents, without a doubt, a solution for the entrepreneurs with the aim to restructure and optimize thir activity. In the specific context of COVID-19 pandemic, effective solutions are required in the sensitive and so severely afflicted domain of entrepreneurship.
Merger and division as forms of reorganization of companies are regulated by Law no. 31/1990 and they represent for many entrepreneurs the last resort, which would respect concomitantly the strict stipulations regarding loyal competition on one hand, as well as those related to fulfilling their contracted obligations with respect to social creditors, on the other.
The legislator is solicited to make effective legal solutions available for the entrepreneurs, which would answer to the necessity to reorganize their activity, solutions meant to protect shareholders as well as social creditors.
The law 31/1990 was modified within the context of COVID-19 pandemic, more efficient solutions being conceived for entrepreneurs and the aim of this paper is to illustrate the manner in which the specific solution of the reorganization of the legal person is regulated, on one hand from the perspective of the Civil Code, and on the other hand from the perspective of Law 31/1990.
Keywords: *entrepreneurship; competition; reorganization; competition; commercial Law.*
JEL Classification: L25, L26, K20, K21

1. INTRODUCTION

The legal person, alongside the physical person, has the quality of being a subject of law, with specific rights and obligations and may conclude various legal acts by exerting rights and assuming specific rights. At the basis of each legal person there is a human person, regarded as individuality, which will exert these rights in the name and for the legal one. There must be a distinction between the human being, as a part within the legal person and the legal person itself, given that the latter has a specific form of organization, its own patrimony and a particular purpose which must be licit and moral. Even if there is a close correlation between these elements, they will remain distinct and self-contained.

With respect to the physical person there is certitude regarding the cease of usage capacity, namely through the death physically certified or on the basis of a court ruling declaring the demise. On the other hand, the legal person has no deadline where it will cease to exist as a subject of the law, therefore, according to the legislation in effect, we may argue that it can be eternal.

There also modalities through which the legal person ceases to exist, either by the certification of nullity, reorganization, closure, dissolution, or others stipulated in the constitutive act or by the law.

Within this paper we aim to describe in detail the modalities in which the legal person may reorganize, through continuation of activity or cessation of activity.

Concurrently, we must specify that there are several categories of legal persons, namely, of private, public and mixed private-public law, each one with its own particular manner of reorganization.

The dynamics of our society is in a perpetual change initiated by the various social, economic or technologic changes, concomitantly imposing on the legal person to adjust to the necessities of the time.

In the instance of the reorganization of legal person the presence and existence of a minimum of two juridical persons is required, which will lead to merger, division or transformation.

We may compare the transformation of the legal person with the Phoenix, that at the same time with its demise gives birth to a new legal person. Furthermore, all rights and obligations that existed in the charge of the old legal person.

We also may compare the transformation with the manner in which the legal person may change its activity domain, consequently falling under a distinct legal regime.

The Covid-19 pandemic crisis significantly damaged most entrepreneurs, certain domains more than others, however through the significant relations between the conduct of business areas, regardless if directly or indirectly, repercussions over the medium and long term are foreseeable in the large majority of entrepreneurship.

The legislator provided solutions meant to counteract the disastrous effects of this pandemic, given that celerity is the main word in entrepreneurship, not only *de jure* but also *de facto*.

Our study aims to analyze the most efficient legislative solutions meants to save an entrepreneur, solutions which respect the fine line between monopoly, the destabilization of the competitors and observing the interests of social creditors.

2. MERGER OF SOCIETIES REGULATED BY LAW 31/1990

Merger is performed through absorption or fusion of the legal persons, and will issue the possibility for several legal solutions. Through absorption a legal person will take over all rights and obligations of another legal person. As an effect of merger through absorption the absorbed legal person disappears as subject of the law. There does not exist from the point of view of the law a limitation with respect to the number of absorbed legal persons.

As a technique of reorganization of companies regulated by Law 31/1990 merger, and especially merger through absorption is the most frequently used in practice, and as a testimony we can designate the recent reorganizations in the banking and telecommunications domain.

Fusion through absorption represents, according to the stipulations of art. 238 paragraph (1) letter a), in Law 31/1990 the operation through which one or more societies are dissoluted without entering liquidation and hence transfer the entirety of their patrimony to another company in the exchange for the allocation of shares in the absorbing company for the shareholders of the absorbed company or companies and, eventually, of a cash payment of maximum 10% of the nominal value of the shares thus distributed.

Another form of merger is represented by merger through fusion and which, according to the stipulations of article 238, paragraph (1), letter b), represents the legal technique through which several companies are dissoluted without entering liquidation and hence transfer the entirety of their patrimony to a company which theyfund, in the exchange for the allocation towards their shareholders of shares in the newly constituted company and, eventually, of a cash payment of maximum 10% of the nominal value of the shares thus distributed (Susanu, 2018, p. 202).

If the merger intervenes between companies within the same group, generally the role of the merger is either of fiscal optimization, in order to implement a single staff policy, to eliminate transactions within the group, to make economies by simplifying the managing structures and unifying the process of management and control and, last but not least, for a more efficient governance.

In the instance of a merger performed between unaffiliated, competing companies, the role of reorganization is much more complex. Regardless if we discuss companies with their headquarters in Romania or if we take into account companies with headquarters in different states, and hereby we mean cross-border merger, this reorganization technique is most efficient in the sense of relaunching activity, broadening the client pool, increasing the bargaining power of the absorbing company with respect to potential clients as well as financial institutions.

In the case of the merger of legal persons limited in number and providing specific essential services from the point of view of the economy an authorization from the competent bodies in that field will be required. For example, if on the cable TV and fixed/mobile telephony supply market there are only three providers, and two of them intend to perform merger, an authorization from the National Authority for Administration and Regulation in Telecommunications will be required. The requiremend of this agreement is necessary in order to avoid the creation of monopoly in a specific field and the creation of a competitive market.

With respect to the object of activity of each legal person we can distinguish several categories of merger such as: the vertical one, where the parties are in different fields in the market, or the horizontal one, where the parties have the same field of activity (Bodu, 2005, p. 82).

Unavoidably the question of respecting regulations regarding the following of licit competition principle is raised. Thus, the Competition Council thoroughly ascertains the following of regulations in use, and it is mandatory that the operation does not raise significant obstacles in the way of efficient competition on the Romanian market or on a substantial part thereof and that there are no serious doubts regarding its compatibility with a normal competitive environment.

With respect to the patrimony of the legal person subject to reorganization the question of immovable property in their patrimony is raised and the manner of its transference towards the new legal persons. Thus, through the merger, division or transformation act the form of the solemnity of this act will be respected, namely the authentic one, as well as the real estate publicity rules.

In order to appraise the immovable goods which are to be transferred towards the new legal person their accounting value will taken into consideration or, if necessary, a report of real estate expertise will be drawn.

In the instance of the presence of certain real estate guarantees it is required to have the agreement of the constituting person with the aim of reorganization. If there is a mortgage on a property within the patrimony of a legal person which undergoes complete division, the creditor will express its agreement or disapproval with respect to this procedure.

In order to operate the reorganization of the legal person, besides the decision of the management bodies it is mandatory that there exists no opposition from the creditor or any interested party.

In the instance of the merger of legal persons limited as number in the supply of certain essential services from the economic point of view an authorization of the competent bodies in this field will be mandatory. For example, if on the market of cable TV and fixed/mobile telephony supply there are only three providers, and two of them intend to merge an authorization from the National Autority for the Administration and Regulation in Telecommunications will be required. The necessity of this agreement is necessary in order to avoid the existence of monopoly in a certain field and the creation of a competitive market.

3. THE DIVISION OF COMPANIES REGULATED BY LAW 31/1990

Another form of reorganization of societies is the division, which can pe performed according to the provisions of art. 238 paragraph 1 in Law 31/1990 by the transfer from a company, after it entered dissolution, towards several companies, of the entirety of its patrimony, in the exchange of the allocation of shares in the beneficiary companies towards the shareholders of the divised company and, eventually, of a cash payment of a maximum of 10% of the nominal value of shares thus distributed.

Art. 238 paragraph (2) in Law 31/1990 regulates a second form of division achieved through the transfer from a company, after it is dissoluted without entering liquidation, of the entirety of its patrimony towards several newly constituted companies, in the exchange allocation of shares in the newly formed companies towards the shareholders of the divised company and, eventually, of a cash payment of a maximum of 10% of the nominal value of shares thus distributed (Cucu, Bădoiu and Haraga, 2011, p. 237).

Nevertheless, the legal person subjected to a division process may survive in the instance where we have partial division which leads to the transference of only a segment of the patrimony of the divised legal person towards the new legal person created through this process. Thus, partial division or the detachment may be achieved in the circumstances of art. 250^1 in the Law of companies, either in the interest of shareholders or associates of the company transferring the assets or in the interest of the society that performs the transference of assets (Șchiau, 2014, p. 63).

Division or detachment as procedures for the reorganization of companies may facilitate the separation of activity branches, therefore assisting in the creation of a strategic and clear orientation and the generation of supplementary potential for the improvement of the performance of the company. Moreover, a better management of the client portofolio is envisaged, as well as the increase of profitability and diminuation of risks by efficiently distributing necessary financial resources towards companies which fraction of the patrimony of the divised company are being transferred to (Mihăilă and Dumitrescu, 2013, p. 59).

Within the framework of the new changes in the entrepreneur market we can notice the increased usage of partial division due to the fact that, on one hand it is a more efficient modality to decrease risks by protecting one activity and a fraction of patrimony, even in the circumstances where other activities of the company could cease to be able to be exerted. Thus, the risk of a potential bankruptcy will be mitigated through the possibility of performing a reorganization plan in this manner. The imprevisibility in the evolution of the entrepreneur environment hence finds an efficient solution of risk management.

4. PROCEDURES IN THE REORGANIZATION OF COMPANIES REGULATED BY LAW 31/1990

The reorganization of societies regulated by Law 31/1990, regardless if it is merger or total or partial division is performed through the ruling of the general assembly of shareholders, adopted in conditions of quorum and majority established by the law for the form of the company being discussed. Thus, a first problem raised in the pandemic context was the possibility of the shareholders to actually participate in these assemblies. In order to answer to the necessities of the entrepreneur environment the Emergency Act 62 from the 2nd of May 2020 was issued for the adoption of measures in the field of companies, which in the first article states the possibility for the convocation with the intent to perform the reunion of the statutory bodies, through the duration of the emergency state, of the general assemblies shareholders/associates of the companies regulated by the Law of companies 31/1990, republished, with ulterior modifications and completions, either through modalities stipulated in art. 117 paragraph (3) in the Law of Companies 31/1990, namely through publication in the Official Journal of Romania, Part IV, and in one of the widely distributed papers in the town where the social headquarters are situated or in the closest town, either through any means of remote communication, which ensure the transmission of text, with the condition that each shareholder/associate will/has communicated in writing to the manager/board of directors/directorship the mailing address, or, if necessary, the e-mail address, the fax number or other coordinates where he/she can receive the correspondence with the company. Towards this end the addresses of the shareholders/associates written in the registry of shareholders/associates may be used.

The passing of this norm was necessary in the context where the undertaking of general assemblies through correspondence is, for some forms of companies, limited or conditioned, including by the presence of stipulations towards this end in the constitutive act.

The Emergency Act 62/2020 creates in art. 5 paragraph (1) the possibility that the general assembly of shareholders/associates may be held through electronic devices for direct remote communication, such as the teleconference or the videoconference, respecting the secret nature of the vote, if necessary and of the right to vote through correspondence. In order for these assemblies to be held legally, th electronic devices for remote communication must, in accordance with the provisions of art. 5 paragraph (2) of the act, to comply with the technical abilities in order to allow for:

„a) compatibility with most usual fixed or mobile access technologies, with the highest possible number of operating systems and the connection with public fixed or mobile networks of electronic communications;

b) identification of participants and their actual participation in the meeting;

c) continuous and live transmission of the general assembly, its recording and archiving;

d) live bidirectional communication, so that shareholders/associates may remotely address the general assembly;

e) voting during the general assembly and its recording;

f) ulterior verification of the manner in which voting was expressed during the assembly".

We state that in the absence of such normative dispositions we would have witnessed unavoidably a decisional blockage, with severe repercussions on the activity of entrepreneurs.

With respect to the patrimony of the legal person subject to reorganization the question of immovable property in their patrimony is raised and the manner of its transference towards the new legal persons. Thus, through the merger, division or transformation act the form of the solemnity of this act will be respected, namely the authentic one, as well as the real estate publicity rules.

In order to appraise the real estate assets which are to be transmitted towards the new legal person their accounting value will be taken into consideration or, if necessary, a report of real estate expertise will be drawn.

In the instance of the presence of certain real estate guarantees it is required to have the agreement of the constituting person with the aim of reorganization. If there is a mortgage on a property within the patrimony of a legal person which undergoes complete division, the creditor will express its agreement or disapproval with respect to this procedure.

In order to operate the reorganization of the legal person, besides the decision of the management bodies it is mandatory that there exists no opposition from the creditor or any interested party.

Social creditors benefit from multiple guarantees in the case of reorganization of the legal person. Thus, art. 243 in Law 31/1990 states the right of the creditors of the companies taking part in the merger or division to an adequate protection of their interests. Therefore, with the intent of obtaining adequate guarantees, any creditor that has possession over a certified liquid debt, preceding the date of the publication of the merger or division project, not yet due at the date of the publication, whose satisfaction is threatened by the merger/division, may oppose the procedure in the terms and circumstances provisioned by the law.

Moreover, associates enjoy supplementary protection from the decision of reorganization of the company. Thus, the shareholders have the explicit ability to withdraw from the company if they do not agree to the decision of merger or division, and the company has the obligation, according with provisions in art. 134 paragraph (4) in Law of the companies to pay for the shares of the individual exerting his/her right to withdrawal, while the worth of the share will be established by an authorized independent expert, as the medium worth resulting from the application of at least two appraisal methods recognized by the current legislation at the date of the evaluation.

Furthermore, the conditions for quorum and majority are much more restrictive for the procedure of reorganization of companies regulated by Law 31/1990 regardless if it is a merger or a division.

Following strictly the procedure, with the intent the respect the transparency of the process of reorganization, the managers of the companies which will participate in the merger or division will draw a project of merger or division which will comprise, according to art. 241 in Law 31/1990:

„a) the form, the name and the social headquarters of all companies involved in the merger or division;

b) foundation and circumstances of the merger or division;

c) the conditions for share allocation of the absorbing company or beneficiary companies;

d) the date from which the shares or social parties stipulated in paragraph c) give to their owners the right to participate in benefits and any special circumstances which prejudice this right;

e) the exchange rate of shares or social parties and the amount of eventual cash payments;

f) the amount for the merger or division bonus;

g) the rights granted by the absorbing or beneficiary company to the shareholders, granting special rights to those who own other mobile assets besides shares or measures proposed regarding these assets;

h) any special advantage given to experts to which art. 243[3] refers and to members of managing or control bodies of the companies involved in merger or division;

i) the date of the financial statements of the participating companies which were used in order to establish the circumstances of merger or division;

j) the date from which the transactions of the absorbed or divided company are considered from the accounting point of view as pertaining to the absorbing company or to one or another of the beneficiary companies;

k) in the case of division:

- the description and exact distribution of assests and liabilities which are to be transferred to each of the beneficiary companies;

- the distribution towards shareholders or associates of the divided company of shares, or social parties, respectively, in the beneficiary societies and the criterion on the basis of which the distribution is being performed".

5. CONCLUSIONS

The reorganization of the legal person and of the companies regulated by Law 31/1990 represents a starting point towards rethinking the activity of entrepreneurs.

Also perfectible, Romanian legislation in this field meets the requirements of the entrepreneur environment, the most recent modifications regarding the possibility of adopting decision in the general assembly through electronical devices coming towards meeting the needs of the companies to prevent possible blockages in the decision process.

Decrease of risks, optimization of patrimony usage, more efficient human resources, increase of profitability including through better governance are just a few of the reasons of entrepreneur reorganization. The task of the legislator is to be up to date with the concrete modifications in the business environment and to adjust with celerity the normative framework to the needs of entrepreneurs.

Within the context of the free circulation of individuals and of the importance of drawing foreign investions a legislative framework suited to the needs of the business environment represents an important added value and a real, tangible answer to the stimulation of the entrepreneurship.

References

1) Bodu, S. (2005). *Dreptul societăţilor comerciale. Dicţionar de termeni juridici (român-englez)*. Bucureşti: Rosetti, Publishing House.
2) Cucu, C., Bădoiu, C. and Haraga, C. (2011). *Dicționar de drept commercial*. București: C.H. Beck Publishing House.
3) Mihăilă, Ș. and Dumitrescu, A. (2013). *Drept commercial român*. București: C.H. Beck Publishing House.
4) Susanu, C. (2018). *Cadrul Juridic Societar. Repere naționale și europene*. București: Universul Juridic Publishing House.
5) Şchiau, I. (2014). Desprinderea reglementată de art. 250[1] din Legea societăţilor – între divizare şi aport la capital. *Bussines Law Review*, 12, pp. 59-69.

Section V

EU MACROECONOMIC POLICIES: HEALH SECTOR CRISIS AND EXIT STRATEGIES

ORGANIZATIONAL VALUES AND COMMUNICATION AS LEVERS OF SUPPORT AND INTEGRATION OF THE EXPERTISE OF REMOTE WORKERS DURING THE COVID-19 CRISIS

ANDREIA GABRIELA ANDREI
Alexandru Ioan Cuza University of Iasi
Iasi, Romania
andrei.andreia@gmail.com

MAGDALENA DANILET
Alexandru Ioan Cuza University of Iasi
Iasi, Romania
madalind@uaic.ro

ADRIANA ZAIT
Alexandru Ioan Cuza University of Iasi
Iasi, Romania
azait@uaic.ro

ANA-MARIA ANDREI
National University of Political Studies and Public Administration
Bucharest, Romania
ana.andrei@facultateademanagement.ro

Abstract
The paper reports the results of a qualitative investigation conducted with participants holding full-time positions in knowledge-intensive business services (KIBS) operating in Romania. It discusses the impact of the first year of massive adoption of the remote work imposed by the ongoing COVID-19 crisis. Focusing on remote worker's perceptions regarding their own efficiency, creativity, ability to cooperate, coordinate with others and integrate their expertise with the working group in fulfilling their daily tasks or delivering the projects, the study analyses the role of organizational values and transparent communication in supporting individuals to face the current difficulties and keeping the work-teams united. The paper brings to the fore the importance of the organizational culture. It shows that the shared values, the transparent, honest, and informal communication help KIBS to harness the expertise of the remote workers, supporting them to collaborate and perform well during the COVID-19 crisis.

Keywords: *working from home during COVID-19 crisis; internal communication; organizational values and culture; KIBS; Romania.*

JEL Classification: M12; M14

1. INTRODUCTION

After a year and a half since the start of the COVID-19 pandemic, individuals, organizations and society, in general, are still found under the pressure of unprecedented change generated by the measures adopted against the spread and consequences of COVID-19 virus. Massive adoption of work from home practice has been one of the immediate effects of these measures. According to the ILO report (ILO, 2021b), the share of employees working from home grew significantly from 3% (before COVID-19 pandemic) to 20-30% (during the pandemic), varying by country and industry. At EU level, the Eurofound (2020a) reports that 48% of the employees worked at home, at least, some of the time during the COVID-19 pandemic, while 34% worked exclusively from home. As for the knowledge-intensive business services (KIBS), the ILO reports (ILO 2021a, 2021b) and the European Commission (2020) estimated an increase from 8-14% (before the pandemic) to 90% (during the pandemic) in the share of remote workers, with variations by country. For example, India with 90% (ILO, 2021a) and Sweden with 90% (European Commission, 2020) are among top countries having adopted remote work for KIBS employees.

In Romania, the data for 2019 (European Commission, 2020; Eurofound, 2020b) describing the industrial structure of employment and teleworking show that in 2019 the KIBS employees accounted for only 15% of employment, less than 5% of which worked regularly from home. Under the pressure of the COVID-19 pandemic, data published by Statista (2021), and by the Eurofound (2021) for 2020 show an exponential growth in the proportion of remote workers in the Romanian economy, from less than 1% in 2019 to 24% in 2020. Official reports do not contain data on the share of KIBS' remote workers, although growth is likely to reach, at least, the level of overall economy (Deacu, 2021).

In this context, our paper focuses on KIBS' workers and presents the result of a qualitative study conducted in the spring of 2021 to explore their work from home (WFH) experiences during the COVID-19 crisis.

2. LITERATURE REVIEW

Traditionally, working from home (WFH) has been positively associated with flexible working arrangement for employees (Felstead and Henseke, 2017) and with the benefits for employers through higher productivity of their employees. (Senz, 2019; Bloom *et al.*, 2015) and cost cuts for working space (Ipsen *et al.*, 2021; Senz, 2019; Felstead and Henseke, 2017).

The studies conducted during the COVID-19 pandemic show that the perceptions of employers and employees of remote work has remained positive: more than half of workers still prefer working from home or the hybrid model

(PwC, 2021; Eurofound, 2020b; Eurofound, 2021), and 83% of employers say the shift to remote work has been beneficial for their company (PwC, 2021).

Studies mention several advantages perceived by remote workers, such as saving commuting time, greater time flexibility, increased productivity, less stress, a better work–life balance (Ipsen *et al.*, 2021; Felstead and Henseke, 2017), as well as diminishing the risk of getting COVID-19 virus (Ipsen *et al.*, 2021; Radulescu *et al.,* 2021).

Still, working from home during the COVID-19 outbreak has been a totally different experience compared to what it meant before the pandemic: the office was moved to a home environment quite suddenly by governmental measures and not due to an arrangement made with the employer; the house was turned overnight both into the office of several companies (depending on the number of family members forced to work from home), and into a classroom for children connected to online schooling (Eurofound, 2020a; Grose, 2020); the Internet connection was overloaded, imposing negotiations, additional extensions and costs (Eurofound, 2020b); lockdowns and the extended state of alert depriving the parents working from home from the help of baby sitters, relatives and aides for childcare and housework (Feng & Savani, 2020); ending with more house tasks as family members had to work, play and eat under the same roof (Arntz, Ben Yahmed and Berlingieri, 2020; Boca *et al.,* 2020; Grose, 2020). The COVID-19 pandemic brought a higher level of stress induced by threats to health and life, long isolation, severity of restrictions and health protection rules, worries related to economic and social security (Eurofound, 2021; Pieh *et al.*, 2021).

The own efficiency, the creativity, the ability to communicate well, to cooperate and to coordinate with others in order to integrate their expertise with the working group and fulfilling their daily tasks or delivering the projects are the challenges that remote workers cope with using the support of their companies. In their ongoing analysis of employee-written reviews on Glassdoor, Sull and Sull (2020) discovered that the top quality of team communication, leaders' honesty and transparency are the themes that stand out in the pandemic months, being mentioned twice more often than in the previous year, and containing more positive employee-written reviews. When employees think, speak and act through screens, effective communication that integrates transparency is essential in maintaining trust, engagement and social connectedness (Nadkarni *et al.*, 2021).

Rawlins (2008, p. 6) defines the three important characteristics of transparency: "information that is truthful, substantial and useful; participation of stakeholders in identifying the information they need; and objective, balanced reporting of an organization's activities and policies that holds the organization accountable". Even without agreeing on how transparency in communication is defined and measured (Hopp and Fisher, 2021), the studies carried out during the COVID-19 pandemic bring evidence that *informational transparency*, *participative transparency* and *accountable transparency* are internal communication dimensions which influence the way in which employees cope with organizational change (Lee *et al.*, 2020), play the role of means strengthening workplace culture (Nadkarni *et al.*, 2021), are the key elements in managing employee morale, as well as fear and uncertainty (Spalluto *et al.*, 2020), function as levers enhancing employee motivation, job engagement and knowledge-sharing behavior (Mani & Mishra, 2020; Lee *et al.*, 2020), increase employee potential and performance in various industries (Kim *et al.*, 2021; Sizemore *et al.*, 2021), and are also related to the perceived quality of employee-employer relationship (Lee & Li, 2020).

The communication and the organizational culture are in a symbiotic relationship (Schein, 2000; White, Vanc and Stafford, 2010; Stein, 2006), depending on one another, and influencing one another. According to Schein (2017), organizational culture consists of three interrelated layers: (1) *basic underlying assumptions and beliefs* (defining what to pay attention to, how to determinate behavior, perception, thought and feeling), (2) exposed *beliefs and values* (about appropriate attitudes and behaviors with subtle differentiations between beliefs and values which are congruent with the underlying assumptions, those that are part of the ideology or philosophy of the organization, and those that are rationalizations or only aspirations for the future), and (3) *the artifacts* (visible and feelable phenomena - e.g., architecture; language; technology and products; artistic creations; style, as embodied in clothing, manners of address, and emotional displays; myths and stories; published lists of values; observable rituals and ceremonies).

At the beginning of March of 2020, the COVID-19 outbreak imposed a sudden and non-negotiated relocation of the working space from the organizational architecture into a home space of a kitchen, a living-room, a balcony or a bedroom. Once this sudden change of location occurred, the social rituals and ceremonies changed, such as coffee breaks or water-cooler conversation (Howard-Grenville, 2020), which were replaced by the domestic routines related to children or pets.

Also, the language changed (i.e. the body language became highly limited through screen mediation), as well as the office attire (i.e. the images of employees wearing pajamas and upper body suits during office hours), while the artistic creations had been left behind in the empty spaces of former offices etc. In fact, the artifacts layer of organizational culture vanished or changed dramatically over a short period of time. The leaders' communication faced the challenge of finding new artifacts, new vehicles for interactions or adjusted cultural tool kit (Howard-Grenville, 2020; Schein, 2017) that would perpetuate the shared beliefs and values as something people experience, in congruence with the basic underlying assumptions and beliefs, so that the culture could become an organizational antidote for COVID-19 crisis (Saran, 2021).

3. **EMPIRICAL INVESTIGATION**

The empirical investigation used a qualitative study based on semi-structured in-depth interviews meant to reveal participants' job-related experiences generated by the mandatory work-from-home (WFH) imposed by COVID-19 crisis.

The interviews were conducted in the spring of 2021 from middle of March to the end of May via on-screen meetings held on Google Meet or Zoom platforms that lasted 25 to 30 minutes.

Participant's sample comprised 18 participants (aged between 28 and 51 years old, 11 males and 7 females, Romanian nationality) having more than 3 years working experience at the actual job, and holding full-time positions in knowledge-intensive business services (KIBS) operating in Romania. Participants were recruited from either professional services or information technology (IT) companies.

The interviews discussed the impact of the first year of massive adoption of the remote work imposed by COVID-19 crisis, focusing on remote worker's perceptions regarding their efficiency, creativity, ability to cooperate with others and integrate their expertise within working group to fulfill the daily tasks and deliver the projects. It was also discussed the role of organizational values and transparent communication in supporting individuals and keeping the work-teams united.

The applied interviews sought to provoke unrestricted expression and allow the examination of the participants' answers. Thematic analysis was used for identifying the main concepts and developing them into common themes.

The analysis of the interviews indicated that the ad-hoc transition from office to WFH was made without technical difficulties by the investigated companies, because the online communication and remote working tools were already used since pre-pandemic period, so the changes were merely associated to the space of working and the adjustments of working processes ("*the change I felt was related only to the environment" – FI, 51 years old, 3 children)*.

In this context, the interviewees mentioned that the mandatory WFH enabled them to manage both professional duties and family life during the pandemic and this was very important because it allowed them to feel secure, to *"stay safe, away from the danger of getting ill" (GA, 37 years old, 1 children)* to take care of their jobs, children and homes in the same time, while saving time and money. *"Home-to-office (and back) travels were no longer necessary, saving certain amounts of time and money. Also, the lunch break became a healthy meal, cooked at home during WFH, which is a far better option than the not so healthy and more expensive catering meals at the office" (EG, 35 years old, 2 children)"*.

However, the interviewees have reported that the advantages of WFH "have come with various challenges at the personal and professional level" (RF, 28 years old, no children), so they have described mandatory WFH as "full of predicted and unpredictably difficulties" (EP, 38 years old, 1 children).

A first difficulty mentioned discussed the fact that they *"have to balance the work and personal life in the same space"* (*FI, 51 years old, 3 children*), all study participants indicating the disadvantages related to the blurred boundaries between professional and personal life. In this regard, almost all participants have indicated an increased stress and exhaustion associated with "*the conversion of personal space into working space*" *(ZA, 38 years old, 1 children)* because childcare, online schooling, house kipping are all melted with job tasks.

Moreover, 66.33% of participants discussed also about exhaustion and extra working hours due to the increase of organizations' expectations about employee's availability for daily job tasks "*there is no delimitation between personal and professional life, there is no longer a limit of working time, the work schedule is continuous*" *- PP, 44 years, no children*).

While one interviewee has reported a subtle rise of work efficiency, explaining that *WFH "reduced a part of the work interruptions [...] occurring more frequently in the office*" (LA, 29 years old, no children), most study participants have indicated that results were kept during mandatory WFH at a very similar level to that reached before the pandemic, but these results obtained during WFH consumed higher amounts of time spent on working. As PC (44 years old, 2 children) reported, remote workers "*managed to overcome the limitations of WFH [...] but activity lasted longer than normal*", or "*the projects are delivered as usual, rather the deadlines are no longer met (DD, 35, years old, 1 children).* Moreover, *if you need to grow your team you face a situation that is very hard to handle The integration of the new-comers and the assignment of new tasks is highly complicated because they cannot benefit from the presence of a mentor to guide them (PC, 44 years old, 2 children).*

Although only 33.3% of participants reported a consistent drop of performance after one year of intensive WFH practice, all participants have indicated more or less severe issues related to communication and synchronization of teammates within their work teams and companies.

As CC (44 years old, 2 children) indicated *"If you need someone's help with an unplanned 5 minutes task, you usually ask for help at coffee-break or lunch. Now you need to set up a MS TEAMS appointment - and it's very hard to find availability on the calendar. And this is only one of the many types of timing problems when teams work only in the remote mode."*

Among the usual communication problems that were reported we noticed the mentions about the fact that the absence of on-site collaboration, the lack of face-to-face contact and informal debates with teammates have induced *"the monotony and the sensation of working alone"* (GB, 45 years old, 2 children), blurring the creativity and the generation of fresh ideas within working teams. A kind of *"a never-ending solitary work feeling"* (LC, 31 years old, no children) replaced the team spirit that have used to inspire WFH workers in the normal times. As EG (35 years old, 2 children) declared "*It was a short period at the beginning of the pandemic, when everyone was somehow 'waiting' and did not know what to expect. In the meantime, we got used to the situation and we have adapted well. Collaboration between colleagues remained good. Innovation has declined during this period, as face-to-face communication and coffee-break inspired discussions are missing.*"

The most serious communication problems have been described by interviewees reporting important gaps between declared values and the cultural reality of the organization, and/or the lack of communication transparency since pre-pandemic times: *"In terms of communication and transparency, there were difficulties even before the pandemic. During WFH they got worse. Probably because of the size of the company and outdated mentalities. Although at the company level, communication and transparency are declared priorities, it matters more if people (colleagues and managers) understand and apply these values. But everyone works from home now, so values are harder to nurture"* (GE, 34 years old, 2 children). Similarly, critical communication issues have been reported in the cases where the work team was less cohesive: *"there are many moments when it seems like working alone on the project, because it happens to ask something on the discussion channel but no one responds"* (LL, 30 years old, no children).

Therefore, an important issue associated with remote work and related communication deficiencies was linked to organizational culture. As one of the interviewees expressed: *"The exclusive use of technology-mediated communication at work has had a negative impact. Confusions multiplied in the absence of face-to-face interaction, the collaboration became much more impersonal. Organizational culture received a shock in the pandemic. Although sustained efforts are being made to return to the nominal, finding a right approach is very complicated" (CD, 37, years old, 1 children).*

Not surprisingly, some of the interviewees reported that team leaders or/and company management have started to address aforementioned issues, so the frequency of communication has increased: *"a higher number of meetings are needed in the team, from 3 meeting sessions monthly we increased to 3 sessions weekly" (MM, 45, no children).* Also, they have started to communicate more openly, and pay more attention to the needs and interests of their subordinates: *"Weekly video meetings are organized to keep the team spirit alive. We have informal discussions on various topics other than the work itself - for example: personal life, movie and book recommendations, hobbies, fun things to do, discussions about children, pets, garden, cooking sessions etc." (IO, 32 years old, no children).*

All study participants who reported that the results were maintained during mandatory WFH at a level similar to that achieved before the pandemic also provided examples of efforts made during this period to fill communication gaps and increase transparency.

4. CONCLUSIONS

The results of our investigation on the massive adoption of remote working from home (WFH) in KIBS operating in Romania during COVID-19 crisis has shown that the transition from office to WFH was made without technical difficulties and the perceived changes were merely associated to the space of working and the adjustments of working processes.

In line with the results of other studies (PwC, 2021; Eurofound, 2020b; Eurofound, 2021), WFH has been positively associated with multitasking, schedule flexibility and savings. The participants in our study pointed out that WFH allowed them to manage both professional and family tasks during the pandemic, to feel secure, to take care of jobs, children and homes at the same time, while they have enjoyed healthier homemade food and saved the time and money that would otherwise have been wasted on commuting and catering meals.

Still, the results of our study indicate that KIBS' employees perceive various difficulties associated to WFH, especially when it is the only option available, as it happened during COVID-19 outbreak, which makes them preferring a hybrid solution.

The most prominent issues mentioned by our study participants were related to the blurred boundaries between professional and personal life, extra working hours, the increase of organizations' expectations regarding employee's availability for daily job tasks, difficult integration of new-comers, problems with meeting the deadlines, increased difficulty of synchronization and coordination between teammates, and communication problems.

The analysis of the interviewees' statements indicated most problems revolve around technology-mediated communication. The lack of on-site collaboration and lack of face-to-face contact with teammates blurred creativity, team spirit and organizational culture.

Therefore, organizational culture has been a critical issue associated with remote work and related communication deficiencies. Our study indicates that some team leaders and managers have started to address this problem, making efforts to increase transparency, to communicate more openly, and pay more attention to the needs and interests of the employees. In this regard, we remind that all study participants who reported they were able to maintain the results at a level similar to that achieved before the pandemic, have also provided examples of managerial efforts made during this period to fill communication gaps and increase transparency. In a similar manner, the study of Sull and Sull (2020) have indicated the importance of leaders' honesty and transparency in the pandemic months. When employees think, speak and act through screens, effective communication that integrates transparency is essential in maintaining trust, engagement and social connectedness (Nadkarni *et al.*, 2021). Honest and transparent communication is related to the community-building process (Stein, 2006), as well as to habitual practices of the community. The communication and the organizational culture are in a symbiotic relationship (White, Vanc and Stafford, 2010; Stein, 2006), depending on one another, and influencing one another.

Similar to the results of our research, the studies conducted in other countries have indicated the importance of incorporating the values (i.e. transparency, honesty and authenticity) into organizational communication. Such studies have shown how virtual peer support groups, Zoom yoga sessions infiltrating work calls (Howard-Grenvillle, 2020), online cooking sessions (where managers and employees have a virtual access to the kitchens and plates of the others), informal online interactions (Wang *et al.*, 2021), manager's connection and a touching base with each team member (Itzchakov and Grau, 2021), online coaching and psychological therapy sessions provided by the companies (Jarosz, 2021; Kniffin *et al.*, 2021) are just a few specific practices which voice the interactions with the remote workers, making the border between formal and informal communication be fluid.

References

1) Arntz, M., Ben Yahmed, S. and Berlingieri, F. (2020). Working from Home and COVID-19: The Chances and Risks for Gender Gaps. *Intereconomics*, 55(6), pp. 381–386. https://doi.org/10.1007/s10272-020-0938-5.
2) Bloom, N., Liang, J., Roberts, J. and Ying, Z. J. (2015). Does Working from Home Work? Evidence from a Chinese Experiment. *The Quarterly Journal of Economics*, 130(1), pp. 165–218. https://doi.org/10.1093/qje/qju032.
3) Boca, D. D., Oggero, N., Profeta, P. and Rossi, M. C. (2020). Women's Work, Housework and Childcare, Before and During COVID-19. *CESifo Working Paper*, 8403. [online] Available at: https://ssrn.com/abstract=3644817 [Accessed 11.04.2021].
4) Deacu, E. (2021). Câți angajați din România lucrează oficial în telemuncă, *Economedia.ro*. [online] Available at: https://economedia.ro/exclusiv-cati-angajati-din-romania-lucreaza-oficial-din-telemunca.html#.YJwMsS8Ro1I [Accessed 18.04.2021].
5) Eurofound, (2020a). *Living, working and COVID-19*. COVID-19 series. Luxembourg: Publications Office of the European Union. [online] Available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20059en.pdf [Accessed 22.04.2021].
6) Eurofound, (2020b). *Telework and ICT-based mobile work: Flexible working in the digital age*. New forms of employment series. Luxembourg: Publications Office of the European Union. [online] Available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef19032en.pdf [Accessed 22.04.2021].

7) Eurofound, (2021). *Living, working and COVID-19 (Update April 2021): Mental health and trust decline across EU as pandemic enters another year*. Luxembourg: Publications Office of the European Union. [online] Available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef21064en.pdf [Accessed 22.04.2021].
8) European Commission, (2020). *Telework in the EU Before and After the COVID-19: Where We Were, Where We Head to*. [online] Available at: https://ec.europa.eu/jrc/sites/jrcsh/files/jrc120945_policy_brief_-_covid_and_telework_final.pdf [Accessed 23.03.2021].
9) Felstead, A. and Henseke, G. (2017). Assessing the growth of remote working and its consequences for effort, wellbeing and worklife balance. *New Technology, Work and Employment*, 32(3), pp. 195-212. https://doi.org/10.1111/ntwe.12097.
10) Feng, Z. and Savani, K. (2020). Covid-19 created a gender gap in perceived work productivity and job satisfaction: implications for dual-career parents working from home. *Gender in Management*, 35(7/8), pp. 719-736. https://doi.org/10.1108/GM-07-2020-0202
11) Grose, J. (2020). Burnt out on home schooling? How to get through the rest of the year. *The New York Times.* [online] Available at: https://www.nytimes.com/2020/05/13/parenting/coronavirus-remote-learning-burn-out.html [Accessed 23.03.2021].
12) Hopp, T. and Fisher, J. (2021). A psychological model of transparent communication effectiveness. *Corporate Communications: An International Journal*, 26(2), pp. 403-419. https://doi.org/10.1108/CCIJ-01-2020-0009
13) Howard-Grenville, J. (2020). How to sustain your organization's culture when everyone is remote. *MIT Sloan Management Review*, 61(4), pp.1-4. [online] Available at: https://sloanreview.mit.edu/article/how-to-sustain-your-organizations-culture-when-everyone-is-remote/ [Accessed 23.02.2021].
14) ILO, (2021a). *Working from home: From invisibility to decent work.* Geneva: International Labour Office. [online] Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_765806.pdf [Accessed 23.02.2021].
15) ILO, (2021b). *From potential to practice: Preliminary findings on the numbers of workers working from home during the COVID-19 pandemic*. Geneva: International Labour Office. [online] Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/briefingnote/wcms_777896.pdf [Accessed 23.02.2021].
16) Ipsen, C., van Veldhoven, M., Kirchner, K. and Hansen, J.P. (2021). Six Key Advantages and Disadvantages of Working from Home in Europe during COVID-19. *International Journal of Environmental Research and Public Health*, 18(1826), pp. 1-17. http://dx.doi.org/10.3390/ijerph18041826.
17) Itzchakov, G. and Grau, J. (2021). High-quality listening in the age of COVID-19: A Key to better dyadic communication for more effective organizations. *Organizational Dynamics*, Article in press Available online 26 December 2020, 100820. https://doi.org/10.1016/j.orgdyn.2020.100820.
18) Jarosz, J. (2021). The impact of coaching on well-being and performance of managers and their teams during pandemic. *International Journal of Evidence Based Coaching and Mentoring*, 19(1), pp. 4-27. https://doi.org/10.24384/n5ht-2722.

19) Kim, S., Kim, P. B. and Lee, G. (2021). Predicting hospitality employees' safety performance behaviors in the COVID-19 pandemic. *International Journal of Hospitality Management*, 93(102797), pp. 1-12. https://doi.org/10.1016/j.ijhm.2020.102797.
20) Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., and Vugt, M. v., (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist*, 76(1), pp. 63-77. http://dx.doi.org/10.1037/amp0000716.
21) Lee, Y. and Li, J.-Y.Q. (2020). The value of internal communication in enhancing employees' health information disclosure intentions in the workplace. *Public Relations Review*, 46(1/101872), pp. 1-9. https://doi.org/10.1016/j.pubrev.2019.101872.
22) Lee, Y., Tao, W., Li, J.-Y.Q. and Sun, R., (2020). Enhancing employees' knowledge sharing through diversity-oriented leadership and strategic internal communication during the COVID-19 outbreak. *Journal of Knowledge Management*, 25(6), pp. 1526-1549. https://doi.org/10.1108/JKM-06-2020-0483.
23) Mani, S. and Mishra, M., (2020). Non-monetary levers to enhance employee engagement in organizations – "GREAT" model of motivation during the Covid-19 crisis. *Strategic HR Review*, 19(4), pp. 171-175. https://doi.org/10.1108/SHR-04-2020-0028
24) Nadkarni, A., Levy-Carrick, N. C., Kroll, D. S., Gitlin, D., and Silbersweig, D. (2021). Communication and Transparency as a Means to Strengthening Workplace Culture During COVID-19. *NAM Perspectives*. Washington, DC: National Academy of Medicine. https://doi.org/10.31478/202103a.
25) Pieh, C., Budimir, S., Delgadillo, J., Barkham, M., Fontaine, J. R. J., and Probst, T. (2021). Mental Health During COVID-19 Lockdown in the United Kingdom. *Psychosomatic Medicine*, 83(4), pp. 328-337. doi:10.1097/PSY.0000000000000871.
26) PwC's US Remote Work Survey, (2021). *It's time to reimagine where and how work will get done.* [online] Available at: https://www.pwc.com/us/remotework?WT.mc_id=CT10-PL102-DM2-TR1-LS3-ND30-PR4-CN_ViewpointHighlights- [Accessed 23.02.2021].
27) Radulescu, C. V., Ladaru, G.-R., Burlacu, S., Constantin, F., Ioanăș, C. and Petre, I. L. (2021). Impact of the COVID-19 Pandemic on the Romanian Labor Market. *Sustainability*, 13(1:271), pp. 1-23. https://doi.org/10.3390/su13010271.
28) Rawlins, B. (2008). Give the emperor a mirror: toward developing a stakeholder measurement of organizational transparency. *Journal of Public Relations Research*, 21(1), pp. 71-99. https://doi.org/10.1080/10627260802153421.
29) Saran, C. (2021). Culture: An organizational antidote for COVID-19. *KPMG News & Perspectives*. [online] Available at: https://info.kpmg.us/news-perspectives/people-culture/culture-as-an-organizational-antidote-for-covid-19.html [Accessed 13.04.2021].
30) Schein, E. H. (2000). Sense and nonsense about culture and climate. In: N. M. Ashkanasy, C. P. M. Wilderom and M. F. Peterson, eds., *Handbook of organizational culture and climate*, SAGE, xxiii–xxx.
31) Schein, E. H. (2017). *Organizational culture and leadership*, 5th ed. Hoboken, New Jersey: Wiley.

32) Senz, K. (2019). How Companies Benefit When Employees Work Remotely. *Working Knowledge, Business Research for Business Leaders,* Harvard: Harvard Business School. [online] Available at: https://hbswk.hbs.edu/item/how-companies-benefit-when-employees-work-remotely [Accessed 13.03.2021].
33) Sizemore, L. M.a., Peganoff-O'Brien, S. and Skubik-Peplaski, C. (2021). Interference: COVID-19 and the Impact on Potential and Performance in Healthcare. *Work*, 69(3), pp. 767-774, DOI: 10.3233/WOR-213512.
34) Spalluto, L. B., Planz, V. B., Stokes, L. S., Pierce, R., Aronoff, D. M., McPheeters, M. L., and Omary, R. A. (2020). Transparency and Trust During the Coronavirus Disease 2019 (COVID-19) Pandemic. *Journal of the American College of Radiology: JACR*, 17(7), pp. 909–912. https://doi.org/10.1016/j.jacr.2020.04.026.
35) STATISTA, (2021). *Share of employees working from home in Romania 2010-2020*. [online] Available at: https://www.statista.com/statistics/1222724/romania-employees-in-home-office/ [Accessed 13.03.2021].
36) Stein, A. (2006). Employee Communications and Community: An Exploratory Study. *Journal of Public Relations Research*, 18(3), pp. 249-264, https://doi.org/10.1207/s1532754xjprr1803_3.
37) Sull, D., and Sull, C. (2020). How Companies Are Winning on Culture During COVID-19. *MITSloan Management Review*. [online] Available at: https://sloanreview.Fmit.edu/article/how-companies-are-winning-on-culture-during-covid-19/ [Accessed 17.03.2021].
38) Wang, B., Liu, Y., Qian, J. and Parker, S. K. (2021). Achieving Effective Remote Working During the COVID-19 Pandemic: A Work Design Perspective. *Applied Psychology*: *An International Review*, 70(1), pp. 16-59. https://doi.org/10.1111/apps.12290.
39) White, C., Vanc, A. and Stafford, G. (2010). Internal Communication, Information Satisfaction, and Sense of Community: The Effect of Personal Influence. *Journal of Public Relations Research,* 22(1), pp. 65-84. http://dx.doi.org/ 10.1080/10627260903170985.

THE COVID-19 PANDEMIC AND THE FAMILY PHYSICIANS' STRATEGIC ROLE

ANA-MARIA BERCU
Alexandru Ioan Cuza University of Iași
Iași, Romania
bercu@uaic.ro

LILIANA CARMEN BARBACARIU
Grigore T. Popa University of Medicine and Pharmacy
Iasi, Romania
carmen.barbacariu@umfiasi.ro

Abstract
The COVID-19 pandemic reveals the role played by the doctors at all levels of health care system and the necessity to have a coherent public strategy to address the prevention, screening and preventive intervention, diagnosis, and intervention to fight against the disease. The role of family physicians increases in these pandemic times, they are becoming the interface between patients and health system.
Using the literature approach, analysing the governmental rules established for fighting against SAR-CoV-2 disease, our investigation proposes to examine the strategic role played by the family physicians, also to underline the most appropriate practices that increase the quality of the medical act.
Keywords: *COVID-19; family physicians; strategy; public health.*
JEL Classification: I18, I12

1. INTRODUCTION

In March 2020, the World Health Organisation (WHO) declared the infection with coronavirus (COVID-19) as a pandemic. Until July 2021, globally were reported over 180 million infections including over 4 millions of deaths according with WHO reports.

Health care family physicians play a strategic role in preventing and providing first care help for the patients infected with the COVID-19, but also, for the patients with other diseases, acute or chronic. The work made by the family physicians is important for their own life, personal and professional, in terms of satisfaction, but also, for the patients' safety and their satisfaction with the provided medical services (Nahrgang, Morgeson and Hofmann, 2011). The literature is focused on the factors that affect the work of physicians and have impact on their professional life. The factors as working conditions, work process, organisational climate, rules and provisions, leadership and organisational support have impact on the professional life of the family physicians (Judge and Piccolo, 2004; Ng *et al.*, 2020).

Family physicians are the only health care professionals who can provide primary health care for patients of all ages in an integrated way, both prophylactically and curatively, being in fact the basis of the health care system. The healthcare systems differ from a country to other, but the addressability to the services offered by the family physicians remains higher for the patient's entire category, being treated, monitoring, and surveyed by the family doctors. The physicians have an integrative role for the patients offering them the necessary guidance to the other specialities or care centres, that the case may be.

Our research examines the key roles played by the physicians in taking the decisions that influence the well-being and safety of their patients analysing the COVID-19 provisions for affordable care, the resource allocation (human, financial, informational) and the on-going delivery of primary care to patients with other acute or chronic disease.

The main research questions that arise are:

Q1: What are the major tasks that should be done by the family physicians during COVID-19 pandemic according with the European and national (Romanian) rules?

Q2: Which are the most appropriate practices to increase the quality of the medical services offered by the family physicians?

2. THE ROLES OF FAMILY PHYSICIANS IN THE FIRST CARE MEDICAL SERVICE

2.1. The European and national regulatory framework for COVID-19

The SARS-CoV-2 pandemic led to significant changes in the conduct of the medical act. At European level, on 26th of March 2020, the European Council defines the emergency measures to fight against the coronavirus, preparing a set of measures with impact at the European member states. The Joint European Roadmap towards lifting COVID-19 is the agreed document to design a strategy at the European Union level, for all member states, to address the challenges imposed by the pandemic. Both economically and socially, the roadmap prepares the long way for recovery.

The European Commission defines the temporary framework for helping the states to facilitate national public spending, especially in health sector, providing financial and economic support from EU budget (also, the European Central Bank had helped the support for monetary policy). For stimulating the economy, was activated the general clause of the EU fiscal regulation (European Commission, 2020a).

Three principles were stated to explain the union of the healthcare systems in the EU:

a. Action taken by the European Union and by the Member States should be based on science and have the public health system in the centre of their actions. The policy decisions should be oriented to the best interest of the people, to protect and to help. The evolution of discovery in science is one of the major aims of the European Union and its member states and, for well-being and health of the people should be follow and, if necessary, the decisions to be revised.
b. The coordination of the action between Member States is a way to develop a strong connectivity within European Union in the fight against coronavirus and to define the common way to act.
c. Respect and solidarity, as the essential of the European Union values. The health systems are divers, and the response could be very different, but, in time of crises, it is important that the states agree on mutual assistance and to express the solidarity. Sending the doctors and nurses for helping other states, providing protection equipment (suits, masks, ventilators), organising the flights to bring home people are just a few measures that explain the stated principle. Also, the doctors shared their experience in fighting with COVID-19 on a platform that offer the data about the treatment, evolution of patients and the best responses at the treatment.

Creating a framework of cooperation, the European Commission (2020b) adopted the Guidance on EU Emergency Assistance on Cross-Border Cooperation in Healthcare related to the Covid-19 Crises (C(2020) 2153 final that facilitates the cooperation between members states to assist patients offering the available hospital bed capacity, health professionals, helping the healthcare systems to not enter under the risks.

In Romania, on 16th of March 2020 was adopted the Decree no. 195 to prevent the spread of COVID-19 and to manage its consequences, a state of emergency being established for a period of 30 days, that was extended by other 30 days periods.

Considering the rule of law in healthcare system, in Romania was adopted the Order of Health Ministry no. 1513/2020 that established the coordinators of the medical activity of the family physicians. In this regard, the family doctors could make the medical consultation remote using the telephone, the Internet, or the videocall. These types of consultations were legislated and have a great impact for the medical staff. Thus, the family doctors are put in the situation of deciding without having a clinical examination but based on questionnaires at phone on what the patient reports. During the pandemic, the family doctor has the main role in the surveillance and treatment of most infected patients, being the basis of the health system in these conditions. The need to quickly adapt doctors and patients to new ways of interacting has caused several difficulties and has also generated frustration on both sides, with an impact on the physician work and for the patient as the beneficiary of the medical service.

The physician or is not only a prescriber and generator of referral tickets but has an active and essential role in monitoring and managing patients and the community to which he/she belongs. Providing appropriate guidance, the role of physicians proved to be essential, especially during the pandemic times. Being the first contact physician of the community, he/she plays an important role in centralizing epidemiological and statistical data on the evolution of the disease, being a main pawn in tracing a correct conduct and obtaining accurate data.

The main task provided by the physicians are about providing access to the health care services, performs continuous medical supervision, detection and monitoring of the risk factors and establishment of prevention measures, their removal and control, early detection of various types of diseases, emergency medical assistance, monitoring patients by age groups, chronic disease monitoring, specific prophylaxis, and immunizations (Clavet and Walsh, 2009).

2.2. The family physician's role in the COVID-19 context

The family doctor plays a central role in the health system in the community in the context of the COVID-19 pandemic, representing primary medicine, with direct addressability that manages and monitors cases of infection, while making it possible to reduce health system overload. It also provides psychological support to patients and their families. At the same time, it continues to manage the rest of the patients who no longer find easy access to other medical specialties. And, not least, it is the basis for periodic statistical reporting and research.

The European Commission set up a series of principles that apply for helping the first care providers in organising their medical activity and to offer the first aid in the case of infection with coronavirus (European Commission, 2020c). The countries have different ways to organise their first care aid, from solo practices through group practices (2-3 physicians) that work at the health centres and works with multidisciplinary teams (Wienke, 2020; McCarthy, 2016). The role of physicians in controlling the spread of the COVID-19 in the community increased, they are having the pivotal role in testing and contact tracing. Physicians decide if the patient should be tested and can initiate the contact with the public authorities in monitoring and treating them.

Thus, we find that the family doctor and primary medicine have the following important roles, according with the principles stated by the European regulation:

a. Prevention - the physicians should spread the correct information for their patients regarding the appropriate methods to prevent the spread of infectious-contagious diseases, including the COVID-19.
b. Accessible services – the physicians should offer the first care medical services for the whole community, regardless of age and social status, with direct, direct addressability.
c. Rational allocation of resources. The pandemic times require an efficient management of the resources (financial resources, human resources,

informational resources) by sharing responsibility at all levels of the health system to avoid bottlenecks due to overloading of health facilities. Essential in the management of resources is the communication between the different responsible structures within the health system.

d. Triage - family physicians are the patient's primary contact physicians with the health system and have the role of deciding the appropriate conduct for each case, while reducing the unjustified burden of secondary and tertiary medicine while reducing the financial impact.
e. Treatment – physicians can effectively manage and treat acute cases or exacerbations of chronic diseases and can easily track the evolution of the disease and recurrences and play a crucial role in preventing the spread of COVID-19 by offering the first care medical act for the patients.
f. Monitoring and surveillance - the family doctor has an important role in terms of public health for monitoring infectious diseases in the population by alerting the authorities in case of an increase in their incidence and adopting preventive, curative, and statistical reporting measures.
g. Long-term follow-up - the family doctor can follow the medical condition of the individual from birth, with the registration and monitoring of chronic diseases, prevention and treatment of acute ones and guiding patients in the public health system to manage the case as efficiently as possible (Lee, Loke and Ng, 2020).

The role of physicians is drawn in the Figure 1. It could be revealing that the physicians have an integrative and pivotal role of integrating the first care medical services to respond not only to the pandemic times. Their capabilities to offer the best medical services using the unconventional methods of offering the first care, to monitor and to treat the patients (through phone, videoconferences, internet etc.) are expected to be at the highest level. Going form this assumption, appears the necessity to train the physicians to have the knowledge and skills to provide medical services and to respond to the quickly demands of the health systems. Surveillance, telemedicine, and multidisciplinary care teams are terms that will arise in the future in the health systems and will require specialised people with a high potential to develop their capabilities is a short time.

Figure 1. The physicians' role during the COVID-19 pandemic

Source: authors description based on the European Commission (2020c)

3. THE MEASURES FOR PROVIDING THE QUALITY MEDICAL SERVICES BY FAMILY PHYSICIANS

Despite clinical uncertainties and psychological stress concerning the risks of infection with coronavirus, the family physicians were committed to discharging their duties in the COVID-19 outbreak. Some studies (Yu *et al.*, 2020; Lasalvia *et al.,* 2021) reveal the measures that could assure the quality of the services during the COVID-19 pandemic. The coordination between public authorities, healthcare providers and family physicians are seen as a fundamental action to address the protocol for helping people in the case of infection with SARS-CoV-2.

The measures imply monitoring and supplying personal protective equipment for the healthcare workers, on-going surveillance, and update on the evolution of COVID-19, providing updated scientific information to doctors and establish the protocols for evaluating the risks for the infected patients and for the family members (Casper, 2021). For the family physicians was important to establish the appropriate guidelines for infection control (needed equipment, ventilation system, disinfectant use etc.), arrange the protocol for suspected cases to the hospital, provide training for using the equipment in a proper way (Lai *et al.*, 2019; WHO, 2020), establish concrete standards for evaluating the risks.

The authorities were in charge with the coordination of the primary care services between family physicians and the healthcare bodies implied in the prevention and treatment of the patients suspected or infected with SARS-CoV-2. Also, the necessity to correlate the treatment scheme with European and national ones, providing the platform of debates for the doctors and provide peer support.

3.1. Health care resources - family physicians

Responding to COVID-19 pandemic requires resources in terms of human resource resources, financial resources, informational resources, and technical resources.

In the health care system, the human resources are the most valuable for facing the challenges of COVID-19 pandemic. Knowledge and skills to understand, discover, treat, monitor, and evaluate the people's health, that make the professionals of the domain to be more active in this time.

Table 1. Number of physicians at EU level (only for the countries with available data on WHO, 2021)

Country	2018	2019	2020	Density per 1000 population
Austria	46337	47224	47674	5,36
Belgium	35762	36343	..	..
Czech Republic	42919	43399	..	..
Denmark	24301	..	..	..
Estonia	4605	4603	..	..
Finland	..	..	..	..
France	210567	213201	..	..
Germany	357401	365100	371562	4,47
Hungary	33078	34137	..	..
Ireland	15962		16366	3,47
Italy	240301	241945	238688	4
Latvia	6367	6253	..	..
Lithuania	12881	12768	..	..
Luxembourg	..	..	..	..
Netherlands	63278	64438	..	..
Norway	25804	26572	27361	5,1
Poland	..	..	..	..
Slovak Republic	..	..	..	..
Slovenia	6591	6812	..	..
Spain	188166	207565	..	..
Sweden	43930	..	..	..

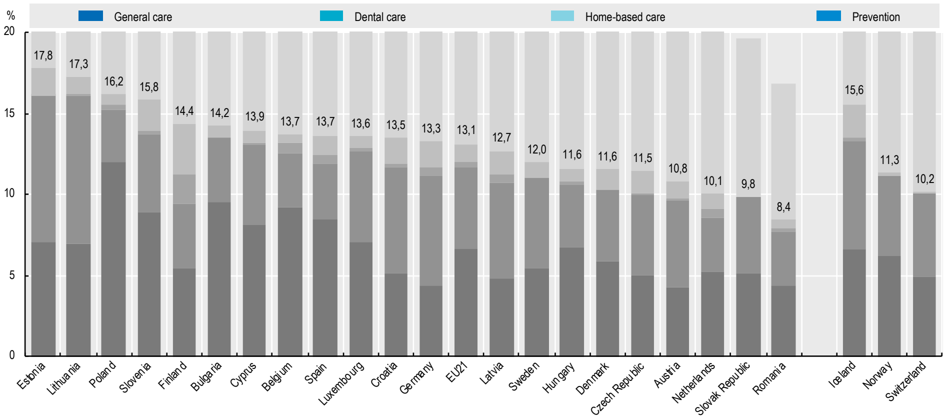
Source: according with data provided by statistics of WHO (2021)

The statistics reveal that the physicians play an important role in assuming the well-being of the patient. According with the data provided by the WHO (2021) for the period 2018-2020, at EU level the number of physicians increased in some countries as Austria, Germany, and Norway, and decrease in states as Italy (according with the available data from statistics provided by WHO, 2021

(Table 1). One explanation could be the necessity to increase the number of specialists to cover the necessity of healthcare systems of states during the pandemic times.

From financial point of view, the expenditure on primary health care (general care, dental care, home-based care, and prevention) is the cornerstone of the health system in the pandemic times. Having the patient in the centre of the actions, the primary health care system became one of the main policy tools to improve the capacity of the authorities to use the money in an efficient manner. Primary health care (Figure 2) represents around 13% of healthcare spending across EU member states, with values that vary from 8% in Romania, 10% in Slovak Republic, 11% in Czech Republic, to more than 16% in Estonia, Lithuania and Poland.

Figure 2. Spending on primary health care services as share of total health spending, 2018



Source: (OECD/European Union, 2020)

For the most of EU countries the primary care expenditures remain relative constant over the five years, suggesting that the expenditure growth is in line with the overall health spending (exceptions are Romania, where primary health care spending grew on average about 10%, or Finland and Slovak Republic where the spending retracted in real terms). Also, in relative terms, the spending on general outpatient care is much lower in Romania, Austria, and Germany (less than 4,5% of total health spending).

3.2. EU health care policy measures for the primary health care systems

EU policies and actions concerning the heath care are oriented to respond to the challenges imposed by the coronavirus pandemic. EU and its Member States have developed common strategies to fight against coronavirus, coordinating the actions of prevention, testing, treatment, monitoring and evaluation of treatment, facilitation of the supply of the protective and medical equipment, vaccination.

Since the pandemic still affects the EU countries, the public authorities' action through a collective effort to limit the effects and to support the health care systems.

The main aim of the EU public policy in public health follow to respond to the following issues:

a. Assurance of the well-being and health of the people across EU;
b. Prevention and treatment of the patients according with the new science discoveries for treating the coronavirus;
c. Developing the medical infrastructure;
d. Improve the efficacy and efficiency of the health systems across Europe.

According with the Primary Health Care Performance Initiative (PHCPI, 2020), the efforts of primary health care are oriented to deliver the quality services to the patients. The primary care health approach is sustained by the actions that help doctors and patients to having access to the medical services during the pandemic period.

Some directions were identified to sustain the initiative. The governments should increase the investment in primary health care systems to maintain the confidence of the patients and the health system ability to adapt to the needs of people and to create new strategies to address these needs. Other direction is done by the revisions of the strategies for responded to the new ways requires for interaction with the patients (telemedicine, internet, videoconferences etc.), to learn how to work in the crises times and to offer the resources for doing the job in a qualitative way. The necessity to develop creative and innovative tools for responding to these challenges are required for the primary care health workers, especially for the physicians and the doctors which work in the first line.

Primary care health system plays a central role in increasing the results of the policies and strategies that address the coronavirus.

4. CONCLUSIONS

COVID-19 reveals the importance of the health systems for assuring the well-being of the people and to respond immediately to the risks and consequences of the pandemic. Primary health care system appears as a strategic element in the health system that is called to respond to the needs of the people. The family physicians represent the strategic key in the process of triage, treatment, monitoring and surveillance of the patients infected with COVID-19 or suffering from acute or chronic diseases.

Our research results shows that the family physicians play crucial roles in assuring the health of their patients, being innovative and finding new ways to be close to them. Telemedicine, teleworking, internet, video conferences are just a few tools that the family physicians learn in very short way how to be used. Also, the resources allocations are fundamental for the family physicians' tasks and, according with the results, its necessary to increase the number of specialists for deliver the primary health care and to respond to the challenging times. The health policies in EU are oriented to sustain the health systems and to find the solutions to finance the public health expenditure and to increase the government capacities to develop efficient strategies for addressing the pandemic. In this regard, appear as necessary and useful to readapt continuous the policies and to maintain a strong cooperation among EU member states.

ACKNOWLEDGEMENTS

This research was performed with the support of the ERASMUS+ Program of the European Union (Jean Monnet Module "Towards New Paradigms of EU Economics: Financial and Monetary Milestones", EUCONOMICS, grant decision number 620297 / 17.09.2020). This work reflects only the views of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

References

1) Casper, E. (2021). Occupational health risk among healthcare workers during COVID-19 pandemic: actions to limit the risk. *The Journal of the Egyptian Public Health Association*, 96(13), pp. 1-2. https://doi.org/10.1186/s42506-021-00076-z.
2) Clavet, D. and Walsh, A. (2009). Helping to prepare future physicians. *Canadian Family Physician*, 55(9), pp. 862-863. [online] Available at: https://www.cfp.ca/content/55/9/862 [Accessed 30.03.2021].
3) European Commission, (2020a). *Commission Communications COM (2020) 112 final of 13 March 2020 and COM (2020) 143 final of 2 April 2020.* [online] Available at: https://ec.europa.eu/info/sites/default/files/communication-annex-coordinated-economic-response-covid19-march-2020_en.pdf [Accessed 30.03.2021].
4) European Commission, (2020b). *Guidance on EU Emergency Assistance on Cross-Border Cooperation in Healthcare related to the Covid-19 Crises (C(2020) 2153 final*. [online] Available at: https://ec.europa.eu/info/sites/default/files/guidelines _on_eu_emergency_assistance_in_cross-bordercooperationin_heathcare_related_to_the_covid-19_crisis.pdf . [Accessed 04.04.2021].
5) European Commission, (2020c). *Joint European Roadmap towards lifting COVID-19 containment measures*. Brussels: EC. [online] Available at: https://ec.europa.eu/info/sites/info/files/communication_-_a_european_roadmap_to_lifting_coronavirus_containment_measures_0.pdf. [Accessed 05.04.2021].
6) Yu, E. YT., Leung, W. LH., Wong, S. YS., Liu, K. SN. and Wan, E. YF (2020). How are family doctors serving the Hong Kong community during the COVID-19 outbreak? A survey of HKCFP members. *Hong Kong Medicine Journal*, 26(3), pp. 176–183.
7) Judge, T. and Piccolo, R. (2004). Transformational and Transactional Leadership: A Meta-Analytic Test of Their Relative Validity. *Journal of Applied Psychology*, 5(1), pp. 755-768.

8) Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., and Hu, S. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Netw Open,* 3(3), pp. 1-12.
9) Lasalvia, A., Bonetto, C., Porru, S., Carta, A., Tardivo, S., Bovo, C., Ruggeri, M. and Amaddeo, F. (2021). Psychological impact of COVID-19 pandemic on healthcare workers in a highly burdened area of north-east Italy. *Epidemiol Psychiatr Science,* 30(e1), pp. 1–13.
10) Lee, J. Q., Loke, W., and Ng, Q. X. (2020). The Role of Family Physicians in a Pandemic: A Blueprint. *Healthcare* 8(3), 198. https://doi.org/10.3390/healthcare8030198.
11) McCarthy, M. (2016). Sustainable general practice: looking across Europe. *The British Journal of General Practice,* 66(642), 36.
12) Nahrgang, J., Morgeson, F. and Hofmann, D. (2011). Safety at Work: A Meta-Analytic Investigation of the Link Between Job Demands, Job Resources, Burnout, Engagement, and Safety Outcomes. *The Journal of Applied Psychology*. 96(1), pp. 71-94. DOI: 10.1037/a0021484.
13) Ng, Q. X., Chee, K. T., De Deyn, M. L. Z. Q., and Chua, Z. (2020). Staying connected during the COVID-19 pandemic. *International Journal of Social Psychiatry*, *66*(5), pp. 519–520.
14) OECD/European Union, (2020). *Health at a Glance: Europe 2020: State of Health in the EU Cycle*. Paris: OECD Publishing. https://doi.org/10.1787/82129230-en.
15) Order of Health Ministry no. 1513/2020. [online] Available at: http://legislatie.just.ro/Public/DetaliiDocumentAfis/229869 [Accessed 25.04.2021].
16) Primary Health Care Performance Initiative, (2020). *Key Messages: COVID-19 and Primary Health Care*. [online] Available at: https://improvingphc.org/key-messages-covid-19-and-primary-health-care [Accessed 12.04.2021].
17) Wienke G.W. B. (2020). *Profiles of General Practice in Europe. An international study of variation in the tasks of general practitioners*. [online] Available at: https://www.nivel.nl/sites/default/files/bestanden/profiles-of-general-practice-in-europe.pdf. [Accessed 15.04.2021].
18) World Health Organization – WHO, (2020). *Infection prevention and control during health care when COVID-19 is suspected*. [online] Available at: https://www.who.int/publications/i/item/10665-331495 [Accessed 25.04.2021].
19) World Health Organisation – WHO, (2021). *Database* [online] Available at: https://www.who.int/data/gho/data/countries [Accessed 25.04.2021].

THE INFLUENCE OF THE COVID-19 PANDEMIC ON THE ECONOMIC ACTIVITES

GABRIELA BOLDUREANU
Alexandru Ioan Cuza University of Iași
Iași, Romania
gabrivaleanu@yahoo.com

TEODORA CRISTINA ROMAN
Alexandru Ioan Cuza University of Iași
Iași, Romania
throman@uaic.ro

ANA-MARIA BERCU
Alexandru Ioan Cuza University of Iași
Iași, Romania
bercu@uaic.ro

DANIEL BOLDUREANU
Grigore T. Popa University of Medicine and Pharmacy of Iași
Iași, Romania
daniel.boldureanu@umfiasi.ro

Abstract
The economic impact of the coronavirus crisis varies from one industrial sector to another and from one enterprise to another. It depends on several factors, including the ability to adapt to supply chain disruptions, the existence of stocks or dependence on just-in-time production processes. The impact of the COVID-19 pandemic on the activity of Romanian economic agents is, in fact, reflected in macroeconomic indicators: gross domestic product, inflation, unemployment, industrial production index, retail volume index and tourism sector-specific indices.
Through a process of induction, deduction, critical and comparative interpretation of studies and reports prepared at national and international level, we investigate the influence of the COVID-19 pandemic on economic activities in Romania compared to the European Union to identify measures to relaunch economic activities, both nationally and internationally.
Keywords: *economic activities; COVID-19 pandemic; macroeconomic indicators; entrepreneurship.*
JEL Classification: M13, O11, O12

1. INTRODUCTION

We are going through an extremely difficult period from an economic and social point of view, which is why economic activities need to be rethought. In the post-pandemic phase, the economy will be to a lesser extent one of mobility and more of an economy of security: we will have less of an economy of personal interaction and more of an economy of digital communication; teleworking, video conferencing, social protection and distancing measures will continue to be part of our daily lives. All these realities will create new business opportunities (Boldureanu *et al.*, 2017), new paradigms in economic and social life.

The coronavirus pandemic has changed the pace of business around the globe. There have been rapid changes in many businesses and fields, the most affected being businesses in the tourism industry and event organizations. There is also an absolute winner of this pandemic period, namely the food trade; online commerce is growing, and courier companies are growing, and online retail platforms are looking to hire staff because they are effectively out of demand. Another winner of the COVID-19 pandemic was e-commerce, as businesses were able to continue operating, despite all restrictions. Customers have benefited from a wide variety of products offered by these companies, electronically (OECD, 2020). Changes due to the pandemic also occurred in the application environment, Facebook being more used compared to the period before the pandemic, and Google updating its functions to make it possible to connect several people at once (Bhatti *et al.*, 2020). In contrast, the COVID-19 crisis has slowed international trade, which has damaged both supply and demand. In 2020, global trade declined by 13%, higher than the percentage of economic losses during the Second World War.

According to several authors (Vidya and Prabheesh, 2020; Barlow *et al.*, 2021; Hayakawa and Mukunoki, 2021) the negative effects of the COVID-19 pandemic are far more numerous and important than the positive effects, as follows:

1. Negative effects of the COVID-19 pandemic: human losses; the collapse of the production sector; problematic supply; declining government revenues; low demand and supply; job loss; rising food prices; hampering exports; installation of stress.

2. Positive effects of the COVID-19 pandemic: remote jobs; pollution reduction; increased demand in the field of construction and interior design.

However, the impact of the COVID-19 pandemic on the economy is negative, as economic activity is reduced as a result of direct government action to suspend business activity to limit the spread of the virus among many states (ILO, 2020). From this perspective, the problems are in the direction of the supply chain which is seriously disrupted and with implications for: access to raw materials (cost and quality); market access (perishable products lost in transit due to longer delivery times); market loss (eg. export markets restricted by logistics activities); sudden increase in imports to cope with rising demand (for certain product categories); poor budgets (impact of the extended period of suspension of business activity); low productivity along the supply chain; employee well-being (physical and psychological).

The impact of the COVID-19 pandemic on the activity of economic agents in Romania is reflected, in fact, in the macroeconomic indicators from Romania compared to the EU, indicators that will be analysed in this paper.

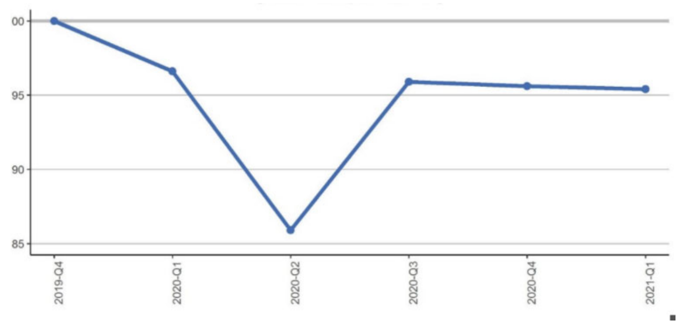
2. MATERIAL AND METHOD

The paper is based on a process of induction, deduction, critical and comparative interpretation of studies and reports developed at national and international level, on the influence of the Covid-19 pandemic on economic activities. As a research method we will use the quantitative method using statistical data provided by Eurostat. The analysis is based on macroeconomic indicators such as: gross domestic product, inflation, unemployment, as well as the index of industrial production, the retail volume index as well as indices specific to the tourism activity. The research results will help us to identify measures to relaunch economic activities, both nationally and internationally.

3. RESULTS ANALYSIS

The COVID-19 pandemic has negatively affected the economy of the European Union in many areas. Gross domestic product (GDP) is the total value added created in an economy. GDP is the most used indicator measure for the size of an economy. The Gross Domestic Product at the level of the European Union decreased by 4.6% in Q1 2021 compared to its pre-pandemic level recorded in Q4 2019. This decreasing trend continued and lately, the gross domestic product (GDP) decreased slightly by 0,1% in Q1 2021 according to Eurostat data (Figure 1).

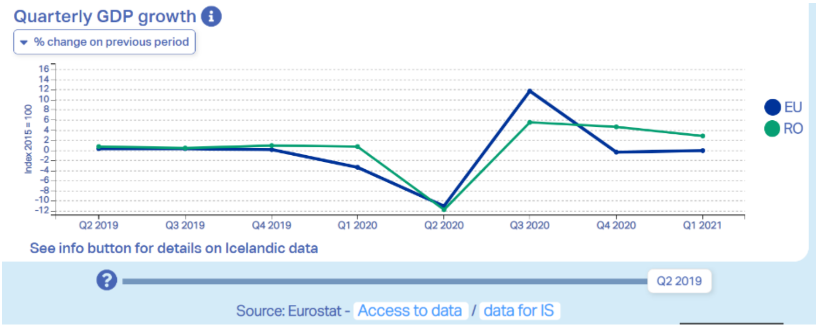
Figure 1. Evolution of GDP at the level of the European Union (Q4 2019- Q1 2021)



Source: (Eurostat, 2021)

Romania also registered the same decreasing trend, but the decrease was smaller than the European average, and the subsequent growth slower (Figure 2).

Figure 2. Romania's GDP evolution (Q4 2019- Q1 2021)

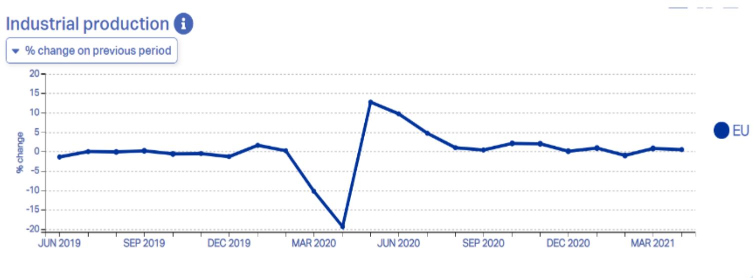


Source: (Eurostat, 2021)

The maximum decrease of Romania's GDP was registered in the Q2 quarter of 2020 (-11.8%), practically in the maximum of the pandemic. The post-pandemic recovery is slower, but sustained, currently Romania's GDP being located at 2.8% compared to that recorded at the beginning of the pandemic.

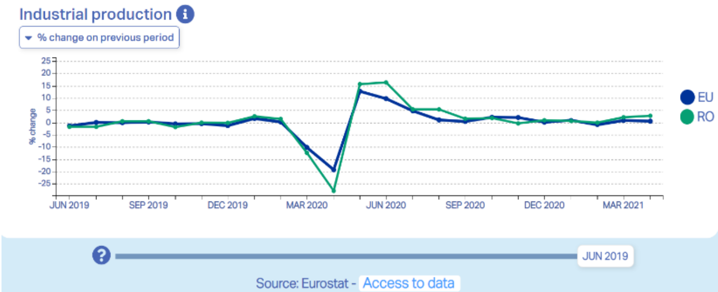
The industrial production index measures the volume of industrial production in all branches of the economy, except construction. This index of industrial production appreciated by 0.5% in April 2021 and exceeded its pre-pandemic value (Q4 2019) (Figure 3). This is remarkable, especially since the largest decrease in the industrial production index during the pandemic was recorded in April 2020 (-19.3%).

Figure 3. Evolution of the Industrial Production Index at the level of the European Union (Q4 2019- Q1 2021)



Source: (Eurostat, 2021)

Romania followed the same evolution close to the European average: after the maximum decrease during the pandemic of April 2020 (-27.9%), followed the recovery period with the maximum value of July 2020 (+16.3%), so that the industrial production index returned to pre-pandemic level (Figure 4).



Source: Eurostat, 2021

Figure 4. Evolution of the Romanian Industrial Production Index (Q4 2019-Q1 2021)

It should be noted that in the last month of April 2021 the increase in the index in Romania (+ 2.7%) was above the European average (+ 0.5%).

The retail trade volume index measures the evolution of the total volume of sales, adjusted for price changes, i.e. the evolution of the total quantity of goods sold in a given period.

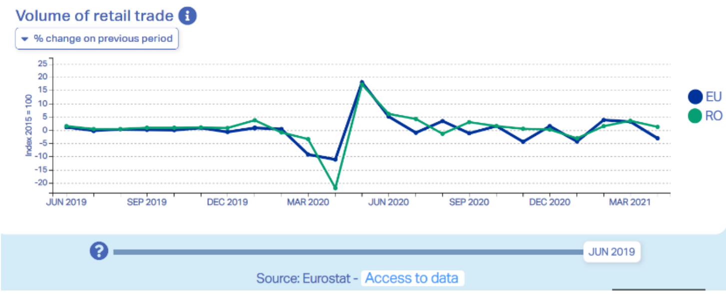
Retail sales in the European Union decreased in April 2021, so that retail trade decreased from one month to another (-3.1%), the largest decrease in the pandemic being recorded in April 2020 (-11, 1%) (Eurostat, 2021).

Figure 5. Evolution of the Retail Trade Index in the European Union (Q4 2019- Q1 2021)

Source: (Eurostat, 2021)

In Romania, the retail trade index increased in the last month (+ 1.2%), continuing the positive trend of recent months (Figure 6).

Figure 6. Evolution of Romania's Retail Trade Index (Q4 2019- Q1 2021)



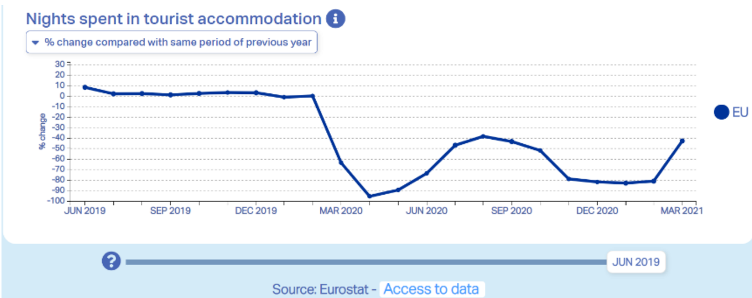
Source: (Eurostat, 2021)

After the maximum decrease in April 2020 (-21.9%), Romania registered successive increases of this indicator (with a maximum of + 17.2% in May 2021), indicating the return of retail trade in our country.

One of the branches of the economy that has suffered the most from the pandemic is tourism. An indicator used is that of the monthly occupancy rate of tourist accommodation units, which measures the nights spent by tourists (residents and non-residents) at tourist accommodation units.

The indicator of the monthly occupancy rate of tourist accommodation units has suffered a dramatic decrease and is far from returning to pre-pandemic values. The maximum decrease registered during the pandemic of April 2020 (-95.6%) could not be exceeded, the last month with available statistical data, March 2021, marking a sharp decrease (-42.8%) (Figure 7).

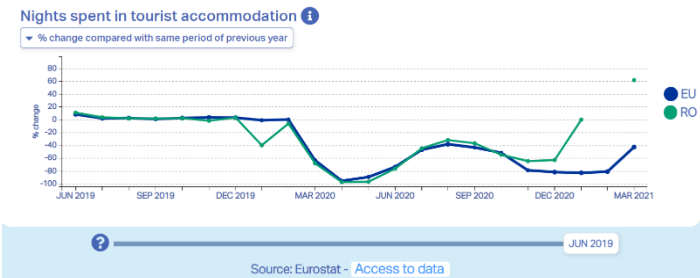
Figure 7 Evolution of the Monthly Occupancy Rate of accommodation units in the European Union (Q4 2019- Q1 2021)



Source: (Eurostat, 2021)

Romania followed the same downward trend, at European and global level. Since the maximum decrease during the pandemic (-97.4%) in April 2020, there has been a continuous but slow increase in the monthly occupancy rate of accommodation units (Figure 8).

Figure 8. Evolution of the Monthly Occupancy Rate of accommodation units in Romania (Q4 2019- Q1 2021)



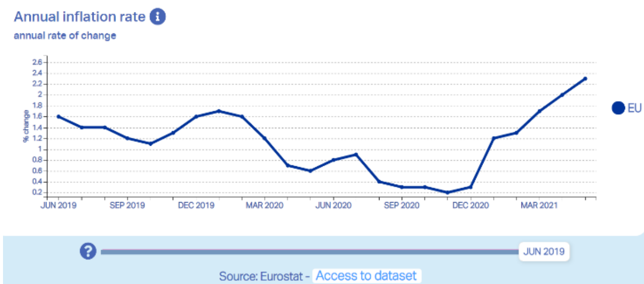
Source: (Eurostat, 2021)

Despite all these positive developments in the last period, the index of the monthly occupancy rate of accommodation units in Romania is not at the pre-pandemic level.

The inflation rate is an important indicator that measures the change in consumer price indices. During the pandemic, this important indicator experienced a sustained increase in the European Union, from a value of 1.7% in January 2020 to 2.3% in May 2021. What is noteworthy is that inflation in the European Union it increased for the sixth consecutive month in May 2021 reached the highest level since October 2018.

In all Member States of the European Union, in May 2021, the annual inflation rate varied greatly from the minimum values of -1.2% in Greece, 0.2% in Malta and 0.5% in Portugal to the maximum values of 4.0% in Luxembourg, 4.6% in Poland and 5.3% in Hungary (Figure 9).

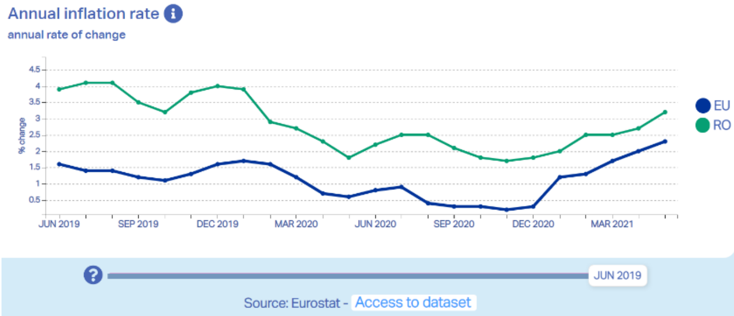
Figure 9. Evolution of the inflation rate at the level of the European Union (Q2 2019- Q1 2021)



Source: (Eurostat, 2021)

Romania also experienced the same evolution concerning the inflation rate, like the European Union. We note the upward trend of inflation in Romania, which reached 3.2% in May 2021. It should be noted that throughout the pandemic, the inflation rate in Romania was above the European average (Figure 10).

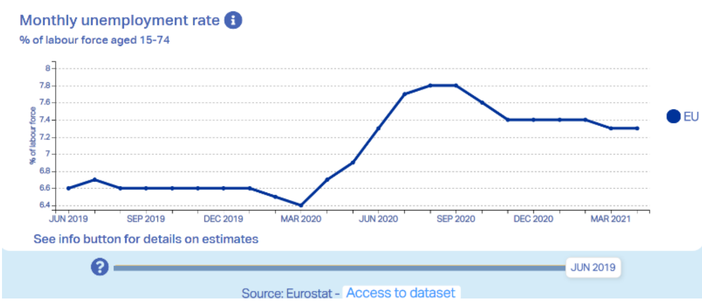
Figure 10. Evolution of Romania's inflation rate (Q2 2019- Q1 2021)



Source: (Eurostat, 2021)

Unemployment is a last indicator analysed. Unemployed people are defined as the percentage of the active population made up of people aged between 15 and 74 who at the same time meet the following conditions: they are out of work, available to start work in the next two weeks and have actively sought a job at a moment in the last four weeks. The unemployment rate was calculated monthly, and at the level of the European Union it increased substantially during the pandemic, reaching a maximum of 7.8% in September 2020 compared to a minimum level of 6.4% in March 2020 (Figure 11).

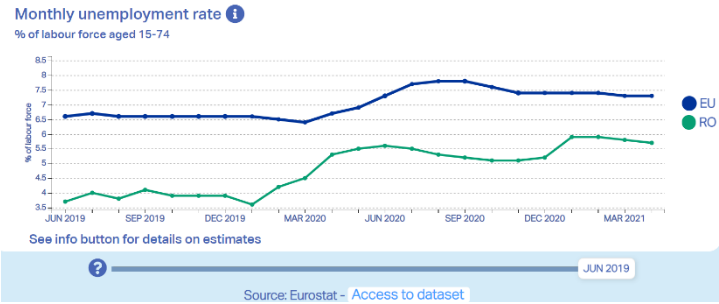
Figure 11. Evolution of the unemployment rate in the European Union (Q2 2019- Q1 2021)



Source: (Eurostat, 2021)

The unemployment rate in Romania during this period experienced a similar evolution from a minimum value of 3.6% in January 2020 to a maximum value of 5.9% in January 2021. Although the unemployment rate has evolved upwards in Romania, it is noteworthy the fact that it has remained and remains below the European average during this period (Figure 12).

Figure 12. Evolution of Romania's unemployment rate (Q2 2019- Q1 2021)



Source: (Eurostat, 2021)

4. CONCLUSIONS

The COVID-19 pandemic negatively influenced the economy of Romania but also of the European Union in many areas. Regarding the gross domestic product of Romania, the maximum decrease was registered in the Q2 quarter of 2020 (-11.8%), i.e. practically in the maximum of the pandemic.

Industrial production in Romania followed the same evolution close to the European average: after the maximum decrease during the pandemic period of April 2020 (-27.9%), followed the recovery period with the maximum value from July 2020 (+16.3%), thus the industrial production index returned to the pre-pandemic level.

Tourism was the branch that suffered the most from the pandemic. At European level, the indicator of the monthly occupancy of tourist accommodation units has suffered a dramatic decline and is far from returning to pre-pandemic values. The maximum decrease registered during the pandemic of April 2020 (-95.6%) could not be exceeded. Romania followed the same downward trend, at European and global level. However, regarding the retail trade volume index, after the maximum decrease in April 2020 (-21.9%), Romania registered successive increases of this indicator (with a maximum of + 17.2% in May 2021), indicating the return of retail trade in our country. In contrast, retail sales in the European Union decreased in April 2021, so that retail trade decreased from one month to another (-3.1%), with the largest decrease in the pandemic being recorded in April 2020 (- 11.1%).

Given this situation, what would be the solutions / measures for relaunching the business environment, economic activities?

The first measures should be governmental. Thus, the financing packages of SMEs should be focused primarily on working capital (employment, purchase of equipment). Consequently, the following programs should be rethought and adapted to the post-crisis situation, such as: Start-up Nation, Diaspora Start-up, Microindustrialization Program 2020, SME Invest Program. At the same time, EU support is needed for economic stimulus not only for the affected sectors

(Boldureanu, 2018, Boldureanu *et al.,* 2019). Thus, European financing instruments should also appear to provide sound guarantees for the economic environment. We mention here the Recovery and Resilience Plan and the SURE (Temporary Support for Mitigation of Unemployment Risks in an Emergency) initiative both to support citizens and businesses in the context of COVID-19. To relaunch the business environment, entrepreneurs also came up with a set of measures: differentiated government action packages, depending on the importance and needs of companies; creating teams of volunteers consisting of management consultants, business, top managers; creating partnerships Government - National Bank - Banks - Companies; involvement of consulting / business companies in the restructuring of companies.

Moreover, the set of measures proposed by entrepreneurs should largely overlap with the set of measures proposed by the government, otherwise the efforts made by both parties will not have the desired effect for the whole economy and for the citizens.

References

1) Barlow, P., van Schalkwyk, M. C., McKee, M., Labonté, R. and Stuckler, D. (2021). COVID-19 and the collapse of global trade: building an effective public health response. *The Lancet Planetary Health*, 5(2), e102-e107, pp.1-3.
2) Bhatti, A., Akram, H., Basit, H. M., Khan, A. U., Raza, S. M. and Naqvi, M. B. (2020). E-commerce trends during COVID-19 Pandemic. *International Journal of Future Generation Communication and Networking*, 13(2), pp. 1449-1452.
3) Boldureanu, D., Prodan, A., Ciulu, R., Boldureanu, G. and Andruseac, G. (2017). The economic impact and the dynamics of the innovative process in Romania compared to the European Union. In: *E-Health and Bioengineering Conference (EHB),* IEEE Xplore Digital Library, pp. 729-732.
4) Boldureanu, G. (2018). The Economic and Social Impact of Entrepreneurial Activity. In: *Conference Proceedings of International Conference on European Financial Regulation*, EUFIRE. Iasi: “Alexandru Ioan Cuza” University of Iasi, pp. 203-209.
5) Boldureanu, G., Manolică, A., Roman T. and Boldureanu, D. (2019) The Profile of SMSs Providing green Products and Services. In: *Conference Proceedings of The European Union, European Financial Regulation and Administrative Area*. Iași: “Alexandru Ioan Cuza” University of Iasi, pp. 377-386.
6) European Commission, (2021). *European Statistical Recovery Dashboard*, Edition June 2021, Eurostat. [online] Available at: https://ec.europa.eu/eurostat/cache/recovery-dashboard/ [Accessed 11.05.2021].
7) Hayakawa, K. and Mukunoki, H. (2021). The impact of COVID-19 on international trade: Evidence from the first shock. *Journal of the Japanese and International Economies*, 60, 101135.
8) International Labour Organization - ILO, (2020). *ILO Web page*. [online] Available at: https://www.ilo.org/actemp/publications/WCMS_748499/lang--en/index.htm [Accessed 11.05.2021].

9) OECD, (2020). *E-commerce in the times of COVID-19.* [online] Available at: https://www.oecd.org/coronavirus/policy-responses/e-commerce-in-the-time-of-covid-19-3a2b78e8/ [Accessed 11.05.2021].
10) Vidya, C. T. and Prabheesh, K. P. (2020). Implications of COVID-19 pandemic on the global trade networks. *Emerging Markets Finance and Trade*, 56(10), pp. 2408-2421.

DETERMINANTS OF R&D INVESTMENT IN PHARMACEUTICAL AND BIOTECHNOLOGY COMPANIES

MIHAELA CUREA
Alexandru Ioan Cuza University of Iași
Iași, Romania
mihaela.curea@feaa.uaic.ro

MARILENA MIRONIUC
Alexandru Ioan Cuza University of Iași
Iași, Romania
marilena@uaic.ro

Abstract
Corporate research and development (R&D) investment is typically portrayed as the main engine for long-term economic growth. In this context, it comes as no surprise that academic interest in the driving factors of R&D is on the rise. However, the results remain unclear. This paper empirically scrutinizes some of the potential determinants of R&D behaviour in European pharmaceutical and biotechnology companies. We focus on the internal factors that may shape R&D decisions, namely firm size, profitability, leverage and current loss. In addition, we seek to disentangle the puzzling relation between foreign direct investment (FDI) inflows and R&D investment. The analysis is based on a longitudinal dataset comprising European listed firms over a time span of 10 years (2010-2019). Secondary data concerning FDI and firm-level variables were extracted from the World Development Indicators (WDI) database and Refinitiv Eikon database. We employ a fixed effects model (FEM) where R&D investment is seen as a function of several firm-specific factors and FDI. Collectively, our findings indicate that firm size, leverage, current loss and profitability affect the R&D decision of pharmaceutical and biotechnology companies. In line with our expectations, profitability and leverage are negatively associated with R&D expenditures. Evidence also shows that large companies and loss companies are more prone to undertake R&D activities as such projects are risky, and their impact is time-lagged. Regarding FDI, we fail to provide a clear picture since no significant influence on R&D is found. Various robustness checks lend further support to our findings. As pharmaceutical and biotechnology firms are traditionally replete with R&D, our study can complement the extant literature and deepen our understanding of the factors that are likely to drive R&D. Therefore, this research could be a useful aid for decision-makers at both national and company level.

Keywords: *R&D expenditures; R&D investment; innovation; pharmaceutical industry; biotechnology.*
JEL Classification: O32, E22, M41

1. INTRODUCTION

Research and development (R&D) investment is widely recognised as being a powerful catalyst for fuelling long-term economic growth (Leogrande, Massaro and Galiano, 2020; Sasidharan, Jijo Lukose and Komera, 2015) fostering innovation (Ginesti *et al.*, 2021). In the face of an ever-increasing global technological race, more and more companies become aware of the role of R&D in enhancing their competitive power in the global market. Not surprisingly, a growing body of literature has scrutinized the factors that may be at the root of R&D investment. However, there is still some controversy surrounding the key drivers of R&D.

The present paper aims to evaluate the influence of internal factors and foreign direct investment (FDI) on R&D behaviour. Our investigation focuses on a sample of European listed entities and uses panel data methodology. The pharmaceutical and biotechnology & medical research industries provide a good setting to explore the key drivers of R&D investment. Firstly, these industries abound in R&D. As highlighted by the 2020 EU Industrial R&D Investment Scoreboard (European Commission, 2020), the health sector represents one of the top investors in terms of R&D. Second, the survival of the pharmaceutical & medical research industries is virtually inconceivable in the absence of R&D activities. In an increasingly competitive business environment, these companies need to continuously innovate in order to keep up with cutting-edge scientific advances and stay competitive (Tyagi, Nauriyal and Gulati, 2018).

The remainder of the article is organised as follows. Section 2 provides a theoretical background and outlines empirical expectations. Section 3 includes details regarding sample selection, measurement of variables and model specification, while section 4 presents the regression results and reports the robustness checks. Some conclusions are drawn in the final section.

2. LITERATURE REVIEW AND EMPIRICAL EXPECTATIONS

R&D investments occupy a pivotal role in economic growth (Leogrande, Massaro and Galiano, 2020). In this context, it comes as no surprise that the investigation of the drivers of R&D behaviour has become the focal point of several papers. Broadly speaking, the economic literature pinpoints internal or firm-specific factors (Neves and Branco, 2020) and external factors (Pamukçu and Utku-İsmihan, 2009), concerning institutional features (Alam, Uddin and Yazdifar, 2019), government R&D policies (Becker, 2013) or spillovers from foreign companies (Khachoo and Sharma, 2017). Our study focuses on the internal factors that may shape R&D decisions since their controllability is considered greater (Lai, Lin and Lin, 2015). We also aim to resolve the puzzling relation between FDI and R&D behaviour. These factors and their expected impact on R&D efforts are presented below.

Profitability is listed as one of the driving factors of R&D behaviour (Lai, Lin and Lin, 2015) and subjected to empirical scrutiny. Previous papers spell an ambiguity in this respect. Some studies (such as Fishman and Rob, 1999; Pradhan, 2002) argue in favour of a positive impact of profitability on R&D decisions. Pamukçu and Utku-İsmihan (2009) substantiate these findings and draw our attention to the uncertainty characteristic of this type of investment. As such, the higher the profit, the greater the chance of undertaking R&D activities. Another strand of literature reports a negative or no association between profitability and subsequent investments in research and development, contrary to the "Schumpeterian" hypothesis. Using a panel vector autoregression model, Coad and Rao (2010) fail to find support for a strong link between profitability and R&D decisions for US manufacturing entities. This has led authors to highlight the importance of the government initiatives that are likely to be conducive to fostering private R&D. Lee (2018) reports an insignificant relationship, based on a longitudinal dataset of pharmaceutical and biotechnology companies from Korea spanning 12 years (1990–2012). More recent evidence (Neves and Branco, 2020; Wasiluk and Białek-Jaworska, 2020) shows a negative relationship between the two constructs. Given this lack of clear-cut findings, the hypothesis can be articulated as follows:

H1: Profitability is associated with R&D investment.

Firm size is considered of paramount importance in R&D activities as large firms possess the technology to seize opportunities (Pamukçu and Utku-İsmihan, 2009), the resources to engage in this type of project (Kor, 2006) and take advantage of the returns (Ginesti *et al.*, 2021; Neves and Branco, 2020). The first mention of the positive relationship between company size and innovation has its origin in Schumpeterian's seminal work (Pradhan, 2002). In this vein, several researchers (García-Quevedo, Pellegrino and Vivarelli, 2011; Lai, Lin and Lin, 2015; Radhakrishnan *et al.*, 2017) have shown that a large firm is more willing to carry out R&D because, by nature, such activities require a long term horizon (Sun, Lee and Phan, 2019), financial resources (Chrisman and Patel, 2012) and imply considerable risks (Lall, 1992; Sun, Lee and Phan, 2019; Wasiluk and Białek-Jaworska, 2020). As we all know, the outcome of innovative activities is unpredictable (Kim, Kim and Lee, 2008), which makes it difficult for small firms to make an investment. Moreover, Czarnitzki and Toole (2013) state that large companies benefit from economies of scope and can, therefore, afford to invest in R&D. Nevertheless, some studies (Kumar and Aggarwal, 2005; Tyagi, Nauriyal and Gulati, 2018) tip the scale in favour of a non-linear relation between company size and R&D behaviour. This could be explained by the fact that large firms enjoy a strong market position, and managers are less willing to undertake actions that may challenge the *status quo* (Barker and Mueller, 2002). In view of these inconclusive findings, we pose the following hypothesis:

H2: Firm size is associated with R&D investment.

The probability of implementing innovative activities is deeply impacted by the financial resources available (Lai, Lin and Lin, 2015). Kim, Kim and Lee (2008) underline that increased organizational resources allow companies to enjoy financial autonomy and provide them with the requisite resources for experimentation and risk-taking, thereby facilitating R&D efforts. Sometimes, companies have to resort to external funds to finance their activities, which results in a slump in R&D. Of relevance here is the research conducted by Hall (1992). Using a panel of US companies, the author concludes that companies rely on debt to fund physical investments, but this is not applicable to intangible investments. An inverse relationship between leverage and R&D is found in the case of R&D intensive companies, motivated by the risky nature of innovative activities. This result is borne out by a number of empirical studies. For example, Chiao (2002) provides evidence that, in science-driven businesses, R&D is negatively associated with current debt. Similarly, Min and Smyth, (2016) infer that leverage is inversely related to R&D efforts, based on a longitudinal dataset comprising all Korean listed companies over the period 2007-2012. As Wasiluk and Białek-Jaworska (2020) emphasize, indebted companies may face a liquidity crisis and may lack funds for engaging in R&D. Therefore, an increase in debt is followed by a drop in R&D investment. In light of this evidence, we state the following hypothesis:

H3: Leverage is negatively related to R&D investment.

Building on the precepts of The Behavioral Agency Model, Chrisman and Patel (2012) suggest that R&D decisions are shaped by choice framing and loss aversion. In other words, when choices or events are framed in a negative way, as a loss, managers tend to join risky projects to raise the chances of a positive outcome (Sun, Lee and Phan, 2019). The article by Darrough and Ye (2007) heads in this direction revealing that loss firms are, overall, more R&D intensive than profit companies. Furthermore, companies with larger losses are inclined to be even more R&D intensive. Of particular interest is that a large number of pharmaceutical and biotech companies report losses and also devote considerable efforts to developing new drugs, as noted by the authors. A recent study by Fedyk and Khimich (2018) supports the view that companies that experience losses tend to over-invest in research and development in an attempt to impress investors. Based on these findings, it is reasonable to expect a positive relation:

H4: Current loss is positively associated with R&D investment.

Foreign direct investment (FDI) is often portrayed by the economic literature as a powerful engine of industrial progress and innovation (Wang *et al*., 2016) and a major channel of technology transfer (Manyuchi, 2016). It is widely recognized as a vehicle that facilitates the indirect transfer of knowledge (Liu and Zou, 2008). It has been argued that the presence of foreign companies can encourage domestic companies to expand R&D investments (Li and Hu, 2013). As highlighted by Caves (1974), local firms are challenged to stay competitive and invest in innovative projects in order to preserve their market share. Nevertheless, the findings regarding the influence of FDI upon R&D efforts are contrasting (Tajaddini and Gholipour, 2020). Using China as a research setting, Fu (2008) shows that foreign direct investment can play an important part in improving the regional innovation capacity. Similarly, AlAzzawi (2012) proves that FDI exerts a positive influence on domestic innovation, proxied by new patents. In line with this, Khachoo and Sharma (2017) demonstrate that FDI entry has a meaningful role in shaping R&D decisions. Conversely, some papers indicate a negative or insignificant relationship. For instance, Sasidharan and Kathuria (2011) focus on the influence of FDI on R&D behaviour but do not provide a clear picture about it. Their analysis is based on a longitudinal dataset of 1,843 Indian manufacturing entities spanning 12 years (1994-2005). Clarke (2001) detects a negative influence of FDI on R&D, a result that is robust across different samples. This ambiguity may derive from differences between methodologies and different levels of absorptive capacity of the local firms (Liu and Zou, 2008). Therefore, based on these findings, we avoid specifying the expected sign *a priori*:

H5: FDI is associated with R&D investment.

3. METHODOLOGY

3.1 Sample and variables

The present paper aims to analyse the key factors of influence on R&D expenditures in the context of European pharmaceutical and medical research companies over a time span of 10 years (2010-2019). To empirically test the hypotheses outlined earlier, we used data extracted from the Refinitiv Eikon database. We limit the sample to two R&D-intensive industries, namely pharmaceuticals and medical research. The initial sample included 370 firms listed in Europe. To ensure the reliability of the results, two filters were applied. We excluded 154 companies due to lack of information for our variables of interest. Next, we removed firms that did not report positive values of R&D expenditures for five years consecutive or more. The final sample comprises 1,510 firm-year observations. Secondary data concerning foreign direct investment was retrieved from the World Development Indicators (WDI) database. Therefore, our study uses unbalanced panel data for 173 European firms covering the period from 2010 to 2019. Data analysis was performed using eViews 10.

In our model, we use R&D expenditures as a dependent variable. Consistent with a wealth of literature on innovation (Chen, Leung and Evans, 2016; Lee and Hwang, 2003), we chose the natural logarithm of R&D expenditures as a proxy for R&D investment. As such, we capture a company's effort to create new products and services with the aim of obtaining a competitive advantage. The natural logarithm transformation is applied because our data is right-skewed. In addition, the transformation allows us to analyse the rate of change and enhances the interpretation and comparability of the results.

As explanatory variables, we use several factors that may influence the probability of an entity undertaking R&D activities, defined as follows. Leverage is proxied by debt ratio, calculated by dividing a company's debt by its total assets (Ginesti *et al.*, 2021; Sun, Lee and Phan, 2019; Xia and Liu, 2021). Traditionally, the number of employees (Filipescu and Cázares, 2012; Lee and Marvel, 2009) or total assets (Ginesti *et al.*, 2021; Sun, 2015; Tyagi, Nauriyal and Gulati, 2018; Xia and Liu, 2021) are used for measuring size. In our study, the natural logarithm of total assets serves as a proxy for firm size. As far as profitability is concerned, we opted for return on equity (ROE). Loss is a dummy variable, which takes the value 1 if operating income is negative and 0 otherwise. FDI represents the net inflows of investment made to establish a lasting interest (*i.e.* at least 10% of the voting power) in a foreign company, divided by GDP. Table 1 offers a synoptic view of our independent variables.

Table 1. Independent variables

Variable	Symbol	Description	Data source	Expected impact
Leverage	Debt_ratio	debt/ total assets	computed by authors, based on data from Refinitiv Eikon database	-
Size	lnTA	ln(total assets)	Refinitiv Eikon database	+/-
Profitability	ROE	return on equity	Refinitiv Eikon database	+/-
Loss	LOSS	equals to 1 if operating income is negative and 0 otherwise	computed by authors, using data from Refinitiv Eikon database	+
Foreign direct investment	FDI	net inflows (% of GDP)	World Bank, WDI	+/-

Source: authors' own elaboration.

3.2 Model

Our study employs a quantitative approach to examine the drivers of R&D decisions, using a longitudinal dataset comprising European companies over the period 2010-2019. According to the Hausman Test, the fixed effects model (FEM) is favoured over its random counterpart, since the null hypothesis is rejected. We add firm fixed effects, widely used by the researchers that explore the impact of different factors, especially internal ones, on investment decisions (Sun, Lee and Phan, 2019). Pennetier (2015) state that cross-section fixed effects analysis has the advantage of reducing potential estimation biases ascribable to unobserved time-invariant R&D-related differences across companies, *inter alia*, differences in terms of R&D abilities and management. Following Liu *et al*. (2021), we also add year fixed effects to control for any unobserved effects due to aggregate specific investment shocks, which are common to all companies like fluctuations in the global economy. We estimate panel regression models where R&D expenditures are seen as a function of several firm-specific factors and FDI, as mentioned above. The general form of our model is depicted in equation (1):

$$lnR\&Dexp_{i,t} = \beta_0 + \beta_1 ROE_{i,t} + \beta_2 lnTA_{i,t} + \beta_3 Debt\_ratio_{i,t} + \beta_4 Loss_{i,t} + \beta_5 FDI_{i,t} + \tau_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

Where $lnR\&Dexp_{i,t}$ denotes the dependent variable – R&D expenditures reported by firm i in year t; β_0 – intercept; ROE – return on equity; lnTA – total assets; Debt_ratio - firm's debt divided by total assets; Loss – equals to 1 if operating income is negative and 0 otherwise; FDI - foreign direct investment divided by GDP; τ_i – is the firm fixed effects; λ_t – captures the year fixed effects, and $\varepsilon_{i,t}$ – the error term.

4. RESULTS AND DISCUSSIONS

4.1 Descriptive statistics

The main descriptive statistics of our variables (mean, standard deviation) are presented in Table 2. To gain a deeper insight into the dataset, we provide statistics for the global sample and for the two industries, pharmaceuticals and biotechnology & medical research, respectively. Out of 173 firms, 75 belong to the pharmaceutical industry.

Table 2. Descriptive statistics

Variables	Global sample		Pharmaceutical firms		Biotechnology&Medical research firms	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
lnR&Dexp	16.374	2.2485	17.049	2.7919	15.819	1.4587
Debt_ratio	0.1820	0.4115	0.2041	0.2898	0.1638	0.4889
lnTA	18.495	2.4945	19.943	2.5121	17.302	1.7330
LOSS	0.6437	0.4791	0.3490	0.4770	0.8865	0.3174
ROE	-0.6363	3.4591	-0.2312	3.0648	-0.9897	3.7359
FDI	3.1074	7.7318	3.1843	8.1116	3.0440	7.4086

Source: authors' processing.

It turns out that pharmaceutical firms are bigger and more indebted than those operating in the biotechnology and medical research industry, as we can see from the mean value of assets and debt ratio. With respect to R&D efforts, one may note that pharmaceutical companies are more engaged in innovative activities as compared to biotechnology & medical research firms. Nonetheless, it can be observed that all firms covered in the sample, irrespective of the industry, allocate important funds for R&D. This is consonant with the observations made by the European Commission. As highlighted by the 2020 EU Industrial R&D Investment Scoreboard (European Commission, 2020), EU companies contribute to 20% of the global R&D, and the health sector is among the top investors. The negative value of return on equity shows that, on average, firms report negative net income. Finally, the mean value of FDI is 3,11% for the global sample, very similar to the mean of each industry. As expected, we have similar results across samples, and there are no marked differences between the two industries.

4.2 Regression analysis

As stated previously, our research scrutinizes the determinants of R&D activity using a longitudinal dataset comprising European pharmaceutical and biotechnology firms over the period 2010-2019. Results of panel fixed effect regression are presented in Table 2 [Reg. (1)]. The predictive accuracy of the FEM model is high (Adj R^2=92,54%). The significance of independent variables is discussed below according to the theoretical background and the hypotheses formulated.

The relationship between profitability and R&D expenditures is observed to be non-linear for the pharmaceutical and biotechnology industry. ROE adversely affects R&D behaviour and is significant at 1%. Holding other factors fixed, a 10% increase in the return on equity leads to a 19.8% fall in R&D expenditures. As extensively discussed in previous sections, this relation has been subject to some degree of controversy. The polarised views may derive from dissimilarities between analysed states or industries, different research methods, time frame under consideration or R&D accounting treatment (capitalisation or expensing). Therefore, our result lies in contrast to those obtained by Pradhan (2002) and Fishman and Rob (1999) but confirms the findings of Neves and Branco (2020) and Wasiluk and Białek-Jaworska (2020), who argue in favour of a negative relationship between the two variables. The latter attribute the result to the fact that innovative activities are not only risky but also time-consuming, which means that they can bear fruit in the long run, yet the outcome is uncertain. Consequently, it is not surprising that ROE is negatively associated with R&D activity, particularly when the project is still in its embryonic stages and requires funds, which may result in lower profitability and even incur losses.

Table 2. Impact of internal factors and FDI on R&D investment

Dependent variable: lnR&Dexp				
	Reg. (1)	Reg. (2)	Reg. (3)	Reg. (4)
ROE	-0.0198*** (0.0066)	-0.0126* (0.0069)	-0.0238*** (0.0085)	-0.0237 (0.0406)
lnTA	0.4299*** (0.0324)	0.4134*** (0.0497)	0.3355*** (0.0419)	0.5933*** (0.0711)
Debt_ratio	-0.5641*** (0.1639)		-0.8285*** (0.2334)	-0.6992*** (0.2579)
LOSS	0.2626*** (0.0716)	0.1703** (0.0860)	0.7226*** (0.1366)	0.0936 (0.0774)
FDI	0.0010 (0,0027)	-0.0003 (0,0032)	0.0063 (0.0054)	0.0006 (0.0030)
lnDebt		-0.0529*** (0.0170)		
N	1,353	967	627	690
Fixed effects	yes (year/firm)	yes (year/firm)	yes (year/firm)	yes (year/firm)
F-test	93.20	76.77	17.73	138.82
Prob F-test	0.0000	0.0000	0.0000	0.0000
R-squared	0.9355	0.9409	0.8030	0.9653
Adjusted R-squared	0.9254	0.9287	0.7577	0.9583

Notes: Standard errors between parentheses; *significant to 10%; **significant to 5%; and ***significant to 1%.

Source: authors' processing

Firm size, proxied by total assets, positively influences the propensity to undertake R&D activities. This result is consonant with the strand of papers that argue that large firms are inclined to spend more on R&D (García-Quevedo, Pellegrino and Vivarelli, 2011; Lai, Lin and Lin, 2015; Radhakrishnan *et al.*, 2017) but runs counter to the studies that infer a negative connection between company size and R&D expenditures, supported by the desire to preserve the *status quo* (Kumar and Aggarwal, 2005; Tyagi, Nauriyal and Gulati, 2018). Table 3 clearly shows that, holding other factors fixed, a rise in firm size significantly increases R&D, thus validating the "Schumpeterian" hypothesis. Several reasons account for this outcome. First, it is well known that uncertainty is intrinsic to R&D, and financial capital plays a major role (Tajaddini and Gholipour, 2020). Second, the impact of R&D efforts is time-lagged (Schimke and Brenner, 2014), which serves as a deterrent to small firms. Czarnitzki and Toole (2013) corroborate the same ideas and further argue that large companies benefit from economies of scope that open the way to growth opportunities.

Regarding the leverage, Table 3 highlights that the debt ratio adversely affects R&D behaviour. More specifically, a 1% increase in debt ratio leads to a 0.56% drop in R&D investment, *ceteris paribus*. The result is consistent with our prediction and with previous studies (Chiao, 2002; Hall, 1992; Min and Smyth, 2016) that reported a negative relationship between the two variables. It is noteworthy that fixed investments and R&D investments appear to operate on different "frequencies". As underlined by Ughetto (2007), debt is not a good option for financing R&D activities, particularly in view of strategic reasons. Unlike fixed investments, innovative projects imply sensitive information. Therefore, managers are reluctant to disclose such information to lenders since this could entail serious repercussions on the firm. Our result is hardly surprising and merely confirms that an increase in debt ratio translates into a reduction in R&D expenditures.

Pertaining to our dummy variable, it is evident that current loss is positively correlated with R&D expenditures. The coefficient is significant at the 1% confidence level, thereby supporting our hypothesis. As anticipated, loss firms are more inclined to carry out this type of project. Our findings appear to be well substantiated by Darrough and Ye (2007), who claim that loss companies tend to be more R&D intensive, and pharmaceutical & biotech industry is a good case in point. A recent study conducted by Fedyk and Khimich (2018) concurs with our findings and shows that loss companies are more prone to over-invest in R&D intending to create a positive public image. An alternative explanation could be that R&D projects require a substantial period of time to become economically effective (Schimke and Brenner, 2014). Thus, in the first years, R&D investment will inevitably be associated with losses.

Turning our attention to the remaining results, we can notice that the hypothesised positive connection between FDI and R&D expenditures is not significant. The results of the regression do not allow us to confirm the expectations, which suggests that R&D behaviour in pharmaceutical and biotechnology firms is not influenced by FDI. Contrary to the insights from the literature (AlAzzawi, 2012; Fu, 2008; Khachoo and Sharma, 2017; Tajaddini and Gholipour, 2020) stating that FDI acts as a strong incentive for engaging in R&D activities, no significant influence is found for our sample. However, our result is similar to the findings of Sasidharan and Kathuria (2011), who fail to detect a link between FDI and R&D behaviour. One possible conjecture as to why FDI bears no impact on R&D is that our sample consists of firms with limited absorptive capacity. According to Liu and Zou (2008), FDI is likely to enhance local firms' R&D performance through knowledge resource spillovers involving different mechanisms (the demonstration effect, human capital mobility or the competition effect), but this implies a certain minimum level of absorptive capacity.

4.3 Robustness checks

As a final exercise, we perform two robustness checks, which are presented hereafter. The first test uses an alternative measure for our independent variable - leverage. The debt ratio is replaced by the natural logarithm of debts. As shown in Table 3 [Reg. (2)], our results are quite robust in terms of both magnitudes and confidence levels. To reinforce our results, split or additional samples could also be used. Considering that firm size exerts a significant influence on R&D, we further divide the sample into small and large companies, taking into account the median of the number of employees. We replicate the baseline model for these size classes separately. Partitioning the sample by the number of employees, we observe that for the sub-sample of small firms [Reg. (3)], no salient changes in the signs of the estimated coefficients occur. When it comes to the sub-sample of large firms [Reg. (4)], loss and profitability are not statistically significant, suggesting that these companies enjoy a strong market position, and their R&D investments are not associated with current loss or return on equity. However, the statistical test indicates similar profiles of coefficients for the other explanatory variables. The interpretation we provided earlier for the main findings remains largely unchanged**.** Overall, the results of the robustness tests lend strong support to our findings.

5. CONCLUSIONS

Our paper extends this growing literature and explores the determinants of R&D activity for a longitudinal dataset of 173 European firms. Several papers have looked into this issue, but there has been no empirical consensus. Taken together, our findings indicate that firm size, leverage, loss and profitability affect the R&D behaviour of pharmaceutical and biotechnology companies. While firm size and loss exert a positive and significant influence on R&D investment, profitability and leverage adversely affect R&D. Pertaining to FDI, the results do not allow us to provide a clear picture of the link between FDI and R&D activities, as they show that the hypothesised positive relationship is not statistically significant. This implies that R&D decision is not influenced by FDI in the case of pharmaceutical and biotechnology companies. Various robustness checks provide further support for our findings.

This study adds to earlier literature and seeks to broaden current knowledge about the key drivers of R&D behaviour in the context of European pharmaceutical and medical research companies. Moreover, our paper sheds light on the major contribution of R&D to long-term growth. Thereby, our study has gone some way towards improving our understanding of R&D determinants and may be interesting for researchers, concerned with analysing R&D decisions and managers, who should focus more on R&D activities to expand their companies' survival chances and stay competitive. At the same time, we believe that the study may increase the awareness of the governments on the significance of private R&D and the need for dedicated policies.

The main limitations of our study, which pave the way for future research, are related to the R&D measure, the external variable considered in our empirical model and the sample analysed since listed firms are subject to greater scrutiny.

References

1) Alam, A., Uddin, M. and Yazdifar, H. (2019). Institutional determinants of R&D investment: Evidence from emerging markets. *Technological Forecasting and Social Change*, 138(1), pp. 34–44.
2) AlAzzawi, S. (2012). Innovation, productivity and foreign direct investment-induced R&D spillovers. *Journal of International Trade and Economic Development*, 21(5), pp. 615–653.
3) Barker, V. L. and Mueller, G. C. (2002). CEO characteristics and firm R&D spending. *Management Science*, 48(6), pp. 782–801.
4) Becker, B. (2013). The Determinants of R&D Investment: A Survey of the Empirical Research. *Economics Discussion Paper Series 2013_09.* [online] Available at: https://www.lboro.ac.uk/departments/sbe/RePEc/lbo/lbowps/Becker_09.pdf [Accessed 01.03.2021].
5) Caves, R. E. (1974). Multinational Firms, Competition, and Productivity in Host-Country Markets. *Economica*, 41(162), pp. 176-193.
6) Chen, J., Leung, W. S. and Evans, K. P. (2016). Are employee-friendly workplaces conducive to innovation? *Journal of Corporate Finance*, 40(1), pp. 61–79.
7) Chiao, C. (2002). Relationship between debt, R and D and physical investment, evidence from US firm-level data. *Applied Financial Economics*, 12(2), pp. 105–121.
8) Chrisman, J. J. and Patel, P. C. (2012). Variations in R&D investments of family and nonfamily firms: Behavioral agency and myopic loss aversion perspectives. *Academy of Management Journal*, 55(4), pp. 976–997.
9) Clarke, G. R. G. (2001). How institutional quality and economic factors impact technological deepening in developing countries. *Journal of International Development*, 13(8), pp. 1097–1118.
10) Coad, A. and Rao, R. (2010). Firm growth and R and D expenditure. *Economics of Innovation and New Technology*, 19(2), pp. 127–145.
11) Czarnitzki, D. and Toole, A. A. (2013). The R&D Investment-Uncertainty Relationship: Do Competition and Firm Size Matter ? *EW - Centre for European Economic Research Discussion Paper No. 08-013.* [online] Available at: https://ssrn.com/abstract=1103467 [Accessed 15.03.2021].
12) Darrough, M. and Ye, J. (2007). Valuation of loss firms in a knowledge-based

economy. *Review of Accounting Studies*, 12(1), pp. 61–93.
13) European Commission, (2020). *EU Industrial R&D Investment Scoreboard.* [online] Available at: https://op.europa.eu/en/publication-detail/-/publication/73e624aa-406c-11eb-b27b-01aa75ed71a1/language-en [Accessed 01.04.2021].
14) Fedyk, T. and Khimich, N. (2018). R&D investment decisions of IPO firms and long-term future performance. *Review of Accounting and Finance*, 17(1), pp. 78–108.
15) Filipescu, D. A. and Cázares, C. C. (2012). *Determinants and consequences of R&D strategy selection*. [online] Available at: http://dx.doi.org/10.4018/978-1-61350-165-8.ch023 [Accessed 01.04.2021].
16) Fishman, A. and Rob, R. (1999). The Size of Firms and R&D Investment. *International Economic Review*, 40(4), pp. 915–931.
17) Fu, X. (2008). Foreign direct investment, absorptive capacity and regional innovation capabilities: Evidence from China. in *Oxford Development Studies* [online] Available at: http://dx.doi.org/10.1080/13600810701848193 [Accessed 01.04.2021].
18) García-Quevedo, J., Pellegrino, G. and Vivarelli, M. (2011). R&D Drivers in Young Innovative Companies*.* *IZA Discussion Paper No. 6136*. [online] Available at: https://ssrn.com/abstract=1965153 [Accessed 19.03.2021].
19) Ginesti, G., Spanò, R., Ferri, L. and Caldarelli, A. (2021). The chief financial officer (CFO) profile and R&D investment intensity: evidence from listed European companies. *Management Decision*. [online] Available at: https://doi.org/10.1108/MD-05-2020-0650 [Accessed 05.04.2021].
20) Hall, B. H. (1992). Investment and Research and Development at the Firm Level: Does the Source of Financing Matter? *National Bureau of Economic Research Working Paper Series*, *No. 4096*. [online] Available at: https://www.nber.org/papers/w4096 [Accessed 20.03.2021].
21) Khachoo, Q. and Sharma, R. (2017). FDI and incumbent R&D behavior: evidence from Indian manufacturing sector. *Journal of Economic Studies*, 44(3), pp. 380–399.
22) Kim, H., Kim, H. and Lee, P., M. (2008). Ownership structure and the relationship between financial slack and R&D investments: Evidence from Korean Firms. *Organization Science*, 19(3), pp. 404–418.
23) Kor, Y. Y. (2006). Direct and interaction effects of top management team and board compositions on R&D investment strategy. *Strategic Management Journal*, 27(11), pp. 1081–1099.
24) Kumar, N. and Aggarwal, A. (2005). Liberalization, outward orientation and in-house R&D activity of multinational and local firms: A quantitative exploration for Indian manufacturing. *Research Policy*, 34(4), pp. 441–460.
25) Lai, Y. L., Lin, F. J. and Lin, Y. H. (2015). Factors affecting firm's R&D investment decisions. *Journal of Business Research*, 68(4), pp. 840–844.
26) Lall, S. (1992). Technological capabilities and industrialization. *World Development*, 20(2), pp. 165–186.
27) Lee, I. H. and Marvel, M. R. (2009). The moderating effects of home region orientation on R&D investment and international SME performance: Lessons from Korea. *European Management Journal*, 27(5), pp. 316–326.
28) Lee, M. H. and Hwang, I. J. (2003). Determinants of corporate R&D investment: An empirical study comparing Korea's IT industry with its non-IT industry. *ETRI*

Journal, 25(4), pp. 258–265.
29) Lee, S. (2018). Growth, profits and R&D investment. *Economic Research-Ekonomska Istrazivanja*, 31(1), pp. 607–625.
30) Leogrande, A., Massaro, A. and Galiano, A. M. (2020). The Impact of R & D Investments on Corporate Performance in European Countries. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, 4(7), pp. 186-201.
31) Li, Y. and Hu, J.-L. (2013). R&D, FDI, and Efficiencies of Small and Medium Sized Firms. *Journal of Management Research*, 13(3), pp. 163–179.
32) Liu, D., Li, Z., He, H. and Hou, W. (2021). The determinants of R&D smoothing with asset sales: Evidence from R&D-intensive firms in China. *International Review of Economics and Finance*. [online] Available at: https://doi.org/10.1016/j.iref.2021.03.013 [Accessed 20.03.2021].
33) Liu, X. and Zou, H. (2008). The impact of greenfield FDI and mergers and acquisitions on innovation in Chinese high-tech industries. *Journal of World Business*, 43(3), pp. 352–364.
34) Manyuchi, A. E. (2016). Foreign direct investment and the transfer of technologies to Angola's energy sector. *Africa Spectrum*, 51(1), pp. 55–83.
35) Min, B. S. and Smyth, R. (2016). How does leverage affect R&D intensity and how does R&D intensity impact on firm value in South Korea? *Applied Economics*, 48(58), pp. 5667–5675.
36) Neves, M. and Branco, J. (2020). Determinants of R&D on European high technology industry: panel data evidence. *Management Research*, 18(3), pp. 285–305.
37) Pamukçu, T. and Utku-İsmihan, F. M. (2009). Determinants of R & D Decisions of Firms in Developing Countries the Case of Turkey. *EconAnadolu 2009: Anadolu International Conference in Economics.* [online] Available at: https://www.academia.edu/22489035/ [Accessed 25.03.2021].
38) Pennetier, C. (2015). R&D Spending: Dynamic or Persistent ? *INSEAD Working Paper No. 2018/03/TOM*. [online] Available at: https://ssrn.com/abstract=2671828 [Accessed 23.03.2021].
39) Pradhan, J. P. (2002). Liberalization, Firm Size and R&D performance: A Firm Level Study of Indian Pharmaceutical Industry. *Journal of Indian School of Political Economy*, 14(4), pp. 647–666.
40) Radhakrishnan, S., Wang, H., Wang, K. and Zhu, Z. (2017). R&D Investment and Firm Growth: The Role of Tangible Asset Complementarity. [online] Available at: http://dx.doi.org/10.2139/ssrn.3096806 [Accessed 27.03.2021].
41) Sasidharan, S., Jijo Lukose, P. J. and Komera, S. (2015). Financing constraints and investments in R and D: Evidence from Indian manufacturing firms. *Quarterly Review of Economics and Finance*, 55, pp. 28–39.
42) Sasidharan, S. and Kathuria, V. (2011). Foreign Direct Investment and R&D: Substitutes or Complements-A Case of Indian Manufacturing after 1991 Reforms. *World Development*, 39(7), pp. 1226–1239.
43) Schimke, A. and Brenner, T. (2014). The role of R&D investments in highly R&D-based firms. *Studies in Economics and Finance*, 31(1), pp. 3–45.
44) Sun, L. (2015). R & D expenditures and future innovation: evidence from the chemical industry. *International Journal of Law and Management*, 57(5), pp. 552–560.

45) Sun, X., Lee, S. H. and Phan, P. H. (2019). Family firm R&D investments in the 2007–2009 Great Recession. *Journal of Family Business Strategy*, 10(4), pp. 1–9.
46) Tajaddini, R. and Gholipour, H. F. (2020). Economic policy uncertainty, R&D expenditures and innovation outputs. *Journal of Economic Studies*, 48(2), pp. 413–427.
47) Tyagi, S., Nauriyal, D. K. and Gulati, R. (2018). Firm level R&D intensity: evidence from Indian drugs and pharmaceutical industry. *Review of Managerial Science*, 12(1), pp. 167–202.
48) Ughetto, E. (2007). Does internal finance matter for R & D ? New evidence from a panel of Italian firms. *Innovation Studies Working Paper n. 10/2007*. [online] Available at: http://is.polito.it/working_papers.html [Accessed 21.03.2021].
49) Wang, Z., Wang, N., Cao, J. and Ye, X. (2016). The impact of intellectual capital – knowledge management strategy fit on firm performance. *Management Decision*, 54(8), pp. 1861–1885.
50) Wasiluk, D. and Białek-Jaworska, A. (2020). Determinants of corporate R&D expenditures: the role of taxes. *Central European Economic Journal*, 7(54), pp. 110–126.
51) Xia, Y. and Liu, P. (2021). The effects of bank competition on firm R&D investment: an inverted-U relationship. *Chinese Management Studies*. [online] Available at: https://doi.org/10.1108/CMS-04-2020-0126 [Accessed 02.04.2021].

SOCIO-ECONOMIC TENDENCIES ON THE BACKGROUND OF THE COVID 19 PANDEMIC CRISIS

BOGDAN FLORIN FILIP
Alexandru Ioan Cuza University of Iaşi
Iaşi, Romania
bogdan.filip@feaa.uaic.ro

Abstract
The appearance of the Covid 19 pandemic crisis two years ago determined major negative impacts on the life of the citizens and, as consequence, it has significantly impacted the functioning of the economies all over the world, rising serious concerns for all governments and forcing them to take actions against this global threat. However, while the global pandemic crisis seems to be still far from being overcome, the author of this research paper considers it should be worth to take a retrospective look over the evolution of the society on the past period of the pandemic crisis. Therefore, the study included in this study is intended to make an analysis on the socio-economic tendencies revealed during the year 2020 in several specific countries from different continents, in order to observe the differences between them and use these results as base of taking future actions towards counteracting the impacts of the pandemic crisis.
Keywords: *Covid 19; crisis; GDP; inflation; unemployment.*
JEL Classification: G21, L29, M14

1. INTRODUCTION

Even not taken very seriously after its appearance at the end of 2019, Covid 19 has become rapidly a global threat and a pandemic in the beginning and then during 2020. The new enemy, in the form of an unknown virus, capable of spreading very fast and of taking lives in a few days induced fear all over the world and changed the way of living for almost all citizens. What at first seemed only an isolated disease has transformed rapidly into a global pandemic, while humanity seemed defenseless under the attack of this virus and found that isolation or lockdown were the only effective measures to prevent its spread. These solutions led, on the other hand, to significant changes both on social and economic levels, work being performed more and more remotely and meetings between people being transferred on-line if possible. In a few weeks, the lives of hundreds of millions of people changed radically leading once more to other changes of the socio-economic climate.

However, time made possible to understand more deeply the new threat and find new solutions to counteract the pandemic, but the marks of the effects of Covid 19 on socio-economic life may last for a long time or even change our behavior forever.

Starting from this idea this paper aims to make an analysis on the way Covid 19 impacted the socio-economic life in six of the most affected countries, in terms of infection cases, each from a different continent, and to the best of our knowledge there has been made no similar studies till now.

2. LITERATURE REVIEW

While Covid 19 was for the first time acknowledged as a contagious virus at the end of 2019 and only after the beginning of 2020 it became a threat for the entire world as a pandemic, the subject regarding this virus and the consequences of the Covid 19 pandemic started to be approached in literature only from 2020, most of the studies concentrating on the medical aspects.

However, as time passed, because of the increased number of cases and especially of deaths, all around the world, that forced governments to take severe actions such as lockdowns, the impact of Covid 19 translated also in the socio-economic dimension of people's life, threatening our lives not only in terms of health, but also in terms of working conditions, productivity, or even free access and, generally, of socio-economic welfare. So, mankind found itself confronted not only with the medical crisis, but also with the specter of a severe global socio-economic crisis expected to derive from the first crisis. Therefore, on the one hand, governments had to seek solutions for both crisis and, on the other hand, the subject of Covid 19 got new dimensions within the scientific literature, more and more papers approaching the socio-economic impacts of this pandemic (Martin *et al.,* 2020; Hsiang *et al.,* 2020; Janssens *et al.,* 2021; Josephson, Kilic and Michler*,* 2021; Kassegn and Endris, 2021; De Vet *et al.,* 2021; Mofijur *et al.,* 2021).

The socio-economic impacts of Covid 19 were approached in recent literature both referring to single specific countries and to groups of countries. For instance, there can be found papers concentrating on specific countries such as India (Aneja and Ahuja, 2020), South Africa (Chitiga-Mabugu *et al.*, 2021; Muller, 2021), USA (Green and Loualiche, 2021; Salvatore, 2021; Stiglitz, 2021), Australia (O'Sullivan, Rahamathulla, and Pawar, 2020; Romano, 2020), Pakistan (Rasheed *et al*., 2021), China (Zhao, 2020; Wang and Zhang, 2021), Kenya (Janssens *et al.,* 2021) Brazil (Prates and Barbosa, 2020; Viezzer and Biondi, 2021) and so on. On the other hand, groups of countries were analyzed in terms of Covid 19 impacts in papers of several other authors. De Vet *et al.* (2021) or Van der Wielen and Barrios (2021) analyzed the case of EU, Gordon, Grafton and Steinshamn, (2021) analyzed the Nordic countries, while Jena *et al.* (2021) or Padhan and Prabheesh (2021) analyzed the major economies.

On the other hand, the social and economic impacts of Covid 19 were approached especially from limited points of view. While many papers approached food issues (Restrepo, Rabbitt and Gregory*,* 2021), others analyzed specific negative impacts reflected on inflation (Meyer, Prescott and Sheng, 2021; Padhan and Prabheesh, 2021), on GDP (Jena *et al.,* 2021, Salvatore, 2021) on public expenditures (Stiglitz, 2021), on unemployment (Sjoquist and Wheeler, 2021; Kim *et al.,* 2021; Green and Loualiche, 2021) or even on environmental issues (Mofijur *et al.,* 2021).

3. ANALYSIS OF COVID 19 EFFECTS ON SOCIO-ECONOMIC TENDENCIES

Our analysis aims to show if on the background of the Covid 19 pandemic crisis, there were observed remarkable changes in the socio-economic climate if their causes could be associated with this crisis and if there can be distinguished some specific socio-economic tendencies.

This analysis has taken into consideration some specific countries, their selection being driven especially by the fact they were some of the most affected by Covid 19 pandemic. Moreover, while the pandemic affected almost the entire world, our analysis is meant to show how the socio-economic climate evolved in countries from different continents during 2020 and on the background of this crisis. Therefore, as mentioned, we chose to analyze in this paper 6 countries, each corresponding to each specific continent affected by Covid 19 pandemic and each of them the most representative one for this situation. The countries selected to be analyzed are Italy for Europe, China for Asia, South Africa for Africa, United States of America for North America, Brazil for South America, and Australia for Oceania.

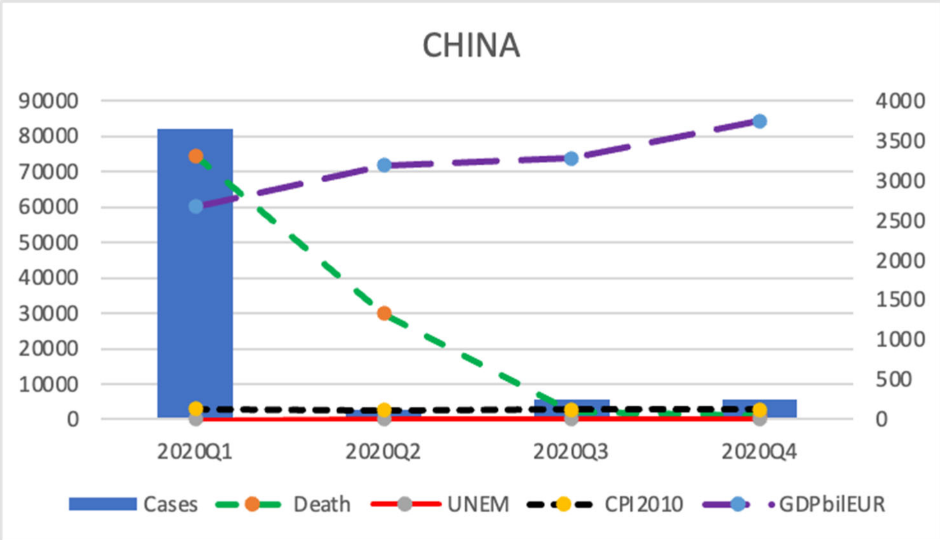
The variables considered as proxies for estimating the quality of the socio-economic climate are GDP, the Consumer Price Index (base 2010) and the unemployment rate. The data for these variables were gathered from IMF International Financial Statistics database.

On the other hand, the data used for quantifying the severity of Covid 19 impact, consist in the number of new cases and the number of death and were gathered from World Health Organization databases (WHO, 2021). While the most detailed data for the socio-economic variables were available only quarterly, we converted the daily data for Covid 19 into quarterly data, to perform the analyses on country level.

We analyze the evolution of the socio-economic indicators within the countries considered in our sample on the background of the Covid 19 pandemic as follows, starting with the countries where the pandemic has manifested first and trying to keep a chronology of its manifestation in the other countries.

As it is well known the first country that was affected by Covid 19 pandemic was China, most of the scientists admitting that the pandemic originated in this country and such an idea is also sustained by our data regarding the Covid 19 cases and deaths, visible in the figures that will follow. The evolution of the Covid 19 cases, as well of the of deaths, in China show a descending tendency as can be seen in Figure 1.

Figure 1. Socio-economic tendencies on the background of the Covid 19 pandemic in China



Source: IMF International Financial Statistics (IMF, 2021) and WHO databases (WHO, 2021)

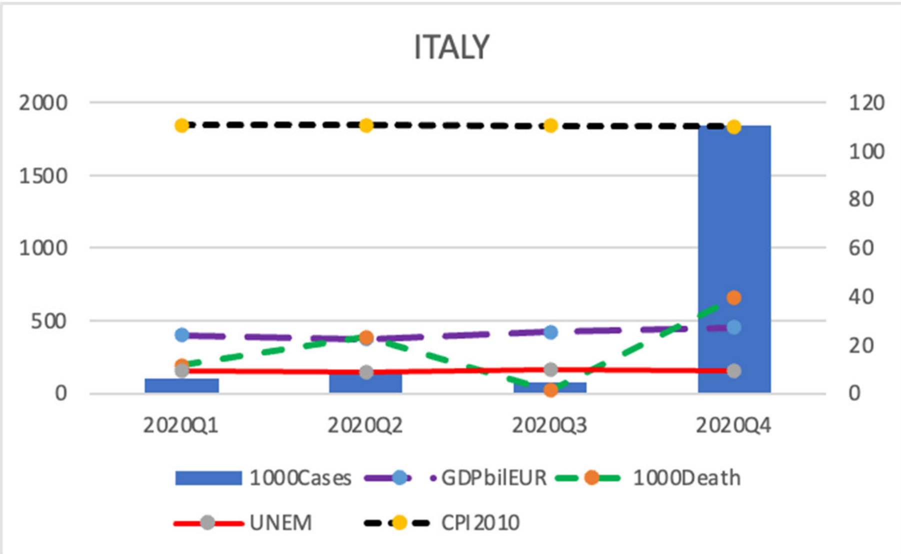
China was in 2020 the only country that registered a very rapid decrease of the number of Covid 19 cases, from 82214 cases in the first quarter to 2539 cases in the second one, 5748 cases in the third quarter and 5712 cases in the fourth one. A similar evolution, but with a continuous decreasing trend was registered also for the deaths determined by Covid 19 pandemic. From 3309 deaths in the first quarter, the number of deaths dropped to 1332 death in the second one, 98 deaths in the third quarter and only 46 deaths in the fourth one. Even there are almost permanently some doubts about the data reported by the Chinese Government, such data show that the pandemic situation in China was very well and rapidly handled and the measures taken were able to counteract very effectively this pandemic. This explains, in our opinion, also the evolution of the main socio-economic indicators, consisting in GDP, unemployment and Consumer Price Index (CPI), that appear not to be affected by the manifestation of the pandemic.

As it can be seen in figure one, while the pandemic was more and more controlled, the GDP shows a continuous ascending trend each quarter, from 2673 Billion EUR in the first quarter, to 3188 Billion EUR, 3277 Billion EUR and finally to 3750 Billion EUR, in the following quarters. Moreover, only in the first quarter of 2020 GDP was lower than in the similar quarter from previous year, while in all the other quarters it was higher. Beyond the unfortunate death cases, by becoming the most representative supplier of medical supplies and equipment, China succeeded to compensate the lower demand on other goods on foreign markets in 2020.

At the same time, CPI (base 2010) also was the highest in the first quarter (129.79), while in the rest of the quarters was at least two points below. Also, the unemployment rate remained at low values, during 2020 in China, even it could be seen a slight increase from 3.66 in the first quarter to 3.84, 4.19 and finally at 4.24 in the following quarters. Therefore, we may draw the conclusion that generally China succeeded to overcome the Covid 19 pandemic effects, and the tendency of the socio-economic climate seems to continue to be improved.

The second country known to be chronologically most affected by Covid 19 pandemic and the first one in Europe, was Italy, but even the most significant panic has manifested here in the first quarter of 2020, Figure 2 shows that the most important impact has been sensed in the fourth quarter of 2020.

Figure 2. Socio-economic tendencies on the background of the Covid 19 pandemic in Italy



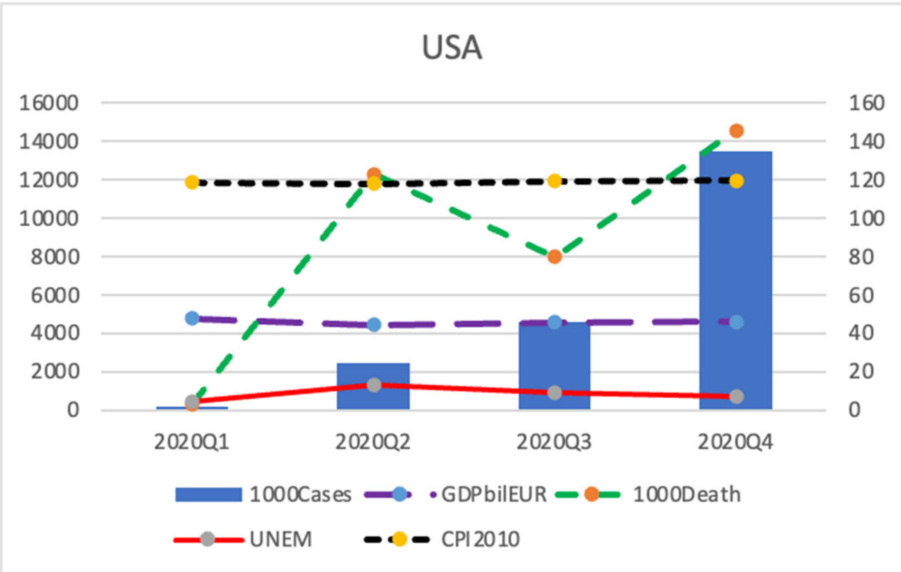
Source: IMF International Financial Statistics (IMF, 2021) and WHO databases (WHO, 2021)

The pandemic situation in Italy evolved quite opposite to the one in China, in 2020, as also shows the above representation. The number of cases raised from 101739 cases in the first quarter to 138697 cases in the second quarter and even it decreased in the third quarter to 72575 cases it exploded in the last quarter of 2020 to 1.84 million cases of Covid 19. This trend was also followed by the deaths. Thus, Italy registered 11591 deaths in the first quarter, 23153 in the second one, only 1131 deaths in third quarter, but also 39457 deaths in the fourth one.

Despite the significant changes of the pandemic during 2020, Italy succeeded to maintain quite stable the socio-economic climate. Thus, CPI (base 2010) remained almost the same during all the four quarters, even it very slightly decreased from 110.61 and 110.65 in the first two quarters to 110.40 and 110.22 in the last ones. At the same time, unemployment registered small variations from 9.2 in the first quarter, to 8.6 in the second one, raising then to 9.8 in the third quarter and decreasing back to 9.1 by the end of the year. Moreover, even if GDP was about 5% lower in 2020 than in 2019, it followed a similar trend, raising from 401.97 and 372.5 billion EUR in the first quarters to 424.11 and then to 453 billion EUR in the last quarters which shows an important capacity of resilience to the impact of Covid 19 pandemic.

While Covid 19 virus continued to spread all over the world the next most affected country was USA, which registered the highest numbers of infected people and fatalities in the world, as it can be seen in Figure 3.

Figure 3. Socio-economic tendencies on the background of the Covid 19 pandemic in USA



Source: IMF International Financial Statistics (IMF, 2021) and WHO databases (WHO, 2021)

As Figure 3 shows, USA began being affected of the pandemic effectively by the end of March 2020 and therefore the number of Covid 19 cases in the first quarter of 2020 was only of 164620. However, after that, the virus spread rapidly and the number of cases raised to 2.42 million in second quarter, 4.6 million in the third one and finally exploded to 13.45 million in the fourth quarter. At the same time, the number of deaths has been of 3170 in first quarter, but then raised rapidly to 122970 in the second one, 79858 in the third one and finally to 145592 in the fourth quarter.

During 2020, GDP has been higher in USA compared to 2019, only in the first quarter, but it decreased in all the other quarters, especially in the second quarter when it registered only 4450.5 billion EUR, compared to 4756,98 billion EUR in the first one. Next quarters showed better values of GDP, 4554.43 and 4596.21 billion EUR, yet still lower than those of the similar quarters from 2019.

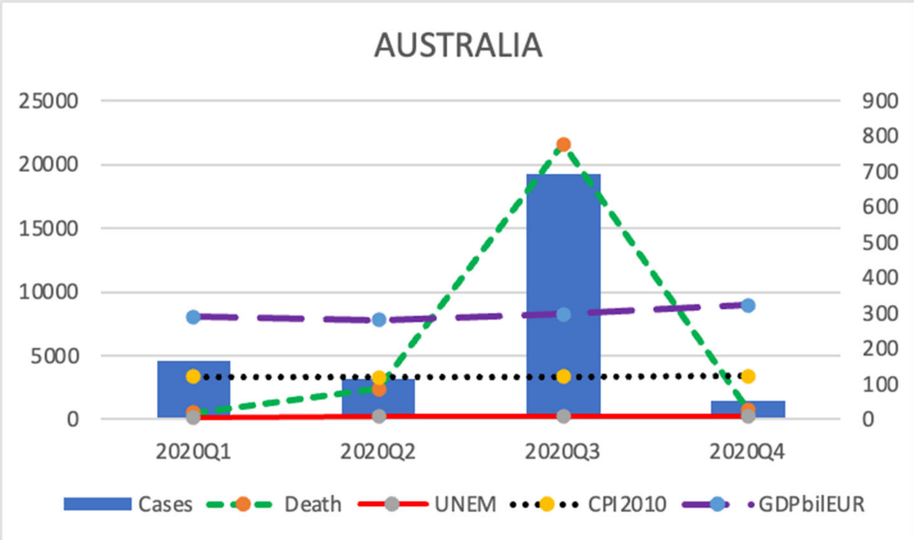
The second quarter appears to be the worse one from 2020 also in terms of unemployment which registered a very high rate of 12.87, compared to first quarter, when it was only 4.10. Moreover, in the third and fourth quarters, even the rate improved to 8.9 and 6.76, unemployment remained significantly higher than at the beginning of the year. Moreover, also CPI (base 2010) increased during 2020, from 118.44 in first quarter to 119.40 in the fourth quarter.

Therefore, as both GDP, unemployment rate and inflation trends reveal a quite important impact of the pandemic on the socio-economic climate in USA.

Another country affected chronologically by the pandemic was Australia, but compared to the other analyzed countries, Australia showed a totally different evolution, as it can be seen in Figure 4.

Unlike previous analyzed countries, Australia sensed a quite small impact of Covid 19 pandemic, both in terms of cases and of deaths, which may be due to its capacity to close its borders more simply than the other countries. Even if the number of cases remained low in the first two quarters, at only 4557, respectively 3210 cases, the third quarter brought a rapid increase to 19296 cases. However, the government reacted also rapidly, and its measures determined the decrease of the cases to only 1441 cases. The number of deaths was also significantly smaller than in other countries, the peak of 778 deaths being registered in the third quarter, after in the first and second quarters there were registered only 19, respectively 85 deaths. In the last quarter, the number of deaths decreased significantly to only 27.

Figure 4. Socio-economic tendencieson the background of the Covid 19 pandemic in Australia



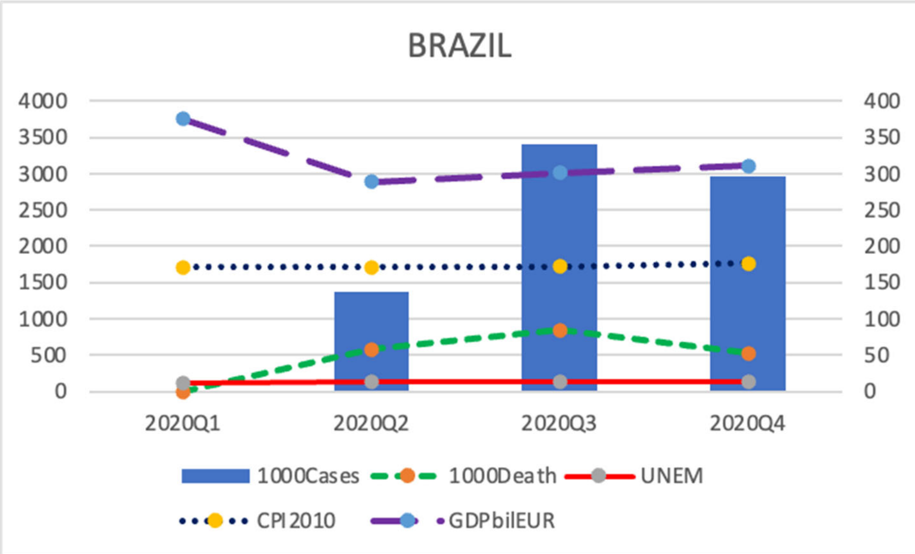
Source: IMF International Financial Statistics (IMF, 2021) and WHO databases (WHO, 2021)

The Australian economy performed worse than in 2019 only in the second quarter, when GDP decreased to 281.2 billion EUR, while in the other quarters GDP was higher. Thus, in first quarter, GDP reached 290.45 billion EUR and in the last two quarters it reached 297.49, respectively 322.93 billion EUR. At the same time, in terms of inflation CPI (base 2010) decreased from 121.33 to 119.04 and then increased slowly to 120.92 and 121.96 in the next quarters.

On the other hand, due to lockdown measures, unemployment rate increased from 5.08 in the first quarter to 7.06 in the second one and then decreased to 6.8 in the next ones. Therefore, there are good premises to consider that despite of the Covid 19 pandemic, Australia tends to maintain its socio-economic climate and there are premises to even improve it.

Another country which started later to be affected by the Covid 19 pandemic, but which was very hard struck by it, is Brazil, whose situation during 2020 is projected in Figure 5.

Figure 5. Socio-economic tendencies on the background of the Covid 19 pandemic in Brazil



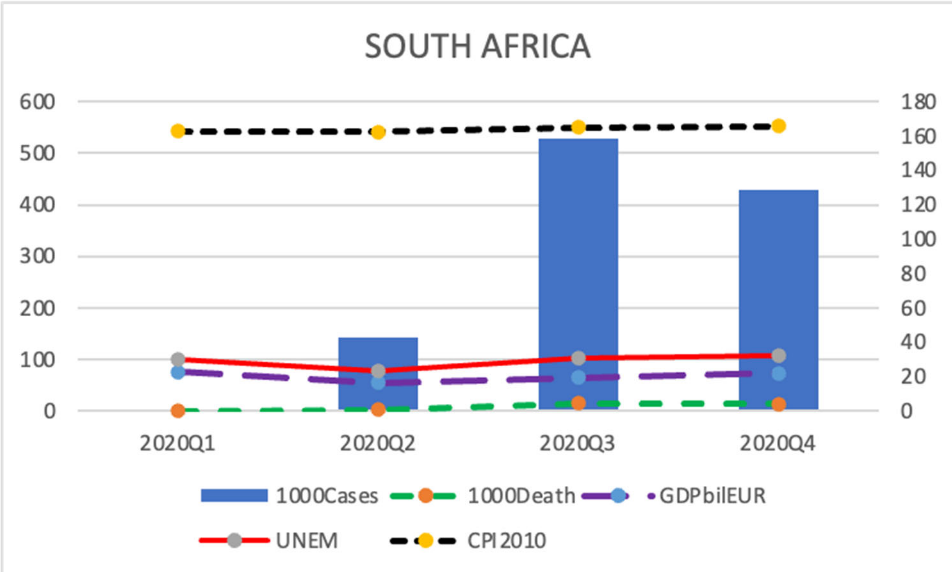
Source: IMF International Financial Statistics (IMF, 2021) and WHO databases (WHO, 2021)

Brazil was less affected by the pandemic in the first quarter of 2020, registering only 4579 cases and 159 deaths. However, the pandemic hit hard this country in the next quarters when the number of cases reached 1.36, 3.41, respectively 2.96 million. At the same time, the number of deaths increased accordingly in the next quarters to 58155, 84607, respectively 53097, revealing a very difficult medical situation.

However, the data regarding GDP show a decrease only in second quarter, comparatively to 2019, when GDP reached 288.64 billion EUR, after 375 billion EUR in the first one and followed by better results of 301.13 and 311.75 billion EUR in the last two quarters. On the other hand, after CPI (base 2010) varied slightly around 172 in the first three quarters, it raised quite importantly to 176.44 in the last quarter signaling a negative tendency towards inflation. Moreover, 2020 was marked by an important ascension of unemployment, which raised almost constantly from 11.7 to over 14 by the end of the year. Thus, even GDP has maintained close to the value from 2019 it appears that Covid 19 hit severely the socio-economic climate from Brazil, while GDP dropped after the first quarter and inflation and unemployment manifest a tendency to raise.

The last country considered in our analysis is South Africa, whose evolution during 2020 is reflected in Figure 6.

Figure 6. Socio-economic tendencies on the background of the Covid 19 pandemic in South Africa



Source: IMF International Financial Statistics (IMF, 2021) and WHO databases (WHO, 2021)

As in the case of Brazil, Covid 19 pandemic has started to affect South Africa later than in the case of other countries. Therefore, in the first quarter of 2020 South Africa registered only 1326 cases and 3 deaths. However, the incidence of the pandemic raised rapidly and in the next quarters the number of cases raised progressively to 142938, 528308 and finally at 428176, in each of the remaining quarters. Also, the number of deaths raised to 2526, 14138 and 12910 in the three remaining quarters.

Even from a different continent than Brazil, South Africa evolved in terms of socio-economic climate quite like Brazil. After, reaching a higher GDP in the first quarter of 2020 than in 2019, of 75.6 billion EUR, GDP dropped down in the next quarters to 54.45, 64.08 and finally reached 72.58 billion EUR quarterly. Both inflation and unemployment raised during 2020. CPI (base 2010) raised from 162.92 to 165.94 and unemployment rate raised from 30.1 to 32.5. As in the case of Brazil it appears that the socio-economic climate tends to degrade itself on the background of the Covid 19 pandemic manifestation.

4. CONCLUSIONS

A global pandemic such as Covid 19 is expected to leave significant marks on the socio-economic climate of the world. Yet, how deep could be such marks may be different from country to country, or even from continent to continent and depends on the measures taken for limiting its spread and counteracting it.

This paper has considered the most affected countries by the Covid 19 pandemic, each from a different continent, during 2020, in terms of number of cases and deaths, for analyzing how their socio-economic climate evolved under the background of this pandemic.

The analysis showed different behaviors in the considered countries. Out of the analyzed countries China had the most different behavior. In its case, even if was first struck by the pandemic and there were worries for a catastrophic evolvement, not only that China succeeded rapidly to stop and control the pandemic spread, but also to resume its economic growth and improve the socio-economic climate. Also, Australia succeeded to overcome the pandemic effects, both in terms of medical issues and of socio-economic climate.

Other countries, such as Italy and USA were mostly affected by the pandemic in the last quarter of 2020, when the number of cases almost exploded. Even so, the experience with the pandemic during the previous quarters helped these countries to maintain the level of their socio-economic climate.

On the other hand, the socio-economic climate has degraded in countries as Brazil and South Africa, on the background of the pandemic strong manifestation during the last two quarters of 2020.

Covid 19 pandemic has put all governments in a difficult position to choose between protecting the lives of their citizens by implementing hard measures like lockdown, impacting negatively on the economy and social life, leaving the citizens and the economy to go free, risking the citizens to be infected or even die. Looking at the evolution of the socio-economic climate, for our sample of countries, we conclude that the countries in which governments assumed strong and hard measures when time has called for them had better evolutions in terms of the socio-economic climate and showed a tendency for improving this climate. Nevertheless, an important role has been played also by the way the population accepted and complied to governments' decisions, understanding the importance of them not only for themselves but also for all the others.

While the dawn of 2021 has brought several new vaccines as an important hope for humanity in its struggle against Covid 19, winning this battle will continue to depend both on the governments and people actions, but also by understanding the big picture that tells us that Covid 19 must be fight in all countries in the world and by everyone to ensure the socio-economic comfort.

References

1) Aneja, R. and Ahuja, V. (2020). An assessment of socioeconomic impact of COVID-19 pandemic in India. *Journal of Public Affairs*, 21(e2266). DOI: 10.1002/pa.2266.
2) Chitiga-Mabugu, M., Henseler, M., Mabugu, R. and Maisonnave, H. (2021). Economic and Distributional Impact of COVID-19: Evidence from Macro-Micro Modelling of the South African Economy. *South African Journal of Economics*, 89(1), pp. 82-94. DOI: 10.1111/saje.12275.
3) De Vet, J.M., Nigohosyan, D., Nunez Ferrer, J., Gross, A. K., Kuehl, S. and Flickenschild, M. (2021). Impacts of the COVID-19 pandemic on EU industries, European Parliament, Policy Department for Economic. *Scientific and Quality of Life Policies*, Directorate-General for Internal Policies, Study for ITRE committee. [online] Available at: https://www.europarl.europa.eu/RegData/etudes/STUD/2021/662903/IPOL_STU(2021)662903_EN.pdf [Accessed 24.05.2021].
4) Gordon, D. V., Grafton, R. Q. and Steinshamn, S. I. (2021). Cross-country effects and policy responses to COVID-19 in 2020: The Nordic countries. *Economic Analysis and Policy,* 71(1), pp. 198–210. DOI: 10.1016/j.eap.2021.04.015.
5) Green, D. and Loualiche, E. (2021). State and local government employment in the COVID-19 crisis. *Journal of Public Economics*. 193(1), DOI: 10.1016/j.jpubeco.2020.104321.
6) Hsiang, S. S., Allen, D., Annan-Phan, S., Bell, K., Bolliger, I., Chong, T., Druckenmiller, H., Huang, L. Y., Hultgren, A., Krasovich, E., Lau, P., Lee, J., Rolf, E., Tseng, J. and Wu, T. (2020). The effect of large-scale anti-contagion policies on the COVID-19 pandemic. *Nature*, 584, pp. 262–267. DOI: 10.1038/s41586-020-2404-8.
7) Janssens, W., Pradhan, M., De Groot, R., Sidze, E., Donfouet, H. P. P. and Abajobird A. (2021). The short-term economic effects of COVID-19 on low-income households in rural Kenya: An analysis using weekly financial household data. *World Development*, 138(1). DOI: 10.1016/j.worlddev.2020.105280.
8) Jena, P.R., Majhi, R., Kalli, R., Managi, S. and Majhi, B. (2021). Impact of COVID-19 on GDP of major economies: Application of the artificial neural network forecaster. *Economic Analysis and Policy*. 69(1), pp. 324–339. DOI: 10.1016/j.eap.2020.12.013.
9) Josephson, A., Kilic, T. and Michler, J.D. (2021). Socioeconomic impacts of COVID-19 in low-income countries. *Nature Human Behavior*, 5(1), pp. 557–565. DOI: 10.1038/s41562-021-01096-7.
10) IMF, (2021). *IMF International Financial Statistics* [online] Available at: https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b [Accessed 24.05.2021].
11) Kassegn, A. and Endris, E. (2021). Review on socio-economic impacts of ‘Triple Threats’ of COVID-19, desert locusts, and floods in East Africa: Evidence from Ethiopia. *Cogent Social Sciences*, 7(1). DOI: 10.1080/23311886.2021.1885122.
12) Kim, A. T., Kim, C. H., Tuttle, S. E. and Zhang, Y. (2021). COVID-19 and the decline in Asian American employment. *Research in Social Stratification and Mobility*, 71(1), DOI: 10.1016/j.rssm.2020.100563.

13) Martin, A., Markhvida, M., Hallegatte, S. and Walsh, B. (2020). Socio-Economic Impacts of COVID-19 on Household Consumption and Poverty. *Economics of Disasters and Climate Change*, 4(1), pp. 453–479. [online] Available at: https://doi.org/10.1007/s41885-020-00070-3 [Accessed 12.05.2021].
14) Meyer, B. H., Prescott, B. and Sheng, X. S. (2021). The impact of the COVID-19 pandemic on business expectations. *International Journal of Forecasting*, 193, 104321. [online] Available at: https://doi.org/10.1016/j.ijforecast.2021.02.009 [Accessed 12.05.2021].
15) Mofijur, M., Fattah, I. M. R., Alam, M. A., Islam, A. B. M. S., Ong, H. C., Rahmand, S. M. A., Najafi, G., Ahmed, S. F., Uddin, M. A. and Mahlia, T. M. I. (2021). Impact of COVID-19 on the social, economic, environmental and energy domains: Lessons learnt from a global pandemic. *Sustainable Production and Consumption*, 26(1), pp. 343–359. DOI: 10.1016/j.spc.2020.10.016.
16) Muller, S. M. (2021). The dangers of performative scientism as the alternative to antiscientific policymaking: A critical, preliminary assessment of South Africa's Covid-19 response and its consequences. *World Development*, 140(C), 105290. DOI: 10.1016/j.worlddev.2020.105290.
17) O'Sullivan, D., Rahamathulla, M. and Pawar, M. (2020). The Impact and Implications of COVID-19: An Australian Perspective. *The International Journal of Community and Social Development,* 2(2), pp. 134–151. DOI: 10.1177/2516602620937922.
18) Padhan, R. and Prabheesh, K.P. (2021). The economics of COVID-19 pandemic: A survey. *Economic Analysis and Policy*, 70(1), pp. 220–237, DOI: 10.1016/j.eap.2021.02.012.
19) Prates, I. and Barbosa, R. J. (2020). The Impact of COVID-19 in Brazil: Labour Market and Social Protection Responses. *The Indian Journal of Labour Economics*, 63, pp. 31-35. DOI: 10.1007/s41027-020-00252-3.
20) Rasheed, R., Rizwan, A., Javed, H., Sharif F. and Zaidi A. (2021). Socio-economic and environmental impacts of COVID-19 pandemic in Pakistan—an integrated analysis. *Environmental Science and Pollution Research*, 28(c16), pp. 19926–19943. DOI: 10.1007/s11356-020-12070-7.
21) Restrepo, B. J., Rabbitt, M. P. and Gregory, C. A. (2021). The Effect of Unemployment on Food Spending and Adequacy: Evidence from Coronavirus-Induced Firm Closures. *Applied Economic Perspectives and Policy*, 43(1), pp. 185–204. DOI: 10.1002/aepp.13143.
22) Romano, F. (2020). *An Estimate of the Economic Impact of COVID-19 on Australia.* [online] Available at: http://dx.doi.org/10.2139/ssrn.3581382 [Accessed 20.06.2021].
23) Salvatore, D. (2021). The world economy after Covid-19. *Journal of Policy Modeling*, 43(4), pp. 725-896. DOI: 10.1016/j.jpolmod.2021.02.002.
24) Sjoquist, D. and Wheeler, L. (2021). Unemployment insurance claims and COVID-19. *Journal of Economics and Business*, 115 (C), 105967. DOI: 10.1016/j.jeconbus.2020.105967.
25) Stiglitz, J. E. (2021). The proper role of government in the market economy: The case of the post-COVID recovery. *Journal of Government and Economics*, 1, 100004. DOI: 10.1016/j.jge.2021.100004.

26) Van der Wielen, W. and Barrios, S. (2021). Economic sentiment during the COVID pandemic: Evidence from search behaviour in the EU. *Journal of Economics and Business*, 115, 105970. DOI: 10.1016/j.jeconbus.2020.105970
27) Viezzer, J. and Biondi, D. (2021). The influence of urban, socio-economic, and eco-environmental aspects on COVID-19 cases, deaths and mortality: A multi-city case in the Atlantic Forest, Brazil. *Sustainable Cities and Society*, 69, 102859 DOI: 10.1016/j.scs.2021.102859.
28) Wang, Q. and Zhang, F. (2021). What does the China's economic recovery after COVID-19 pandemic mean for the economic growth and energy consumption of other countries? *Journal of Cleaner Production*, 295, 126265. DOI: 10.1016/j.jclepro.2021.126265.
29) WHO, (2021). *Coronavirus Disease (COVID-19) Dashboard*. [online] Available at: https://covid19.who.int/info [Accessed 24.03.2021].
30) Zhao, B. (2020). COVID-19 pandemic, health risks, and economic consequences: Evidence from China. *China Economic Review*, 64, 101561. DOI: 10.1016/j.chieco.2020.101561.

PUBLIC SPENDING ON LABOR MARKET POLICIES AND UNEMPLOYMENT IN THE EUROPEAN UNION. A GENDER ANALYSIS

ANDRIANA NASTAS
Alexandru Ioan Cuza University of Iași
Iași, Romania
andriana.nastas98@gmail.com

IRINA BILAN
Alexandru Ioan Cuza University of Iași
Iași, Romania
irina.bilan@uaic.ro

Abstract
All around the world, governments are implementing policies designed to fight unemployment and diminish its negative economic and social effects. While passive labor market policies (PLMPs) are aimed at providing unemployed individuals with income support during their search for a job, active measures (ALMPs) aim to increase employment opportunities and cut down unemployment. Our paper seeks to investigate the impact of public expenditure with these policies on unemployment rates in the European Union countries, during 2006-2018. In addition, we want to assess whether there are substantial differences in their effects on unemployment rates among women and men. The results show that higher unemployment benefits are detrimental to employment because unemployed people lessen their efforts to search for a job, and active measures may be an efficient tool in reducing unemployment, although further analysis is needed in this respect. Moreover, we found evidence for important differences among the two genders, especially regarding the passive labor market measures. The side-effects of generous unemployment benefits on unemployment are found to be more important among men compared to women.
Keywords: *unemployment rate; female unemployment rate; male unemployment rate; ALMPs; PLMPs; European Union countries.*
JEL Classification: E24, J08, J65

1. INTRODUCTION

Unemployment is a complex macroeconomic phenomenon and an economic and social problem that many countries around the world are facing, disregarding their level of development. In terms of labor market functioning, unemployment expresses an imbalance between labor supply and demand, where labor supply exceeds demand (Munteanu *et al.,* 2005) and there are people without a job who are looking to get employed. The definition of unemployment is a highly debated issue in the literature; however, there is a simple definition of an unemployed person - an “individual who is deprived of work” (Crețoiu, Cornescu and Bucur, 2011). Although many factors could explain high unemployment in different countries, one common source resides in the cyclical behaviour of the economy; in times of crises and recessions, unemployment rates rise because fewer employees are required for a lower level of production. This happened during the economic and financial crisis of 2007-2009 and re-emerged during the current COVID-19 crisis, calling for consistent and targeted and policy action.

In the European Union, governments have set in place extensive measures to fight unemployment and limit its negative economic and social consequences. Economic theory and the practice of different countries emphasize two kinds of such policies, namely active labor market passive policies (ALMPs) and passive market passive policies (PLMPs). While the first ones are aimed at providing unemployed individuals with income replacement during periods of job search, usually under the form of cash benefits (unemployment benefits, support allowance), the later mainly target increased labor market integration, by enhancing employment opportunities and improving the marching between workers and jobs (European Commission, 2017, p. 1).

Although, in time, passive measures were the first ones to be introduced, active measures are more and more appealing and public expenditure on such measures has a significant share in GDP in some EU countries. This is because of their positive contribution to employment and GDP growth, through well-defined strategies that meet the needs of different categories of unemployed (depending on age, gender, level of education, experience in the labor market, etc.).

Our study seeks to investigate the impact of public expenditure with ALMPs and PLMSs on unemployment rates in the European Union countries. The importance of our research derives from the complexity and wide negative economic and social effects of unemployment. In addition, we run a gender analysis and investigate if there are differences in the impact of labor market policies on unemployment rates among women and men. Over the last two decades, the world has experienced an increased level of participation in the labor market among women. However, even where women's participation in the labor market has increased, the quality of employment has not necessarily improved, and there are still important differences between unemployment rates among women and men in many countries. Previous studies (Kring, 2017; Pissarides, 2013) have shown that unemployment among women is higher than among men for various reasons, among which the perception of the role of women in society, social norms that attribute different roles to women and men (unequal distribution of household and family tasks between men and women), inequitable access to employment opportunities, etc. Equitable access to employment opportunities is still a problem that women face and achieving gender equality in the labor market remains a major challenge (Otobe, 2014). Considering these differences between men and women regarding their position on the labor market, we want to see if the impact of different government policies on unemployment rate differs by gender.

The paper proceeds as follows: section 2 briefly overviews existing literature on the relationship between labor market policies and unemployment, especially emphasizing the different roles for women and men; section 3 describes the data and methodology of the paper; section 4 presents the results; section 5 concludes and develops some policy recommendations.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 The impact of active and passive labor market policies on unemployment rates

Over time, many studies have addressed the role of government policies in fighting unemployment and the effects of different active and passive labor market measures on unemployment indicators, trying to provide useful policy recommendations. As a rule, such recommendations emphasize one or more active policy measures that proved, based on empirical analysis, to be more effective in terms of access, coverage, and results. Regarding passive policies, the main issue resides in the sizing of financial support for unemployed individuals, in terms of both amount granted and benefit duration.

Passive measures are aimed at protecting unemployed persons, by providing them financial support and mitigating, in the short term, the financial consequences caused by job loss. However, in the long run, passive measures can have adverse (negative) effects on the economy, due to the occurrence of moral hazard at the individual level (Pinelli *et al.,* 2017). When unemployment benefits are large (compared to previous wages) and granted for a long period of time, there is a high probability that unemployed individuals will lessen their efforts to find a job and prefer to stay unemployed for longer.

This side effect is evidenced by several studies. Nie and Struby (2011) mention that the probability that individuals facing long-term unemployment will return to work is low and that the higher the amount of cash benefits, the lower the interest of an unemployed person to look for a job is. For this reason, benefits (financial support) must be provided so as to discourage the phenomenon of unemployment. Acemoglu and Shimer (1999) also show that higher benefits allow the unemployed to spend more time looking for a job and not accept the first employment opportunity that they find.

The relationship between unemployment rates and passive labor market policies has made the subject of many studies. Analyzing labor market dynamics in the Visegrad Group countries - Czech Republic, Poland, Slovakia and Hungary (2007-2012), Zieliński (2015) notes that the unemployment rate is responsive to the implementation of public (active and passive) policies and emphasizes the direct (positive) relationship between the unemployment rate and passive measures. A similar result is recorded by Rotar (2018) who, using panel data for 20 European Union member states and a period of 12 years (2004-2015), concludes that passive measures positively influence the unemployment rate. A higher financial support determines the increase in the unemployment rate, and unemployment benefits expenses are not, in the author's view, distributed efficiently.

Regarding active labor market policies, they have been the focus of many studies. According to Eurostat and the OECD, there are several major types of active measures, namely: training services, employment incentives, direct job creation, supported employment and reconversion (start-up incentives), and labor market services. Martin (2014) clearly points out that the trend is to place more emphasis on active measures and less on passive ones. The author also mentions that active policies are particularly aimed at reducing structural unemployment.

Sahnoun and Abdennadher (2018), studying the active policies implemented in 18 OECD countries over the period 2000-2014, find that, overall, active measures lead to lower unemployment. However, employment incentives and supported employment and rehabilitation incentives have a low impact on the unemployment rate. Instead, training services play an important role in reducing unemployment, because of their potential positive impact on labor productivity. The same conclusion is reached by Nie and Struby (2011), who suggest that a greater use of these programs would lead to lower unemployment in the United States.

The study of Kluve (2010), conducted on the basis of a data set that includes 137 program evaluations from 19 European countries (period 1980 - 2002), shows that training programs are less likely to influence unemployment after implementation, while incentive programs for private sector employers perform better, so there are differences in the effectiveness of the various programs through which active measures are implemented. In a later study, Card, Kluve and Weber (2018) show that, in the short term (less than a year), active measures have a modest influence, but a much stronger one in the medium term (1-2 years after the end of the programs) and long term (after more than 2 years).

On the contrary, Vooren, Harelermans and Groot (2019) find that labor market services are most effective in the short term (less than 12 months after the start of programs), while subsidies to employers and job creation directly by the state do not have an impact in the short term but may have beneficial effects on long-term employment. Therefore, in terms of subsidies, they start to show their effectiveness after 12 months from implementation (and especially after 36 months). Regarding the creation of jobs in the public sector, positive effects appear only after a period of 36 months.

Betcherman, Olivas and Dar (2004) assess the impact of active measures on unemployment in countries in transition from a planned to a market economy

(Hungary, Bulgaria, Estonia, Croatia, Czech Republic, Russia, Slovakia, Poland, and Ukraine) and reach the following conclusions: employment incentives generally have a positive impact on employment and earnings, the cost-benefit ratio is sub-unitary, and training services have, on the whole, a negative impact (in the sense of reduction) on unemployment, positively influencing earnings. Both types of above-mentioned measures have limited effects in developed countries. It is generally stated that measures implemented in developed countries are applicable in the economies in transition, but the reciprocal does not always hold.

Experience in implementing public policies to cut down unemployment demonstrates a higher efficiency of active measures compared to passive ones. Pissarides (1985) finds that employment subsidies reduce unemployment, while unemployment benefits increase it, and a similar result is reached by Rollnik-Sadowska and Dąbrowska (2018). In addition, there are many other researchers confirming the positive effects of implementing active measures, among which: Martin (2000), Martin and Grubb (2001), Calmfors, Forslund and Hemstrom (2002), Woźniak (2016).

2.2 The impact of active and passive labor market policies on unemployment rates for women and men

An important strand of literature emerging from gender analysis focuses on the impact of different labor market measures for women and men. In most EU countries, the unemployment rate for women is still higher than for men. Women and men are affected in a different way by the effects of the business cycle, due to the segregation of the labor market and an unequal and unbalanced position in employment. Therefore, adequate policies should be designed and implemented to fight this inequality between genders with regard to their employment position.

In the literature, the effects of unemployment protection measures on the unemployment rate among men did not make the distinct object of many studies, the emphasis being on the impact on women's unemployment. Nonetheless, most studies include a comparative approach on the unemployment rate for women and men. While for active labor market measures the impact is sometimes found to be different among the two sexes, the effects of passive measures on both women and men are generally found to be relatively the same, as benefits in the form of financial support for the unemployed, whether men or women, reduce the desire to work and search for a job, which leads to higher unemployment.

Although most papers analyze the generic impact of passive measures on overall unemployment rates, there are also studies that aim to investigate the differences among women and men. According to Leschke (2007), women are on average 2 to 3% less likely to be monetarily eligible for unemployment insurance compared to men; therefore, gender matters when it comes to access to social protection. Michaelides and Mueser (2013) analyzed the trends in unemployment and unemployment benefits by gender, during the period 1990-2010. They found that women are more likely to be unemployed than men, but less likely to be eligible for unemployment benefits. This indicates that, for women, job loss has more negative effects, among which influencing the stability of the family's financial situation. At the same time, the study shows that women tend to get out of unemployment faster compared to men, who prefer to keep being unemployed when the value of benefits is large.

According to Kring (2017), women, compared to men, are also more likely to be unemployed and have more vulnerable jobs, in terms of protection and rights, as well as lower wages. Therefore, the unemployment rates for men and women may respond differently to unemployment protection measures. Auer, Efendioglu and Leschke (2008) state that active labor market policies combine financial incentives (financial assistance to employers as an active measure to increase employment) with either work or training activities. Bergemann and Van den Berg (2006) argue that one reason why active labor market policies might work better for women than for men is that many women have a greater distance from the labor market. Because of this, they may underestimate their opportunities and may not be aware of the non-pecuniary value of employment. Participating in active programs can help increase the desire to become an employee. This explanation may also be more relevant in economies with relatively low female labor force participation.

Another strand of literature investigates the impact of different types of active measures on female and male employment. Some authors have studied the effects of training programs or qualification services on women and men, among which: Weber and Hofer (2004), Bergemann, Fitzenberger and Speckesser (2005), Zhang (2003), Cavaco, Fougere and Pouget (2005), Lechner, Miquel and Wunsch (2011), Biewen *et al.* (2006), Kluve, Lehmann and Schmidt (1999). According to these studies, the duration of participation in training programs usually varies between 0.5 and 1 year, although there are also programs of up to 1 month or up to 3 years. Short-term courses aim to update existing knowledge, while long-term courses should lead to the acquisition of skills for a completely new occupation. All the above authors found positive effects of training on labor market outcomes for women, with unemployment rates declining. In addition, most of these studies emphasized that the effects on employment outcomes among women outweigh the effects among men, and the latter are often close to zero or insignificant.

Although the conclusion that, in general, training programs are more effective for women holds, there are also studies showing that some programs work better for women, while some others work better for men. The main argument for the different effects is that men and women follow different programs (Richardson and Van den Berg, 2006; Bolvig, Jensen and Rosholm, 2003). Among the studies reaching these conclusions, we can mention: Weber and Hofer (2004) - for Austria, 1999-2001; Cavaco, Fougere and Pouget (2005) - for

France, 1996–1997; Bergemann, Fitzenberger and Speckesser (2005) – for Germany, 1993–1997; Lechner, Miquel and Wunsch (2011) – for Germany, 1993–2002; Zhang (2003) – for Norway, 1990–2000; Kluve, Lehmann and Schmidt (1999) – for Poland, 1992–1996; Bolvig, Jensen and Rosholm (2003) – for Denmark, 1997-1999; Richardson and Van den Berg (2006) – for Sweden, 1993-2000; etc.

The impact of job search assistance on unemployment rates for women and men made the research objective of several studies, including: Biewen *et al.* (2006), Crepon, Dejemeppe and Gurgand (2005), Fougere, Pradel and Roger (2005), Hujer, Thomsen and Zeiss (2006), Lalive, van Ours and Zweimller (2008), and Weber and Hofer (2004). Overall, these studies show that there are positive effects of job-seeking assistance on employment outcomes, for both women and men. The only study reporting significant adverse effects, for both sexes, is that of Gerfin and Lechner (2002).

Moreover, five out of the six above studies (except Hujer, Thomsen and Zeiss, 2006) found more consistent effects for women compared to men. Nonetheless, there are also studies emphasizing similar effects or even less important effects for women compared to men, but these refer to economies with a low female participation in the labor market (Hujer, Thomsen and Zeiss, 2006). Among the countries on which the analyses were performed are included: Austria, 1999-2001 (Weber and Hofer, 2004); France, during the period 1986-1988 (Fougere, Pradel and Roger, 2005) and 2001-2004 (Crepon, Dejemeppe and Gurgand, 2005); Germany, 2001-2002 (Hujer, Thomsen and Zeiss, 2006); and Switzerland, 1997-1999 (Lalive, van Ours and Zweimller, 2008).

Some other authors have analyzed the impact of employment subsidies on unemployment for women and men. As the most heterogeneous group of active labor market policies, these may include schemes for direct job creation in the public and non-profit sectors, subsidies granted to private sector employers if they hire unemployed workers looking for a job, and incentives to start a new business. The studies focus mainly on the probability of employment or on the transition rates out of unemployment for women and men.

The effectiveness of wage subsidies or incentives to encourage employers to hire people looking for a job, for the different genders, was investigated by Gerfin and Lechner (2002), Gerfin, Lechner and Steiger (2005), Kluve, Lehmann and Schmidt (1999), and Zhang (2003). In general, these studies found evidence of positive effects for women, as analyses were performed on economies with relatively low female labor force participation. Moreover, in all four papers it was concluded that the effect for men is lower than for women, although in two of them (Kluve, Lehmann and Schmidt, 1999; Zhang, 2003) the estimated effect for men is positive as well. As for the other two studies, the results for men show a significant negative impact on their chances of employment. Among the countries on which the analysis was performed are: Poland, 1992–1996 (Kluve, Lehmann and Schmidt, 1999); Norway, 1990–2000 (Zhang, 2003); Switzerland, 1997-1999 (Gerfin and Lechner, 2002).

Incentives to start a new business have made the object of several studies, including the one by Baumgartner and Caliendo (2006). According to the findings of these authors, who use data from West Germany in their analysis, start-up grants, with a duration of 0.5 to 3 years, increase the probability of employment among both men and women, but the effect is stronger for women.

Finally, several authors (Gerfin and Lechner, 2002; Gerfin, Lechner and Steiger, 2005; Hujer and Caliendo, 2004; Hujer, Thomsen and Zeiss, 2006; Van Ours, 2004; Zhang, 2003) studied the effects of direct job creation schemes on the probability of finding a job and the reduction of unemployment rates, for economies with a relatively low female labor force participation. Their results are mixed, this reflecting the high degree of heterogeneity of job creation programs and types of jobs created. Depending on these factors, the effects of direct job creation on the probability of employment and dynamics of unemployment rates are found to vary from significantly positive to significantly negative. Also, there is no clear pattern of gender difference.

However, some gender differentiation emerges from the analyses carried out by Bergemann (2005) and Eichler and Lechner (2002), who estimate the individual employment effects of job creation schemes in East Germany. Together with the study of Bolvig, Jensen and Rosholm (2003), which investigates the joint effect of job creation schemes and employer subsidies in Denmark, these are among the few studies on the impact of employment subsidies in economies with a relatively high level of labor force participation. The common conclusion of these papers is that the active measures under analysis have a positive impact on the probability of leaving unemployment. Moreover, the effects are more favourable for women compared to men. Among the countries on which the analyses were performed are: Germany, for the periods 1992-1997 (Eichler and Lechner, 2002) and 1990-1999 (Bergemann, 2005); Denmark, 1997-1999 (Bolvig, Jensen and Rosholm, 2003); Norway, 1990–2000 (Zhang, 2003); Switzerland, 1997–1999 (Gerfin and Lechner, 2002).

Bergmann and van der Berg (2006) argue that active labor market policies have higher positive effects on the employment of women compared to men, especially when female labor force participation is low. Their evidence suggests that these results are the strongest for training programs, although other measures such as job search assistance, employer subsidies and incentives to start a business may also have a positive impact on women's employment and the decrease of unemployment rates.

Based on the literature review and main findings regarding the impact of different labor market policies on employment, we formulate the following research hypotheses:

- *Hypothesis (1): Higher public expenditure with active labor market policies reduce the unemployment rate;*
- *Hypothesis (2): Higher public expenditure with passive labor market policies increase the unemployment rate;*
- *Hypothesis (3): Active and passive labor market policies have a different impact on the unemployment rate among women and men.*

3. DATA, METHOD AND VARIABLES

In this paper we aim to investigate the relationship between unemployment and public spending on (active and passive) labor market policies in the European Union countries. In addition, we want to see if the impact differs for women and men and, therefore, some policy measures are more (or less) effective for the two genders in cutting down unemployment. To test our hypotheses, we conducted multiple linear regression analyses on panel data for 28 EU countries and 13 years (2006-2018). As data sources we used Eurostat, the AMECO database (European Commission) and Doing Business database (the World Bank).

The regression models are as follows:

$$UNEMPi,t = \beta 0 + \beta Exp\_ALMPi,t + \sum \rho jCONTROLj,i,t + \alpha i + \delta t + \varepsilon i,\ t \quad (1)$$

$$UNEMPi,t = \beta 0 + \beta Exp\_PLMPi,t + \sum \rho jCONTROLj,i,t + \alpha i + \delta t + \varepsilon i,\ t \quad (2)$$

Where:

- i indicates the country ($i = \overline{1, 28}$);
- t indicates the year ($t = \overline{1, 13}$);
- UNEMP represents the unemployment rate (total/ women/ men);
- Exp_ALMP represents public expenditure with active labor market policies (as % of GDP);
- Exp_PLMP represents public expenditure with passive labor market policies (as% of GDP);
- CONTROLj is a vector of control variables (other determinants of unemployment);
- $\beta 0$ - constant;
- β, ρj are the coefficients of the explanatory variables;
- αi - country fixed effects;
- δt – times (year) fixed effects;
- εi,t - the random component of the error.

The main explanatory variables are represented in our study by public expenditure with active and passive labour market policies. The dependent variables are the total unemployment rate, and the unemployment rates for women and men. A brief overview of all explanatory variables (including control variables), as well as their expected impact on the dependent variables, and the data sources are presented in Table 1.

According to previous studies, unemployment is positively influenced by an increase in public spending with passive measures, meaning that higher unemployment benefits lead to higher unemployment (see the literature review section). On the contrary, more public spending on active labor market policies is expected to reduce unemployment rates.

Regarding the control variables, they were selected following the analysis of previous empirical work on the determinants of unemployment. Specifically, each control variable that we selected significantly influences unemployment, although the sign and magnitude of this impact may differ.

Table 1. Explanatory variables and their expected impact on unemployment

Variable	Description	Expected impact (+/-)	Data source
Exp_ALMP	Public spending with active labour market policies (% of GDP)	-	Eurostat
Exp_PLMP	Public spending with passive labour market policies (% of GDP)	+	Eurostat
Productivity	Labor productivity/person (annual percentage change, %)	+/-	Eurostat
Tax_contributions	Labor tax and contributions supported by employers (% of profit)	+	World Band, Doing Business Database
GFCF	Gross fix capital formation (% of GDP)	-	Eurostat
Output_gap	Output gap (% of potential GDP)	-	European Commission, AMECO Database
Gov_effectiveness	Effectiveness of the governing act (index)	-	World Bank, Worldwide Governance Indicators

Source: own processing

One of the control variables in our model is labor productivity, which reflects the effectiveness of the work spent in the production process and is a synthetic indicator of the efficiency of firms' economic activity. Increasing labor productivity is a key factor of economic performance and a key determinant of higher living standards. The growth of gross domestic product (GDP) per capita can be divided into the increase in labor productivity (measured by GDP per hour worked) and changes in the use of labor (measured by hours worked per capita).

Therefore, the increase in labor productivity may reflect a greater use of capital, thus increasing the efficiency of companies' activity. The impact of labor productivity on unemployment can be both negative and positive.

On the one hand, the increase in labor productivity leads to a decrease in employment among low-productivity workers, which may result in a higher unemployment rate. This conclusion was reached by the study of Blanchard, Solow and Wilson (1995), who state that higher individual labor productivity conduces to lower employment, when the more productive employees, who are contributing to increasing the company's efficiency, make the employer choose to hire fewer but more productive persons and stimulate existing employees through increased salaries, instead of hiring additional workers. Other studies (Nikulin, 2015; Folawewo and Adeboje, 2017) also confirm this positive relationship between labor productivity and the unemployment rate.

On the other hand, there are also studies showing that labor productivity negatively influences the unemployment rate, in other words, an increase in labor productivity results in the decrease of unemployment. Trehan (2001) concludes that the salaries offered by a company are directly related to the productivity of its employees. A higher productivity makes it more attractive for the company to hire more employees, and the firm can do this by increasing the salaries it would offer to workers. In turn, this increases the likelihood that an unemployed person will find an acceptable job offer and reduces the time he spends looking for a job. Therefore, the unemployment rate will decrease in response to an increase in labor productivity. The same results are found by Morlok, Meier and von Arx (2016), who state that, because of a higher productivity of their employees, more productive enterprises are more competitive, have higher sales and profits, and support employment, which leads to lower unemployment.

Another control variable that we use in the regression analysis is represented by the taxes and contributions on labor borne by companies. Higher taxes and contributions on labor are expected to be related to an increase in the unemployment rate. Unemployment is a dual phenomenon, which concerns both employer and employee. On the one hand, the employee may not be interested in a job, looking for greater benefits elsewhere and, on the other hand, the employer may not be interested in keeping the job. When taxes and contributions are high, labor costs are high as well and, from the employer's perspective, this creates conditions for unemployment to rise. Among the studies that have addressed this topic are those of Daveri (2002) and Dolenc, Laporšek and Šeparović (2011). The authors conclude that the impact of employers' labor tax burden on the unemployment rate is positive, because high labor costs inhibit the creation of new jobs by companies.

Gross fixed capital formation is an overall indicator of investment, both in the public and private sectors of the economy. Higher investment generates positive effects, both directly and indirectly: directly, because it involves the creation of new jobs, and indirectly because it creates additional demand, which often calls for an increase in the production capacity and hiring of additional workers. As a result, employment rises, and the unemployment rate decreases. Several studies (Rowthorn, 1995; Meyer and Sanusi, 2019) confirm that the increase in gross fixed capital formation negatively influences the unemployment rate, which decreases.

Output gap is an indicator that captures the impact of the economic cycle and is determined as the percentage difference between actual and potential GDP. It goes without saying that in times of recession, companies make layoffs to reduce costs, which leads to an increase in the unemployment rate. Conversely, during economic upswings characterized by high demand, companies want to hire more to increase the production capacity, and unemployment decreases. This relationship between output gap and unemployment is evidenced in the studies of Owyang, Sekhposyan and Vermann (2013) and Dixon, Lim and van Ours (2016).

The last control variable is government effectiveness, an indicator that measures the quality of the governance act and reflects perceptions of the quality of public services. According to Abrams (1999), a better quality of governance is conducive to lower unemployment rates. Specifically, a more effective governance in terms of active and passive labor market policies leads to a decrease in the number of people without a job and, therefore, the unemployment rate. Bercu *et al.* (2019) confirm that government effectiveness is related to the economic growth and, therefore, unemployment level in the European countries from Central and Eastern Europe.

Once the variables selected, we had to decide between the fixed and random effects models, using the Hausman test. In all cases, the null hypothesis was rejected, which means that fixed effects are the most appropriate. Moreover, we used the F-test to see if time effects are needed, and we rejected the null that all coefficients are jointly equal to zero; therefore, we decided to use year fixed effects. We also checked for inverse causality. We used Granger's causality test, which showed that between public spending on active and passive measures and unemployment rates there is a double causal relationship. To address this issue, the first lag of our main explanatory variables has also been used as regressor in some models.

In addition, we checked the hypotheses regarding homoskedasticity and no autocorrelation of errors. In the first case, we used the Chi-squared test, which resulted in rejecting the null hypothesis for all models; errors were found to be heteroskedastic. To test for error autocorrelation, we used the Durbin-Watson test, its value (<2) indicating in all cases a positive autocorrelation. Robust standard errors were reported to correct these problems.

We also tested the significance of coefficients using the t test and the results indicated that they are all statistically significant, except for labor taxes and contributions. The overall significance of the models was tested using the F test, and the results indicated statistical significance. In addition, the correlation matrix was computed to detect high correlations and potential multicollinearity issues, but no problems were found in this respect. Finally, we analysed the descriptive statistics of the variables to look for unusual (extreme) values that could seriously affect our estimates (see Table 2).

Analyzing the data, we found that the maximum and minimum values of variables do not indicate the presence of extreme values. For example, the maximum unemployment rate of 27.5% was recorded in Greece in 2013, amid the public debt crisis that began in 2009 (in 2013, 15.000 public sector employees were laid off). The maximum of 31.4% of the unemployment rate for women was registered in the same country and year. Regarding the unemployment rate for men, the maximum of 25.6% was recorded in Spain in 2013, because of the severe economic downturn that occurred against the background of the global economic crisis.

Table 2. Descriptive statistics of the variables

Variable	Mean	Median	Max.	Min.	Std. Dev.	Obs.
Unemp	8.96	7.7	27.5	2.2	4.47	340
Unemp_fem	9.12	7.8	31.4	2.8	4.80	340
Unemp_male	8.85	7.6	25.6	1.8	4.48	340
Exp_ALMP	0.54	0.45	1.93	0.05	0.37	340
Exp_PLMP	0.90	0.68	3.13	0.04	0.67	340
Productivity	1.22	1.1	20.8	-7.8	2.78	340
Tax_contributions	28.62	29.35	54	1.4	12.01	340
GFCF	21.75	21.45	37.3	10.8	4.21	340
Output_gap	-0.51	-0.415	13.75	-16.26	3.98	340
Gov_effectiveness	1.11	1.07	2.35	-0.36	0.59	340

Source: own processing

As for our main explanatory variables, the maximum value of public expenditure with active labor market policies (1.93% of GDP) was registered in 2015, in Denmark. One explanation is that Nordic countries, applying the social-democratic model of social protection, have generous welfare systems that aim to reach full employment. The maximum amount of public expenditure with passive measures - unemployment benefits - (3.13% of GDP) was recorded in Spain, in 2012. The large amount of expenditure is caused by Spain having one of the highest unemployment rates during the global economic crisis, which called for massive income support for the unemployed.

4. RESULTS AND DISCUSSIONS

In the following, we will present the results of the regression analysis, first for the impact of ALMPs on unemployment rates (Table 2), and second, for the effects of PLMPs (Table 3). Several measures of unemployment are sequentially used in the different models: the overall unemployment rate (models 1 and 2), the unemployment rate among women (models 3 and 4), and the unemployment rate among men (models 5 and 6). Moreover, the current value of public spending with ALMPs and PLMPs and the first lag of these variables are alternatively used.

Several conclusions result from Table 3. Active labor market policies seem to be efficient in cutting down unemployment in the EU countries, which confirms our first hypothesis and economic theory. In model 1, an increase by one percentage point in public expenditure with active measures in a country is associated with a decrease in total unemployment rate by 1.828 percentage points. The result is confirmed when the fist lag of public expenditure with ALMPs is used as regressor in model 2, to control for reverse causality, although the effect seems to be smaller and less statistically significant ($p<0.1$). Moreover, public spending on active measures seems to be more effective for women compared to men, as the coefficients are higher and more significant statistically in model 3 compared to model 5. With an increase of one percentage point of public spending on ALMPs in a country, the average unemployment rate among women is expected to decrease by 2.068 percentage points, and among men by 1.805 percentage points. However, the effects become more homogenous when the first lag of public spending on ALMPs is considered, in models 4 and 6.

We can also see that labor productivity has positive and statistically significant coefficients in all models, in line with our expectations. Therefore, an increase in labor productivity leads to higher unemployment, and the strongest impact is found to be among men. The results are consistent with those of studies showing that increased labor productivity leads to lower employment because companies will prefer to offer higher wages to the more productive employees, instead of hiring additional workers. Although employer's taxes and contributions on labor are found to also have a positive coefficient, as expected, this is not statistically significant.

Table 3. Impact of public spending on ALMPs on the total unemployment rate / for women / men

Dependent variable	Model (1) *Unemp*	Model (2) *Unemp*	Model (3) *Unemp_fem*	Model (4) *Unemp_fem*	Model (5) *Unemp_male*	Model (6) *Unemp_male*
Explanatory variables						
Exp_ALMP	-1.828** (0.814)	-	-2.068*** (0.736)	-	-1.805* (0.915)	-
L.Exp_ALMP	-	-1.476* (0.781)	-	-1.512** (0.720)	-	-1.529* (0.894)

Dependent variable	**Model (1)** *Unemp*	**Model (2)** *Unemp*	**Model (3)** *Unemp_fem*	**Model (4)** *Unemp_fem*	**Model (5)** *Unemp_male*	**Model (6)** *Unemp_male*
Productivity	0.274*** (0.060)	0.246*** (0.058)	0.232*** (0.055)	0.209*** (0.053)	0.301*** (0.069)	0.272*** (0.067)
Tax_contributions	0.062 (0.062)	0.039 (0.086)	0.060 (0.076)	0.041 (0.083)	0.073 (0.089)	0.047 (0.096)
GFCF	-0.280*** (0.065)	-0.239*** (0.065)	-0.250*** (0.059)	-0.214*** (0.060)	-0.312*** (0.073)	-0.266*** (0.073)
Output_gap	-0.581*** (0.055)	-0.589*** (0.055)	-0.525*** (0.055)	-0.525*** (0.056)	-0.624*** (0.062)	-0.644*** (0.061)
Gov_effectiveness	-3.690*** (0.813)	-3.957*** (0.764)	-3.647*** (0.811)	-3.843*** (0.773)	-3.683*** (0.865)	-4.046*** (0.824)
Constant	17.800*** (3.755)	17.832*** (3.604)	17.470*** (3.573)	17.140*** (3.429)	17.949*** (4.171)	18.320*** (4.066)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
N	340	316	340	316	340	316
Adjusted R-squared	0.875	0.892	0.896	0.908	0.853	0.871

Notes: OLS estimates; the coefficients of country and year dummy variables were not reported for reasons of space economy; robust standard errors between parentheses; (***) significant at 1%, (**) significant at 5% and (*) significant at 10%.

Source: own processing

As for the other three control variables, the results in Table 3 confirm the expected negative and statistically significant impact on unemployment rates. An increase in gross fixed capital formation leads to lower unemployment rates, through both its direct and indirect effects on new job creation. GDP gap, as a proxy for the impact of economic cycle on unemployment, is negatively correlated with unemployment rates. In times of economic recession, when actual GDP goes well below its potential and GDP gap decreases to negative values, unemployment rates increase as companies make layoffs to cope with decreasing demand for goods and services, and the opposite holds during upswings. Finally, the quality of governance is an important determinant of unemployment, a higher governance effectiveness being associated with lower unemployment rates.

The results of estimating the impact of public expenditure with passive labor market policies on unemployment rates are reflected in Table 4. Our expectations are, once again, confirmed in all models, disregarding the variable we use (Exp_ALMPs, in models 1, 3 and 5, or its first lag, in models 2, 4 and 6). Higher public spending on income replacement for the unemployed is associated with higher unemployment rates, because in the presence of large unemployment benefits (as amount and duration), unemployed individuals may choose to lessen their efforts to search for a job and stay unemployed for longer. Specifically, an increase with 1 percentage point of public expenditure on passive measures in a country leads to a higher unemployment rate with 2.189 percentage points, in model 1, and 3.241 percentage points, in model 2.

Table 4. Impact of public spending on PLMPs on the total unemployment rate / for women / men

Dependent variable	**Model (1)** *Unemp*	**Model (2)** *Unemp*	**Model (3)** *Unemp_fem*	**Model (4)** *Unemp_fem*	**Model (5)** *Unemp_male*	**Model (6)** *Unemp_male*
Explanatory variables						
Exp_PLMP	2.189*** (0.455)	-	1.342*** (0.459)	-	2.852*** (0.454)	-
L.Exp_PLMP	-	3.241*** (0.414)	-	2.735*** (0.438)	-	3.708*** (0.415)
Productivity	0.253*** (0.050)	0.195*** (0.045)	0.221*** (0.049)	0.166*** (0.044)	0.272*** (0.056)	0.214*** (0.053)
Tax_contributions	0.055 (0.072)	0.006 (0.061)	0.059 (0.071)	0.014 (0.061)	0.063 (0.078)	0.008 (0.066)
GFCF	-0.182*** (0.062)	-0.116** (0.053)	-0.182*** (0.061)	-0.109** (0.055)	-0.188*** (0.066)	-0.127** (0.057)
Output_gap	-0.574*** (0.054)	-0.560*** (0.052)	-0.526*** (0.056)	-0.503*** (0.057)	-0.611*** (0.058)	-0.610*** (0.054)
Gov_effectiveness	-2.965*** (0.724)	-3.493*** (0.619)	-2.857*** (0.746)	-3.355*** (0.653)	-2.950*** (0.756)	-3.573*** (0.661)
Constant	10.196*** (3.262)	9.797*** (2.672)	11.401*** (3.255)	9.946*** (2.710)	8.805** (3.490)	9.374*** (2.935)
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
N	340	316	340	316	340	316
Adjusted R-squared	0.884	0.914	0.898	0.921	0.870	0.915

Notes: OLS estimates; the coefficients of country and year dummy variables were not reported for reasons of space economy; robust standard errors between parentheses; (***) significant at 1%, (**) significant at 5% and (*) significant at 10%.

Source: own processing

It can also be is noticed that the increase of public spending with passive measures has a stronger impact on the unemployment rate for men compared to women. With an increase of 1 percentage point of public expenditure with PLMPs in a country, the unemployment rate for men increases by 3.708 percentage points (in model 6), while the unemployment rate among women increases by only 2.735 percentage points (in model 4). This indicates that, when financial benefits are generous, men prefer to remain unemployed for longer, but women tend to get out of unemployment sooner. One explanation could reside in the lower employment opportunities available to women.

Finally, all the control variables preserve their signs and statistical significance in Table 3. Overall, all our research hypotheses were confirmed, although further investigation is needed regarding the impact of public spending with ALMPs, for which the program composition could definitely play an important role.

5. CONCLUSIONS

The main purpose of this paper was to investigate the relationship between unemployment and public expenditure with (active and passive) labor market policies implemented to spur employment and provide individuals with income replacement while looking for a job. In addition, we looked to identify differences in the occurrence of these effects between women and men, in the European Union countries.

We found that an increase in public spending on active measures results in a decrease in the unemployment rate, while higher spending on passive measures leads to lower employment, thus confirming the results of previous empirical studies. Moreover, active and passive measures were found to have a different impact on the unemployment rate among women and men. The negative impact of generous unemployment benefits on the unemployed individuals' motivation to look for a job is stronger among men than among women. In addition, active measures, which are aimed at supporting employment and the creation of new jobs, have a stronger influence on the unemployment rate among women compared to men.

Our results confirm the need for properly designed policy measured in the European Union countries, to cut down unemployment and reduce its negative effects. Seen as a whole, active policies seem to have good results, although further investigation is needed regarding the most appropriate mix of such measures, given the large amount of policy options available and their different impact. While passive measures are without doubt an important way of providing income security to the unemployed, governments should carefully set the appropriate level and duration of such benefits, because of the side effects that may occur on the unemployed individuals' motivation to find work.

ACKNOWLEDGEMENTS

This research was performed with the support of the ERASMUS+ Program of the European Union (Jean Monnet Module "Towards New Paradigms of EU Economics: Financial and Monetary Milestones", EUCONOMICS, grant decision number 620297 / 17.09.2020). This work reflects only the views of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

References

1) Abrams, B. A. (1999). The effect of government size on the unemployment rate. *Public Choice*, 99(3-4), pp. 395– 401.
2) Acemoglu, D. and Shimer, R. (1999). Efficient Unemployment Insurance. *Journal of Political Economy*, 107(5), pp. 893-928.
3) Folawewo, A. O. and Adeboje, O. M. (2017). Macroeconomic Determinants of Unemployment: Empirical Evidence from Economic Community of West African States. *African Development Review*, 29(2), pp. 197-210.
4) Auer, P., Efendioglu, Ü. and Leschke, J. (2008). *Active labour market policies around the world: Coping with the consequences of globalization*, 2nd ed. Geneva: International Labour Office.
5) Baumgartner, H. J. and Caliendo, M. (2006). *Turning unemployment into self-employment: Effectiveness and efficiency of two start-up programmes*. Bonn: Institute for the Study of Labor (IZA).
6) Bercu, A.M., Tofan, M., Cigu, E. and Petrisor, M.-B. (2019). The Government Effectiveness Drivers and Growth. Empirical Evidence from CEE Countries. *Transformations in Business & Economics*, 18(2A), pp. 553-567.
7) Bergemann, A. (2005). *Do job creation schemes initiate positive dynamic employment effects? Evidence from East Germany*. Free University Amsterdam, Amsterdam.
8) Bergemann, A., Fitzenberger, B. and Speckesser, S. (2005). *Evaluating the dynamic employment effects of training programs in East Germany using conditional difference–in–differences.* Bonn: Institute for the Study of Labor (IZA).
9) Bergemann, A. and Van den Berg, G. J. (2006). Active Labor Market Policy Effects for Women in Europe: A Survey. *IZA Discussion Paper* No. 2365, October 2006, Institute for the Study of Labor.
10) Betcherman, G., Olivas, K. and Dar, A. (2004). *Impacts of Active Labor Market Programs: New Evidence from Evaluations with Particular Attention to Developing and Transition Countries.* Social Protection Discussion Paper Series No. 0402. Washington D.C.: The World Bank.
11) Biewen, M., Fitzenberger, B., Osikominu, A. and Waller, M. (2006). *Employment effects of short and medium term further training programs in Germany in the early 2000s.* Goethe University Frankfurt, Frankfurt am Main.
12) Blanchard, O., Solow, R. and Wilson, B. A. (1995). *Productivity and Unemployment*. Massachusetts Institute of Technology, Manuscript.
13) Bolvig, I., Jensen, P. and Rosholm, M. (2003). The employment effects of active social policy. *IZA Discussion Paper* No. 736. Bonn: Institute for the Study of Labor.
14) Calmfors, L., Forslund, A. and Hemstrom, M. (2002). Does active labour market policy work? Lessons from the Swedish experiences. *Swedish Economic Policy Review,* 85, pp. 61-124.
15) Cavaco, S., Fougere, D. and Pouget, J. (2005). Estimating the effect of a retraining program for displaced workers on their transition to permanent jobs. *IZA Discussion Papers* No. 1513. Bonn: Institute of Labor Economics.

16) Crepon, B., Dejemeppe, M. and Gurgand, M. (2005). Counseling the unemployed: Does it lower unemployment duration and recurrence? *IZA Discussion Paper* No. 1796. Bonn: Institute for the Study of Labor.
17) Crețoiu, G., Cornescu, V. and Bucur, I. (2011). *Economie [Economics],* 3rd ed. Bucharest: C.H. Beck Publishing House.
18) Daveri, F. (2002). Labor Taxes and Unemployment: A Survey of the Aggregate Evidence. *Working Paper* 18/2, Center for Research on Pensions and Welfare Policies, Turin.
19) Dixon, R., Lim, G. and van Ours, J. (2016). *Output gaps and unemployment by age and gender*. [online] Available at: https://voxeu.org/article/output-gaps-and-unemployment-age-and-gender [Accessed 12.04.2021].
20) Dolenc, P., Laporšek, S. and Šeparović, A. (2011). Does Labour Taxation Affect Unemployment? Croatian Worker in International Perspective. *Economic Research*, 24 (3), pp. 86-101.
21) Eichler, M. and Lechner, M. (2002). *An evaluation of public employment programmes in the East German state of Sachsen-Anhalt*. Labour Economics, 9(2), pp. 143–186.
22) European Commission, (2017). *European Semester: Thematic factsheet – Active labour market policies.* [online] Available at: https://ec.europa.eu/info/sites/default/files/european-semester_thematic-factsheet_active-labour-market-policies_en_0.pdf [Accessed 23.03.2021]
23) Fougere, D., Pradel, J. and Roger, M. (2005). Does job–search assistance affect search effort and outcomes? A microeconometric analysis of public versus private search methods. *IZA Discussion Paper* No. 1825. Bonn: Institute for the Study of Labor.
24) Gerfin, M. and Lechner, M. (2002). A microeconometric evaluation of the active labour market policy in Switzerland. *The Economic Journal,* 112(482), pp. 854–893.
25) Gerfin, M., Lechner, M. and Steiger, H. (2005). Does subsidised temporary employment get the unemployed back to work? An econometric analysis of two different schemes. *Labour Economics,* 12(6), pp. 807–835.
26) Hujer, T. and Caliendo, M. (2004). New evidence on the effects of job creation schemes in Germany – A matching approach with threefold heterogeneity. *Research in Economics*, 58(4), pp. 257–302.
27) Hujer, T., Thomsen, S. and Zeiss, C. (2006). The effects of short–term training measures on the individual unemployment duration in West Germany. *ZEW Discussion Papers* 06-065, ZEW - Leibniz Centre for European Economic Research.
28) Kluve, J. (2010). The effectiveness of European active labor market programs. *Labour Economics,* 17(6), pp. 904–918.
29) Kluve, J., Lehmann, H. and Schmidt, C. M. (1999). Active labor market policies in Poland: human capital enhancement, stigmatization or benefit churning? *Journal of Comparative Economics*, 27(1), pp. 61–89.
30) Card, D., Kluve, J. and Weber, A. (2018). What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations. *Journal of the European Economic Association,* 16(3), pp. 894-931.

31) Kring, S. A. (2017). *Gender in employment policies and programmes: What works for women?* Employment Working Paper No. 235. Geneva: International Labour Office, Employment Policy Department.
32) Lalive, R., van Ours, J. C. and Zweimller, J. (2008). The Impact of Active Labor Market Programs and Benefit Entitlement Rules on the Duration of Unemployment. *Economic Journal*, 118(525), pp. 235–257.
33) Lechner, M., Miquel, T. and Wunsch, C. (2011). Long–run effects of public sector sponsored training in West Germany. *Journal of the European Economic Association,* 9(4), pp. 742-784.
34) Leschke, J. (2007). Gender Differences in Unemployment Insurance Coverage: A Comparative Analysis. *Discussion Papers*, Research Unit: Labor Market Policy and Employment SP I 2007-106, WZB Berlin Social Science Center.
35) Martin, J. P. (2000). What Works Among Active Labour Market Policies: Evidence from OECD Countries' Experiences. *OECD Economic Studies No. 30,* OECD.
36) Martin, J. P. and Grubb, D. (2001). What works and for whom: a review of OECD countries experiences with active labour market policies. *Swedish Economic Policy Review*, 8, pp. 9-56.
37) Martin, J. P. (2014). Activation and active labour market policies in OECD countries: stylised facts and evidence on their effectiveness. *IZA Policy Paper* No. 84. Bonn: Institute for the Study of Labor.
38) Meyer, D. and Sanusi, A. K. (2019). A Causality Analysis of the Relationships Between Gross Fixed Capital Formation, Economic Growth and Employment in South Africa. *Studia Universitatis Babes-Bolyai Oeconomica,* 64(1), pp. 33-44.
39) Michaelides, M. and Mueser, P. R. (2013). The Role of Industry and Occupation in Recent US Unemployment Differentials by Gender, Race, and Ethnicity. *Eastern Economic Journal,* 39(3), pp. 358-386.
40) Morlok, M., Meier, H. and von Arx, R. (2016). *Business Environment Reform and Labour Productivity*. Donor Committee for Enterprise Development (DCED) [online] Available at: https://www.enterprise-development.org/wp-content/uploads/BEWG-BER-and-Labour-Productivity-Report-FINAL.pdf [Accessed 22.03.2021].
41) Munteanu, V., Bucur-Sabo, M., Irimia, M. and Butnaru, A. (2005). *Economie [Economics].* Iasi: Sedcom Libris.
42) Nie, J. and Struby, E. (2011). Would Active Labor Market Policies Help Combat High U.S. Unemployment? *Economic Review* Third Quarter, Federal Reserve Bank of Kansas City.
43) Nikulin, D. (2015). Relationship between wages, Labour productivity and unemployment rate in new EU member countries. Journal of International Studies, 8(1), pp. 31-40.
44) Otobe, N. (2014). *Resource guide on gender issues in employment and labour market policies. Working towards women's economic empowerment and gender equality*. International Labour Office, Employment and Labour Market Policies Branch, Employment Policy Department.
45) Owyang, M., Sekhposyan, T. and Vermann, K. E. (2013). Output and unemployment: how do they relate today? *The Regional Economist*, Federal Reserve Bank of St. Louis. [online] Available at: https://www.stlouisfed.org/publications/

regional-economist/october-2013/output-and-unemployment-how-do-they-relate-today [Accessed 10.03.2021].

46) Pinelli, D., Torre, R., Pace, L., Cassio, L. and Arpaia, A. (2017). The Recent Reform of the Labour Market in Italy: A Review. *European Economy - Discussion Papers 2015 - 072,* Directorate General Economic and Financial Affairs, European Commission.
47) Pissarides, C. A. (1985). Taxes, subsidies and equilibrium unemployment. *Review of Economic Studies,* 52 (1), pp. 121-133.
48) Pissarides, C. A. (2013). Unemployment in the Great Recession. *Economica,* 80(319), pp. 385-403.
49) Richardson, K. and van den Berg, G. J. (2006). Swedish labor market training and the duration of unemployment. *IZA DP* No. 2314. Bonn: Institute for the Study of Labor.
50) Rollnik-Sadowska, E. and Dąbrowska, E. (2018). Cluster analysis of effectiveness of labour market policy in the European Union. *Oeconomia Copernicana*, 9(1), pp. 143–158.
51) Rotar, L. J. (2018). The Effects of Expenditures for Labour Market Policy on Unemployment Rate. *Business Systems Research Journal,* 9(1), pp. 55-64.
52) Rowthorn, R. (1995). Capital formation and unemployment. *Oxford Review of Economic Policy*, 11(1), pp. 26-39.
53) Sahnoun, M. and Abdennadher, C. (2018). The assessment of active labor market policies: evidence from OECD countries. *Economia Politica: Journal of Analytical and Institutional Economics,* 35(2), pp. 257-283.
54) Trehan, B. (2001). Unemployment and Productivity. *FRBSF Economic Letter,* Federal Reserve Bank of San Francisco, issue oct12.
55) Van Ours, J. C. (2004). The locking–in effect of subsidized jobs. *Journal of Comparative Economics,* 32(1), pp. 37–55.
56) Vooren, M., Harelermans, C. and Groot, W. (2019). The effectiveness of active labor market policies: a meta- analysis. *Journal of Economic Surveys,* 33(1), pp. 125–149.
57) Weber, A. and Hofer, H. (2004). Are job search programs a promising tool? A microeconomic evaluation for Austria. *IZA Discussion Paper* No. 1075. Bonn: Institute for the Study of Labor.
58) Woźniak, M. (2016). Job placement agencies in an artificial labor market. *Economics: The Open-Access, Open- Assessment E-Journal*, 10(2016-29), pp. 1–53.
59) Zhang, T. (2003). *Identifying treatment effects of active labour market programmes for Norwegian adults (Memorandum, 26/2003).* Oslo, Norway: Oslo University, Department of Economics.
60) Zieliński, M. (2015). Unemployment and Labor Market Policy in Visegrad Group Countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 10(3), pp. 185-201.

THE IMPACT OF COVID19 PANDEMIC ON THE SUSTAINABILITY OF SMALL AND MEDIUM ENTREPRISES

OTILIA-ROXANA OPREA
Alexandru Ioan Cuza University of Iași
Iași, Romania
otiliaoprea40@gmail.com

Abstract
The coronavirus crisis has affected Member States in a sudden and dramatic way, with a potentially major impact on their societies and economies. This has led to a sharp decline in economic activity, which may be exacerbated by liquidity constraints as companies struggle to pay their suppliers and employees. The purpose of this paper is to investigate the impact of Covid19 pandemic on the sustainability of the SMEs. . We used fixed effects methodology for times series data for the EU 28 countries during 2018-2020. We find that the main factors through which the pandemic contribute significantly and positively to SMEs are per capita income financial transactions and value added, and the variables which has a significant but negative influence are the number of Covid19 cases and labor productivity.
Keywords: *pandemic; sustainability; SMEs; crisis; economy.*
JEL Classification: E51, E42, G01, G11

1. INTRODUCTION

Significant and rapid interventions are needed in health care systems, allowing them to operate under considerable stress, for SMEs that often have lower margins, to cushion the negative consequences on labor markets and other vulnerable parts of the economies.

This is an EU-wide issue that requires all available resources, at EU and Member State level, to be mobilized to overcome the unprecedented challenges of the COVID-19 outbreak.

The COVID-19 pandemic affects and will affect activities for a long time economic and social development in Romania and internationally. This aspect is supported by evolution COVID-19 infestations globally and in countries in different areas geographical.

Its functioning is a concrete expression of genuine solidarity, through which Member States agree to support each other by providing additional financial resources through the EU budget.

2. THEORETICAL BACKGROUND

The European Commission is therefore proposing a "Coronavirus Response Investment Initiative" aimed at promoting investment by mobilizing available cash reserves in European Structural Funds and Investment Funds to combat the crisis immediately. The investment will be considerable and will quickly reach over 37 billion euros. (European Commission, 2020c)

The EU Solidarity Fund (EUSF) can play an important role in showing solidarity with Member States in addressing the emergency.

The main objectives of the EUSF are to address major public health emergencies and to define specific operations eligible for funding.

The proposal is part of the measures responding to the current pandemic and is based on an existing policy instrument.

By broadening the scope of the current EUSF, it closes a gap in current legislation and allows for comprehensive Union action in response to major public health emergencies.

Consistency with the other policies of the Union, in particular cohesion policy, is ensured by a number of legislative provisions which exclude double financing and require compliance with public procurement rules and the principle of sound financial management. (European Commission, 2020c)

The COVID-19 pandemic is severely affecting small and medium-sized enterprises around the world, with measures to combat it by blocking and quarantining leading to severe declines in the use of production capacity, disrupting supply chains, leading to a lack of materials and intermediate goods. (OECD, 2020)

There is a dramatic and sudden decrease in demand and, therefore, in revenues, which severely affects their ability to operate due to lack of liquidity, SMEs being more vulnerable to "social distancing" than other types of companies. (Dodonov, 2020)

The situation of active companies in Romania will worsen according to the opinion of the Association of Financial Analysts, and a first solution could be to subsidize interest rates that will register an upward energy trend. (European Commission, 2020d)

Romanian SMEs operate mainly in the national framework, few being engaged in cross-border activities, but which can capitalize on opportunities generated by EU membership, using the existing organizational and legislative framework such as:

The Small Business Act (SBA), which aims to integrate the various instruments based on the European Charter for SMEs and a policy for growth and employment:

- Access to European funding (European Investment Bank and European Investment Fund);
- SMEs and the single market;

- EU networks for SMEs;
- Program for the competitiveness of SMEs;
- Measures to support SMEs in Romania during the crisis;
- Support for redundancies in SMEs and the self-employed with activities related to combating the pandemic;
- Waiver of reimbursement of unused pre-financing from the Structural Funds;
- Micro-mezzanine - the extent to which the state can become a shareholder in SMEs that can no longer repay a loan in 5 years;
- Increasing investment programs in support of SMEs;
- Accelerate the implementation of the aid scheme provided for in the "National Multiannual Microindustrialization Program"
- The use of the facilities provided by C.E. through the "Temporary Framework": direct grants or tax advantages, state-subsidized guarantees, public and private loans with subsidized interest rates, flexibility in export credits;
- Utilization of the facilities offered by the "European Enterprise Network - (EEN)" within the "European Economic Area" by young entrepreneurs;
- Granting Loans through the program "SME-INVEST ROMANIA" which allows SMEs in crisis to provide liquidity for current activity or investments, by accessing one or more loans. (Commission of the European Communities, 2008)

According to a study conducted by MKOR, 91% of Romanian companies feel affected by the COVID-19 epidemic, with an average total impact of -10.2% for 2020. This figure is in line with European Commission estimates, which forecast a decrease of - 7.5%, at the community level. (Cimpoca, 2020)

On 19 March 2020 the Commission adopted a temporary framework for State aid measures to support the economy. It allows Member States to make full use of the flexibility provided by state aid regulations to support the economy during this difficult time:

- ✓ Direct subsidies, selective tax advantages and advance payments;
- ✓ State guarantee of loans from corporate banks;
- ✓ Subsidized public loans for companies;
- ✓ Protective measures for banks targeting state aid to the real economy;
- ✓ Securing short-term export credits. (European Commission, 2020d)

Through the prism of investments, European Commission suggested high-priority investment needs to mitigate the socio-economic costs of the transition:

- ❖ investments in site regeneration and decontamination, land restoration and conversion projects;
- ❖ investments in the implementation of technology and infrastructure for clean energy at affordable prices, reduction of greenhouse gas emissions, energy efficiency and renewable energy;

- ❖ productive investments in SMEs, including start-ups, leading to economic diversification and reconversion;
- ❖ investments in the creation of new companies, including through business incubators and consulting services;
- ❖ investing in research and innovation activities and encouraging the transfer of advanced technologies;
- ❖ training and retraining of workers;
- ❖ job search assistance for jobseekers. (European Commission, 2020a)

Another measure to support SMEs in the context of the pandemic was proposed by the Ministry of Economy, Energy and Business Environment, in partnership with the Regional Agencies for Small and Medium Enterprises, attracting investment and export promotion and the Special Telecommunications Service through the project "financial support for SMEs affected by the COVID-19 pandemic through the integrated IT system - SME Recover", whose main purpose is to support SMEs affected by COVID-19 and aims to continue their activity in the next period taking into account the risks of economic recession. (European Commission, 2020b)

According to a report of GEEE7 (Dodonov, 2020), the results of the pandemic impact analysis show that worst affected are the transportation manufacturing, wholesale and retail sectors as well as professional activities, as more and more people are staying at home and avoiding crowded places like markets or public transport to prevent the spread of virus.

Although industrial, construction, services and trade were largely unaffected; accommodation, food services, entertainment and recreation sectors were severely affected as people stayed at home and avoided crowded and enclosed spaces to prevent exposure to the virus.

In April 2020, the Romanian business environment registered a dramatic decrease in what regarding the entrepreneurial initiative, compared to the same period last year, the number of establishment of companies reaching the lowest level in the last 5-10 years (National Office of Trade Register). Since the beginning of the current crisis, which severely affected the business environment, 22.5 billion euros lost from the turnover of companies, one million people went into technical unemployment and 35,000 companies in the HoReCa industry are closed. (Antonescu, 2020)

The European Commission has approved a RON 16 billion (approximately €3.3 billion) Romanian scheme to support small and medium-sized enterprises (SMEs) in the context of the coronavirus outbreak. The scheme was approved under the State aid Temporary Framework adopted by the Commission on 19 March 2020, as amended on 3 April 2020. (European Commission, 2020b)

For entrepreneurs, the International Labor Organization (ILO, 2020) proposed in a study six steps needed to develop the "Business Continuity Plan" (PCA) are:

Step 1: Identify your company's key products or services
Step 2: Set the PCA goal for your business.
Step 3: Assess the potential impact of disruptions on the company and employees
Step 4: List the actions you need to take to protect your business
Step 5: Make contact lists
Step 6: Maintain, review, and update your PCA on an ongoing basis

3. DATA AND METHODOLOGY FRAMEWORK

The studies carried out so far on this topic have used various methodologies.

For example, a study conducted by Gregurec, Furjan and Tomicic-Pupek (2020) used a content analysis on 89 articles the results of the study reveal the distribution of drivers and technologies between service sectors, and also states that the pandemic motivates SMEs to rethink their core competencies.

Another research made by the OECD analyzed the SMEs policy reponse for 60 countries and noticed that observed that the pandemic had different influences in the countries of the world and provided an inventory of countries' responses to promote SME resilience. (OECD, 2020)

GEEE-7 (Dodonov, 2020) analyzed in their study guidelines and best practices for micro-, small and medium enterprises in delivering energy-efficient products and in providing renewable energy equipment from 15 EU countries and noticed that business financing programs are fruitful because they give them security and delaying non-essential and non-priority projects until a future date is also a way to alleviate the crisis.

Antonescu (2020) analyzed the situation of small and medium enterprises in Romania both before and after the crisis generated by the pandemic, and she noted that SMEs are ahead of most great trials of the last three decades. This challenge comes with both negative aspects and some positive ones, which can turn into real opportunities for such an important sector in the economy of each country / region.

Another study analized differential impact of COVID-19 on SMEs across economic activities and countries, with the help of a structured questionnaire which was applied for companies from Central Asia (6 countries, 598 firms), Southeast Europe (3 countries, 184 firms) and Southern and Eastern Mediterranean (6 countries, 570 firms).

In this study, unlike most revised studies on this topic, we will use a multiple regression analysis over several periods and groups of countries. Also we will use regression analysis with fixed effects because it is the most suitable for our data according to statistical tests. The depedent variable will be the economic growth, expressed by GDP per capita, and the independent variables will be the number of Covid19 cases, interest rates, balance sheets, gross investments, per capita income, value added, financial transactions, labor productivity unemployment rate and budget deficit. We used as sample the EU countries for the period 2018-2020, quarterly data, unlike the other revised studies, to capture the situation both before and after the pandemic.

To analyze the impact of the pandemic on SMEs, we constructed two key hypotheses:

H1: *The pandemic has a significant influence on SMEs.*

H2: *The pandemic has a greater impact on SMEs in post-covid period.*

The equation for the fixed effects model has the following form:

$$ln_{GDP_{it}}=\beta_0+ \beta_1 * \mathrm{NUM} + \beta_2 * \mathrm{INT}+\beta_3 * \mathrm{INC}+\beta_4 * \mathrm{BAL}+\beta_5 * \mathrm{INV}+\beta_7 * \mathrm{VAL} + \beta_{11} * \mathrm{FIN} +\beta_{13} * \mathrm{LAB} + \beta_{14} * \mathrm{UNEM} + \beta_{14} * \mathrm{BUD}+ \alpha_i + \varepsilon_{it} \quad (1)$$

Where: NUM - number of Covid19 cases; INT - interest rates; INC - per capita income; INV - gross investments; VAL - value added; FIN - financial transactions; LAB - labor productivity; UNEM - unemployment rates; BUD - budget deficit.

4. RESULTS

Given that the data is not normally distributed, according to the Shapiro Wilk test and the Shewkness Kurtosis test, and is unbalanced, and to eliminate the estimation risks, we decided to eliminate the extreme values (outliers) through the winorization (setting) process. data at the level of 1% (keeping data between the 1% percentile and the 99% percentile). Descriptive statistics are presented in Table 1.

Table 1. Descriptive statistics

Variables	Obs.	Mean	Std.Dev.	Min	Max
GDP	308	143111.9	2122884.6	2782.5	872335
NUM	154	1409124	4190751	14958	2.24
INT	308	0.94794	1.1949	-0.54	4.87
INC	308	147290.3	216858.7	2773	891942
UNEM	308	579.4416	868.7857	9	3796
BUD	308	-1.54107	4.95248	-25.9	7.7
BAL	308	6923366	1.02	118944	3.95
INV	308	174168	592877	630.5	3804216
VAL	308	128316	191255	258.3	799480
FIN	308	60732.33	196814	-482417	1551137
LAB	308	109.717	15.543	74.8	168.7

Source: authors' calculations

We estimated several models with the variables proposed in the methodology section to see if the results are similar. We also applied some tests for time series models (heteroskedasticity, serial correlation and unit root tests) to validate them. To control the autocorrelation, heteroskedasticity and serial correlation we used according to the Driscoll-Kraay model the robust covariance matrix. Regarding multicollinearity, which could be a problem in a regression analysis, if present, we calculated the VIF test, whose values are below 3, so I can say that there are no multicollinearity problems for our models, not being necessary excluding variables from the model. We performed the Hausman test to select between random and fixed effects models, and the probability is 0.00 <0.05 for all models, so those with fixed effects are more suitable. Tests are available on demand. The 3 estimated models use the same variables, the difference between them being that they are applied on different samples.

Table 2. Initial database

Independent variables	Fixed effects regression
NUM	-0.0012 (0.0001)***
INT	0.94 (0.73)
INC	0.97 (0.003)***
BAL	0.00006 (0.00007)
INV	0.003 (0.0005)
VAL	1.107 (0.004)***
FIN	0.005 (0.002)**
UNEM	-0.31 (0.61)
BUD	84 (70)
LAB	-104 (24)***
R squared	0.99
F statistic	0.23
Obs.	308

*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors are in parentheses

Source: authors' calculations

Model 1, which was estimated for the entire database, (Table 2) shows that the variables that have a positive and significant influence are per capita income, financial transactions, and the variables that have a significant but negative influence are the number of covid cases, value added and labor productivity. Per capita income have a great impact because, in the pandemic period, the economy has been affected, which led to a reduction in the standard of living and quality of life of the population. The term "value-added" describes the economic enhancement a company gives its products or services before offering them to customers. It negatively influences the sustainability of SMEs because according to previous studies, VAT is considered harmful to SMEs, representing the direct source of government revenue from which government leaders finance the provision of social, social and economic services. Due to the pandemic, many companies have seen their revenues fall, while still incurring fixed operating costs and trying to operate remotely from home offices, which has led to significant VAT problems, a sharp drop in it. (Corbett, 2020) The financial transactions also was affected by the pandemic period, because following the global outbreak of

COVID-19, many companies are struggling with liquidity and are therefore exploiting intra-group financial arrangements to support the necessary cash mobilization and cash prioritization. This can be, if not done with due diligence, a significant source of exposure to tax risk. (EY Denmark, 2020)

Models 2 and 3 were estimated for two distinct periods, namely the pre-covid (Table 3) and post-covid periods (Table 4). We can see that, in the pre-covid period, the variables that have a positive and significant influence are per capita income, value added and financial transactions, and in the post-covid period, the variables that have a positive and significant influence are the same. The variables which have a negative and significant impact are the number of Covid19 cases in the post-covid period and labor productivity in both models.

Table. 3 PRE-COVID

Independent variables	Fixed effects regression
NUM	
INT	306 (298)
INC	0.97 (0.001)***
BAL	0.0001 (0.0001)
INV	0.0002 (0.001)
VAL	1.09 (0.008)***
FIN	0.014 (0.004)***
UNEM	0.44 (1.03)
BUD	-61 (162)
LAB	-150 (43)***
R squared	0.99
F statistic	43
Obs.	133

*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors are in parentheses

Source: authors' calculations

Table 4. POST-COVID

Independent variables	Fixed effects regression
NUM	-0.005 (0.002)***
INT	-198 (834)
INC	0.95 (0.01)
BAL	-0.00005 (0.00009)
INV	0.0003 (0.0006)
VAL	1.11 (0.005)***
FIN	0.007 (0.002)***
UNEM	-1.02 (0.74)
BUD	125 (82)
LAB	-95 (27)***
R squared	0.99

Independent variables	Fixed effects regression
F statistic	45
Obs.	157

*** p<0.01, ** p<0.05, * p<0.1 Robust standard errors are in parentheses

Source: authors' calculations

The countries with higher number of confirmed cases provide more economic stimulus, because COVID-19 is a pandemic and thus to mitigate the negative effects, countries must provide sufficient economic stimulus regardless of their GDP. (Siddik, 2020) Also the spread of COVID-19 cases led to the closure of the workplaces, as well millions of workers lost part or all of their incomes. Those who continued to work had to accept shorter hours and/or wage cuts in different industries such as airlines, retail and accommodation, food services, or the textile and garment sectors, which are highly feminized sectors. (ILO, 2020; OECD, 2020) The measures taken so far by the Government, including ensuring the payment of technical unemployment amounting to 75% of the gross salary of the employee, but not more than 75% of the average gross salary, guaranteeing investment loans and ensuring working capital for SMEs- with subsidized state interest, they aim to save as many companies as possible, but they cannot save them all. (European Comission, 2020d) Labor productivity have a significant and negative influence because a major impact on the formation of the labor market is considered the differentiation of the level of labor productivity with a direct impact on wages. The motivation of workers from different sectors of the economy can determine the orientation toward more prestigious and better paid industries. However, increasing labor productivity, mechanization, automation and digitization of the economy were considered factors that contribute to the reduction of labor. The COVID-19 pandemic paradoxically leads to the accentuation of these factors, being able to be a source of economic recovery (Rădulescu *et al.,* 2021) Also we can say that this long period will also have negative effects in several ways, including declining investment, the erosion of human capital due to unemployment and school loss, and a possible withdrawal from global trade and supply links. These effects can reduce productivity and limit the ability of economies to generate real long-term revenue growth. (Dieppe, 2020)

5. CONCLUSIONS

The SME sector is one of the most affected sectors during the Covid-19 crisis, both in Romania and globally.

In Romania, measures to support the SME sector reach a percentage of 2% of GDP, while in other countries the aid granted amounts to about 10% of GDP.

During this period, a very good communication from the Government on the measures for the SME sector is needed, but also a good collaboration with the business environment, in order to identify, along the way, the needs and problems that have arisen.

The Covid-19 crisis is a different kind of crisis than in 2008 and the role of the decision-maker for this sector to restart its activity and contribute to the relaunch of economic growth is vital.

Much of the attention paid so far to tax authorities, governments and policy makers has focused on the immediate response measures needed to manage the emergency and crisis mitigation phases. Attention in some parts of the world is slowly shifting to measures to stimulate recovery and, beyond that, to long-term book balancing mechanisms. These developments could give impetus to governments to take difficult political steps so far to reform, simplify and positively improve global VAT / GST systems.

To deal with the crisis caused by the pandemic, financial services institutions (banking and capital markets, insurance and asset management) should monitor the effective distribution of profits or losses by combining existing pricing with results testing approaches (especially for asset sharing agreements in the asset management sector). or profit models divided into the banking sector) to monitor the actual distribution of profits / losses between the various entities / branches and group jurisdictions. Also, in order to cope with the cash shortage, it may be necessary to change the settlement practices between companies, as the delay in settlement should be similarly examined to changes in debt instruments.

The SMEs will have to adopt several requirements such as: a willingness to give up the traditional type of management, possible, by identifying and accepting new challenges, building an organizational structure regarding the learning process and the adoption process of new technologies along with the innovation involved within all domains, which leads to management innovation, a segment that is directly related to the organizational facet of the company.

The originality of this paper consists in performing a sub-sample analysis, ie the pre-covid and post-covid period, for 3 years, the use of quarterly data, as well as the use of variables that were not used in the revised studies on this topic, such as balance sheets, budget deficit, value added, financial transactions and labor productivity.

References

1) Antonescu, D. (2020). *The Small and Medium Enterprises Sector during the COVID-19 crisis. The Case of Romania*. [online] Available at: https://mpra.ub.uni-muenchen.de/100295/1/MPRA_paper_100293.pdf [Accessed 15.02.2020].
2) Cimpoca, C. (2020). *Market Report: Diversity and Inclusion in Romanian Organizations 2020. MKOR Report*. [online] Available at: https://mkor.eu/research/diversity-inclusion-romanian-organizations-2020/ [Accessed 18.03.2020].
3) Commission of the European Communities, (2008). *Commission Staff Working Document. Annex to the Report from the Commission. Fifth Report on Citizenship of*

the Union (1 May 2004 - 30 June 2007). {COM(2008) 85 final}. [online] Available at: http://aei.pitt.edu/45860/1/SEC_(2008)_197.pdf [Accessed 07.03.2020].

4) Corbett, T. (2020). *The impact of COVID-19 on VAT/GST regimes: Five areas that could change.* [online] Available at: https://www.pwc.com/gx/en/services/tax /publications/the-impact-of-covid-19-on-vat-gst-regimes.html [Accessed 07.03.2021].
5) Dieppe, A. (2020). *Global Productivity: Trends, Drivers, and Policies*. Washington, D. C.: The World Bank. [online] Available at: https://openknowledge. worldbank.org/handle/10986/34015 [Accessed 6.004.2020].
6) Dodonov, A. (2020). *Guidelines and best practices for micro-, small and medium enterprises in delivering energy-efficient products and in providing renewable energy equipment. GEEE-7/2020/INF.4.* [online] Available at: https://unece.org/sites/default/files/2020-12/GEEE-7.2020.INF_.4-E.pdf [Accessed 9.04.2020].
7) European Commission, (2020a). *Country Report Romania*. [online] Available at: https://eur-lex.europa.eu/legalcontent/EN/TXT/?qid=1584543810241&uri= CELEX%3A52020SC0522 [Accessed 19.03.2020].
8) European Commission, (2020b). *Coronavirus Response. UE press release.* [online] Available at: https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response_en [Accessed 18.04.2020].
9) European Commission, (2020c). *Proposal for a Regulation of The European Parliament and of The Council establishing the criteria and mechanisms for determining the Member State responsible for examining an application for international protection lodged in one of the Member States by a third-country national or a stateless person (recast).* COM/2016/0270 final/2 - 2016/0133 (COD). [online] Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri= CELEX%3A52016PC0270%2801%29 [Accessed 06.04.2020].
10) European Commission, (2020d). *Policy measures taken against the spread and impact of the coronavirus*. [online] Available at: https://ec.europa.eu/info/sites/ default/files/coronovirus_policy_measures_12_february_2021.pdf [Accessed 18.03.2020].
11) EY Denmark, (2020). *Transparency Report 2020*. [online] Available at: https://assets.ey.com/content/dam/ey-sites/ey-com/da_dk/home-index/pdf/ey-denmark-transparency-report-2020.pdf [Accessed 17.04.2020].
12) Gregurec, I., Furjan, M. T. and Tomicic-Pupek, K. (2021). The Impact of COVID-19 on Sustainable Business Models in SMEs. *Sustainability*, 13(3), 1098, https://doi.org/10.3390/su13031098.
13) ILO, (2020). *"Planul de continuitate a afacerii" în 6 pași, în contextul pandemiei COVID-19.* [online] Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---act_emp/documents/publication/wcms_748495.pdf [Accessed 16.04.2020].
14) OECD, (2020). *Coronavirus (COVID-19): SME policy responses*. [online] Available at: https://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/ [Accessed 18.04.2020].

15) Rădulescu, C. V., Lădaru, G-R., Burlacu, S., Constantin, F., Ioanăș, C. and Petre I. L. (2021). Impact of the COVID-19 Pandemic on the Romanian Labor Market. *Sustainability*, 13(1), 271. https://doi.org/10.3390/su13010271.
16) Siddik, N. A. (2020). Economic stimulus for COVID-19 pandemic and its determinants: evidence from cross-country analysis. *Heliyon*, 6(12), e05634.

MISLEADING AND COMPARATIVE ADVERTISING IN CONSUMER RELATIONSHIPS

OLESEA PLOTNIC
Academy of Economic Studies of Moldova
Chișinău, Republic of Moldova
plotnicolesea.aum@gmail.com

RODICA CRUDU
Academy of Economic Studies of Moldova
Chișinău, Republic of Moldova
crudu.rodica@ase.md

PASCARI ROMAN
National Consortium of Educational Institutions Academy of Economic Studies of Moldova and University of European Political and Economic Studies "Constantin Stere"
Chişinău, Republic of Moldova
roman.pascari@gmail.com

Abstract
Misleading and comparative advertising, in fact like other unfair consumer practices, has become increasingly diverse in recent years, including with the application of information technology. But the countermeasures have also become more effective, largely due to the aspirations of European integration and the signing of the Association Agreement of the Republic of Moldova with the European Union (Association Agreement of 27.06.2014).
These important processes have brought significant results, and finding that consumer protection in the field of misleading and comparative advertising in the Republic of Moldova was regulated below European standards, and essential regulations to ensure consumer interests were lacking, efforts were made to significantly improve legislation. through a broad process of harmonizing it with European Union legislation.
The most important regulations in the field of misleading and comparative advertising can be found both in the national legislation, such as the Law on Advertising no. 1227 of 27.06.1997, the Law on Consumer Protection no. 105 of 13.03.2003 and the Competition Law no. 183 of 11.07.2012, as well as in the legislation of the European Union, the Directive of the European Parliament and of the Council on misleading and comparative advertising no. 2006 / 114 / EEC of 12.12.2006.
An essential role in regulating misleading and comparative advertising is also represented by the adoption of Law no. 133 of 15 November 2018 on the modernization of the Civil

Code and the amendment of some legislative acts, which entered into force on March 1, 2019.
The aim of the study is to analyze both national regulations and European Union legislation, as well as unfair practices used by economic agents in misleading and comparative advertising.
Keywords: *consumer; misleading advertising; regulations; comparative advertising.*
JEL Classification: K12, K20

1. GENERAL ASPECTS

The subject of misleading and comparative advertising is more and more current, and a catalyst has also served the pandemic period, in which consumers in everyday life began to use information technologies much more often, being invaded with various offers, proposals, advertisements. , which promise products and services to a certain quality standard. However, most of the time the intention is to mislead the consumer into getting them to buy various products or services. And the result is that consumers still fall into the trap of misleading and comparative advertising.

However, it is very important to make the effort of both national and European authorities to counter this phenomenon through clear regulations, which conclude that misleading advertising is prohibited and must meet certain conditions.

One of the main objectives is that consumers need to be informed about their rights, but the right of professionals to have a clear regulation on how to legally promote their business should not be neglected.

It should be noted that advertising is nothing more than a form of communication between professionals and consumers, carried out within an activity, and the purpose of advertising is to promote the provision of products or services.

In order to stimulate fair competition and protect consumers, this commercial practice is regulated by normative acts at both national and European level, and the main theses are: to formally prohibit any misleading advertising, to prohibit any advertising practice that promotes unfair competition and comparative advertising is subject to strict conditions.

Consequently, any professional, natural or legal person engaged in commercial or industrial activities must comply with the provisions governing advertising.

2. MISLEADING AND COMPARATIVE ADVERTISING REGULATIONS

Following the establishment of the European Economic Community - EEC, which also aimed to create a common market, a consumer protection policy was gradually developed, enshrined with the adoption of the Single European Act and having as main instruments both the strategic framework and the secondary legislation adopted, rules, standards and norms introduced, associations and committees set up, as well as other common competition policies. From the point of view of the Community institutions, the responsibility in this area lies with the European Commission, the European Parliament and the Council of Ministers.

Thus, the achievement of the objectives of the European Economic Community and then of the Single Internal Market made the need for common policies appear alongside the common market. Among the horizontal policies introduced with the Single European Act, the consumer protection policy can also be highlighted.

The Republic of Moldova began to lay the foundations for the transposition of European Union legislation into national law with the signing of the Partnership and Cooperation Agreement between the European Communities and their Member States, of the one part, and the Republic of Moldova, of the other part, on 28 November 1994 (CPA), which entered into force on 1 July 1998 for an initial period of 10 years with the possibility of tacit extension.

Areas of regulation of the Partnership and Cooperation Agreement has been the legal framework for bilateral relations between the Republic of Moldova and the European Union in various fields, including political, commercial, economic, legal, cultural and scientific. The main objective was to support the Republic of Moldova for the consolidation of democracy and the rule of law with respect for human and minority rights by ensuring the appropriate framework of political dialogue; sustainable development of the economy and completion of the transition to a market economy by promoting trade, investment and harmonious economic relations.

The next step closer to the Republic of Moldova with the European Union was the Action Plan Republic of Moldova - European Union, developed within the European Neighborhood Policy and adopted at the Cooperation Council on February 22, 2005 (The Action Plan Republic of Moldova - European Union, p. 401).

The Republic of Moldova - European Union Action Plan was replaced in 2014 by the Association Agenda, agreed on the basis of the Association Agreement between the Republic of Moldova, on the one hand, and the European Union and the European Atomic Energy Community and their Member States, on the other. another part, from June 27, 2014, and ratified by Law no. 112 of July 2, 2014.

From the analysis of the legislation of the European Union we also highlight an increased concern for the improvement of the European regulatory framework in order to standardize the national regulations of the member countries in the field of consumer law, including in terms of misleading and comparative advertising. This is because at European level, at present, there are major inconsistencies between the laws in force in the Member States regarding misleading advertising.

In order to improve the European regulatory framework and the need to standardize the regulations of the Member States in the field of consumer law, several Directives have been adopted which contain important aspects governing misleading and comparative advertising.

To that end, Council Directive 87/102 / EEC on the harmonization of the laws, regulations and administrative provisions of the Member States relating to consumer credit was adopted on 22 December 1986 (Law no. 133 of November 15, 2018). Subsequently, Directive 98/7 / EC amending Directive 87/102 / EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to consumer credit was adopted.

In the following years, several directives containing important aspects of consumer rights have been adopted by the European Parliament and the Council in order to improve the European regulatory framework and the importance of the need to standardize the regulations of the Member States in the field of consumer law.

Acts which need to be inserted include Directive 2005/29 / EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450 / EEC , Directive 97/7 / EC, 98/27 / EC and 2002/65 / EC of the European Parliament and of the Council and Regulation (EC) No. 2006 / 2004 of the European Parliament and of the Council, published in the Official Journal of the European Union (JO) no. L 149/22 of 11 June 2005.

Another important act is the EU Directive no. 2006/ 114/ EEC of 12.12.2006 has a direct effect on the proper functioning of the internal market, so that misleading and illegal comparative advertising can lead to distortions of competition in the internal market. However, advertising goes beyond the borders of the Member States.

Advertising, whether or not it determines the conclusion of a contract, affects the economic situation of consumers but also of traders, so that differences between Member States' legislation on misleading advertising prevent advertising campaigns from being carried out outside national borders, thereby affecting the free movement of goods; of the provision of services.

In this way, we highlight the regulations of the European Parliament and Council Directive on misleading and comparative advertising no. 2006/ 114 / EEC of 12.12.2006, which in art.2 establishes that "advertising" means any form of presentation of a commercial, industrial, artisanal or liberal activity for the purpose of promoting the supply of goods or services, including real estate , rights and obligations.

At the same time, the notion of "misleading advertising" is regulated, which means any advertising which, in any way, including by way of presentation, misleads or may mislead the persons to whom it is addressed or who come into contact with it and who, due to its nature misleading, may affect their economic behavior or which, for these reasons, harms or may harm a competitor.

An important notion covered by Directive 2006/114 / EEC of the European Parliament and of the Council of 12 December 2006 is "comparative advertising" which means any advertising which explicitly or implicitly identifies a competitor or the goods or services offered by it.

Because misleading advertising is likely to significantly distort a consumer's economic behavior, it is expressly prohibited by law at national level.

Or, such regulations are found in several national normative acts, among which the Law on Advertising no. 1227 of 27.06.1997, the Law on Consumer Protection no. 105 of 13.03.2003, Competition Law no. 183 of 11.07.2012.

Thus, art.1 of the Law on Advertising no. 1227 of 27.06.1997, establishes that, “advertising (advertisement)” is that public information about persons, goods (works, services), ideas or initiatives (advertising information, material advertising) meant to arouse and sustain the public interest towards them, to contribute to their commercialization and to raise the prestige of the producer.

The same article regulates the notion of "inappropriate advertising", according to which it represents dishonest, inauthentic, camouflaged, amoral, sexist advertising and any other advertising of similar origin (Law no. 1227 of 27.06.1997).

Law on consumer protection no. 105 of 13.03.2003 in the part related to combating the incorrect practices of traders in relation to consumers and harmonization of regulations with European legislation on consumer protection, provides in art.1 that, "commercial practices (practices of traders in relation to consumers)" is any action, omission, conduct, declaration or commercial communication, including advertising and marketing, carried out by a trader in close connection with the promotion, sale or supply of a product to consumers.

Subsequently, there are regulations regarding "declared requirements" which are any public statements regarding the main characteristics of the products made by the seller, manufacturer or his authorized representative, in particular through advertising or labeling.

At the same time, it is important to insert what, from the regulations provided in art. 13 paragraph (7) letter a) of Law no. 105/2003, it appears that commercial practice is considered as a deceptive action if, in the context of the situation. in fact, and taking into account all the characteristics and circumstances, this practice determines or is likely to cause the average consumer to make a trading decision that he would not otherwise have taken and whether this practice involves any commercial activity on the product, including comparative advertising. , creating confusion with another product, brand, name or other distinguishing marks of a competitor.

It is considered misleading, in any case, to use an editorial context in the media in order to promote a product for which the advertiser has paid, but without the advertising being clearly stated either in the content or through images or sounds easily accessible. identified by the consumer (disguised advertising).

At the same time, they are considered aggressive, in any case, the commercial practice regarding the inclusion in an advertisement of a direct exhortation addressed to minors to buy the promoted products or to convince the parents or other adults to buy the promoted products).

In the same order of ideas, we mention the role of the Competition Council in the field of advertising, and the limits of competence being inserted in the Competition Law no. 183 of 11.07.2012.

Thus, according to the mentioned normative act, the Competition Council is an autonomous public authority, responsible to the Parliament, which ensures the application and observance of the legislation in the field of competition, state aid and publicity within the limits of its competence.

The purpose of the activity of the Competition Council is to ensure the observance of the legislation in the field of competition, through actions to prevent anti-competitive practices, to eliminate competitive violations, to promote and increase the competitive culture.

The formation of a fair competitive environment is an important mission, because only with the joint efforts of the business environment, state authorities, the media, civil society and obviously the Competition Council can a fair competitive environment be maintained.

Among the main concerns of the Competition Council in the field of advertising are: the development of self-regulation in the field of advertising; the peculiarities of placing outdoor advertising; the development of the advertising field during the triggering of the COVID-2019 pandemic and the practice of the competent authorities in counteracting illegal advertising, etc.

3. MISLEADING AND COMPARATIVE ADVERTISING

Misleading advertising, by definition, means any advertising which, in any way, including its presentation: misleads or is likely to mislead persons for whom it is intended or touches, affects or is likely to affect the economic behavior of persons is intended or achieved.

To determine whether an advertisement is misleading or not, the following characteristics of the goods or services are considered, such as: their availability; their nature; their execution; their composition; their quantity; their specifications; their geographical and commercial origin; the results that can be expected from their use; the results and essential characteristics of the tests or verifications carried out on these goods or services; the price of the goods or services or the method of calculating that price; the conditions for the supply of goods or services; the nature, qualities and rights of the advertiser, such as: his identity and heritage; his qualifications; its industrial, commercial or intellectual property rights; the awards he has received or his distinctions.

The legislation of the Republic of Moldova expressly regulates the types of prohibited misleading advertising, such as in art. 9 of the Law on Advertising no.

1227 of 27.06.1997, which stipulates that dishonest advertising, which: a) discredits natural and legal persons who do not use the goods advertised; b) contains incorrect comparisons of goods advertised with similar goods of another economic agent, as well as statements or images that harm the honor, dignity or professional reputation of the competitor; c) contains images of some persons, references to them or descriptions of their property, without their prior consent, by methods that leave the impression of confirmation by the persons concerned of the content of the advertising information.

Also, according to art. 10 of the Law on Advertising no. 1227 of 27.06.1997, non-authentic advertising is prohibited, it is considered advertising that contains data that do not correspond to reality regarding: a) some characteristics of the goods necessary for the consumer, obligatorily indicated on the commercial label: the quality, composition, date of manufacture, destination, consumer properties, conditions of use and care recommendations, compliance with the standard, the manufacturer's trademark, the origin and place of production of the goods; b) the presence of the certificate for the goods, the possibility of purchasing it, the price, the time and place of purchase, the additional payment conditions; c) transport, exchange, return, repair and servicing of the goods; d) warranty obligations, term of use or validity of the goods; e) the exceptional rights over the results of the intellectual activity and of the equivalent means of individualization of the natural and legal persons, as well as of the goods (work, service); f) the right to use state symbolism (flag, coat of arms, anthem); g) official recognition of the goods (works, services) advertised, appreciation with medals, awards, diplomas and other distinctions; h) extracts from the results of research and experiments, quotations from technical, scientific and other publications, scientific terms, use of outdated recommendations; i) selective statistical data, including those concerning the degree of demand for the respective goods.

Amoral advertising is regulated by art. 11 of the Law on Advertising no. 1227 of 27.06.1997 and is considered advertising that: a) violates the unanimously accepted norms of humanism and morality through offenses, comparisons and defamatory images regarding race, nationality, profession, social category, age, sex, language, religious, philosophical, political and other beliefs of individuals; b) defames the works of art that constitute the patrimony of the national and universal culture; c) discredits the state symbols (flag, coat of arms, anthem) and religious ones, the national currency of the Republic of Moldova and other states.

Another type of misleading advertising is sexist advertising, which according to art. 111 of Law no. 1227/1997 is considered sexist advertising that: a) presents the woman or man as a sexual object, in humiliating or degrading, violent situations and that offends human dignity; b) promotes sexist stereotypes for discriminatory purposes, maintaining the traditional perception of women as a weak, vulnerable and dependent being, having an inferior social position.

Camouflaged (disguised) advertising according to art. 12 of Law no. 1227 / 1997 is considered advertising that: a) exerts a disguised influence on the consumer with the aim of changing his economic behavior; b) other prohibited procedures.

At European level, according to the Directive of the European Parliament and of the Council on misleading and comparative advertising no. 2006/ 114 / EEC of 12.12.2006, advertising which misleads or may mislead the persons to whom it is addressed is prohibited. Its misleading nature may affect the economic behavior of consumers and traders or harm a competitor.

The misleading nature of advertising depends on a number of criteria: the characteristics of the goods and services (availability, composition or nature, method of manufacture or delivery, origin, etc.), the expected results of their use and the results of the quality controls performed; its price or method of calculation; the conditions under which the goods are distributed or the services are provided; the nature, duties and rights of the advertiser (identity and assets, industrial property rights, etc.).

Comparative advertising refers to any advertising that explicitly or implicitly identifies a competitor or goods or services offered by a competitor.

It is necessary to identify the conditions that allow comparative advertising. In this way, we identify the following conditions: not to be misleading; objectively compare one or more essential, relevant, verifiable and representative characteristics of the goods and services of which the price may form part; not to create confusion between the advertiser and a competitor or between the advertiser's and a competitor's trademarks, trade names, other distinctive signs, goods or services; not to discredit or denigrate the trademarks, trade names, other distinctive signs, goods, services, activities or situation of a competitor; refer, in the case of products with a designation of origin, to products with the same designation; not to take undue advantage of the notoriety attached to a trade mark, trade name or other distinguishing marks of a competitor or the designation of origin of competing products; not present a good or service as an imitation or reproduction of a good or service bearing a protected trademark or trade name.

Any comparison relating to a special offer must clearly and unequivocally indicate the date on which the special offer ends or, where applicable, that it is valid until the goods and services are exhausted. If the special offer has not yet started, the advertisement must indicate the start date of the period in which a special price or other specific conditions apply.

At European level, according to Directive of the European Parliament and of the Council on misleading and comparative advertising no. 2006/ 114 / EEC of 12.12.2006, comparative advertising refers to a competitor or to competing goods and services, explicitly or implicitly.

This type of advertising is only allowed if it is not misleading. Moreover, if it fulfills this condition, comparative advertising can be a legitimate means of informing consumers about their interest.

Thus, the comparisons must mainly: refer to goods or services that meet the same needs or are intended for the same purposes; to compare products with the same designation of origin; objectively address essential, relevant, verifiable and representative features of these goods or services, which may include the price; not to create confusion among merchants, not to discredit, not to imitate or take advantage of competing names or trademarks.

4. CONTROL OVER MISLEADING AND COMPARATIVE ADVERTISING

As far as ensuring the legitimate interests of individuals or organizations is concerned, European Union (EU) countries must ensure that they can take legal or administrative action against illicit advertising.

Thus, the courts or administrative bodies of EU countries must be able to: order the cessation of the broadcasting of illicit advertising, even in the absence of evidence of loss, actual damage or willful negligence; or prohibit illicit advertising that has not yet been broadcast.

In the Republic of Moldova, the Competition Council is one of the main authorities that exercises, within the limits of its competence, the state control over the implementation of the legislation on advertising, in terms of respecting the rights of economic agents.

According to the Competition Law no. 183 of 11.07.2012, the Competition Council has the following attributions: a) performs the publicity expertise regarding its compliance with the provisions of the legislation regarding advertising; b) sends to the advertising agents prescriptions for ceasing the violations of the legislation regarding the advertising; c) sends to the prosecution bodies, other law enforcement bodies, respecting the territorial principle and that of the competence, the materials for solving the problems regarding the initiation of actions related to the field of publicity.

At the same time, the Competition Council has the right to bring actions in court, including in the interests of an undetermined circle of advertising consumers, in connection with the violation of the legislation on advertising by advertisers, as well as on the cancellation of transactions related to inappropriate advertising.

It is also important that art. the necessary documents and other materials of the advertisers. The information that constitutes a trade secret, according to the Law on trade secret, obtained by the employees of the Competition Council may not be disclosed. In case of disclosure of such information, the damages caused will be repaired by the Competition Council in the manner established by the legislation (Law on Advertising no. 1227 of 27.06.1997).

Another actor in the field of advertising are Public Professional Organizations, which operate in the field of advertising - unions, associations of individuals and legal entities, and which have the right to bring, in the established manner, actions in the courts in the interests of advertising agents and consumers. case of violation of their rights under advertising law.

Relevant is that, art. 30 of the Law on Advertising no. 1227 of 27.06.1997, offers public professional organizations operating in the field of advertising a wide range of rights, such as: training in drafting laws and other acts regulations governing advertising activity; carrying out independent advertising expertise on its compliance with the provisions of the legislation on advertising and will send the respective recommendations to advertisers; their involvement by the Competition Council in exercising control over compliance with the legislation on advertising.

Public professional organizations operating in the field of advertising have the right to bring, in the established manner, actions in the courts in the interests of advertising agents and consumers in case of violation of their rights provided by the legislation on advertising.

5. CONCLUSIONS

Given that the purpose of establishing consumer protection rules results from the superiority of professionals in their relations with consumers, this difference sometimes creating a significant imbalance, the protection rules are intended to restore balance. In the absence of this position of superiority, the issue of consumer protection cannot be raised.

Consumers can exercise their right to be protected, through institutions empowered to protect consumer rights, or by bringing an action directly in court. It is necessary to note the obligation to exercise the positive burden of the state in determining the free access to justice of consumers by exemption from the payment of state tax, but also by the non-obligation to comply with the prior procedure.

Thus, referring to the free access to justice in the Republic of Moldova in terms of payments for state tax, it is attested that according to Article 6 letter (a) of Law No. 105 of March 13, 2003 on consumer protection, any consumer has the right to the protection of his rights by the state, which implies, including through the courts. In this context, art.31 paragraph (1) of Law no.105 of 13 March 2003 on consumer protection provides that actions on consumer protection may be filed in court by consumers themselves or their representatives, by public administration authorities ability or by public consumer associations.

With regard to disputes concerning consumers, it should be noted that in resolving this category of disputes, the principle will be highlighted, according to which consumers who purchase goods and services, should be protected against abuse of power by professionals, including against misleading advertising that leads to infringements of essential consumer rights.

In this way, any illicit advertising violates consumer rights, as it violates the requirement of good faith. However, an express regulation is contained in Article 11 of the Civil Code, which defines good faith as a standard of conduct of a party, characterized by fairness, honesty, openness and taking into account the interests of the other party to the legal relationship (Civil Code of the Republic of Moldova, no. 1107-XV of 06.06.2002).

Following the analysis of the national legislation on misleading and comparative advertising, it can be concluded that the legislation of the Republic of Moldova on the protection of consumer rights in this segment is largely harmonized with European Union legislation, and recent measures bring regulations relevant to providing consumers with effective regulatory protection.

The harmonization of legislation aims to maintain the trends of fully ensuring consumers with the best practices of European jurisprudence in order to ensure the effective exercise of consumer rights, including through control bodies and courts.

However, at the moment it is difficult to conclude unequivocally that in this category of disputes a uniform finding of national judicial practice has been reached, which at the moment is not yet able to offer sufficient guarantees for the full realization of consumer rights in the Republic of Moldova. .

The conclusions set out above are also based on the study of national judicial practice, including in disputes concerning misleading and comparative advertising. However, the national courts, having a rich jurisprudence of the Court of Justice of the European Union, must exercise the positive task of the state in ensuring the full exercise of consumer rights.

ACKNOWLEDGEMENTS

This article was developed within the project Jean Monnet Chair in EU policies for protection of the consumer economic interests/EU4CONS ref. no. 599823-EPP-1-2018-1-MD-EPPJMO-CHAIR is part of the Erasmus + program funded by the European Union, implemented with the financial support of the Erasmus + program of the European Union. "The support provided by the European Commission for the development of this publication does not constitute an endorsement of the content, which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."

References

1) Association Agreement between the Republic of Moldova, on the one hand, and the European Union and the European Atomic Energy Community and their Member States, on the other hand, of 27.06.2014, published in the Official Journal of the European Union L 260/4 of 30.08. 2014 and ratified by Law no./ of 02.07.2014, published in the Official Gazette no. 185-199, art. no: 442 on 18.07.2014.
2) Law no. 133 of November 15, 2018 on the modernization of the Civil Code and

amendment of some legislative acts, published in the Official Gazette of the Republic of Moldova no. 467-479 art no. 784.

3) Partnership and Cooperation Agreement between the European Communities and their Member States, of the one part, and the Republic of Moldova, of the other part, signed on 28 November 1994, published on 30.12.1999 in International Treaties No. 10, art.127.
4) The Action Plan Republic of Moldova - European Union, adopted by the Cooperation Council on February 22, 2005 and approved by Government Decision no. 356 of 22.04.2006. Published in International Treaties Volume 38, 2006.
5) Directive 2006/114 / EC of the European Parliament and of the Council of 12 December 2006 concerning misleading and comparative advertising. [online] Available at: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX: 32006L0114:RO:HTML [Accessed 09.03.2021].
6) Law no. 1227 of 27.06.1997 on Advertising. Published on 16.10.1997 in the Official Gazette no. 67-68 art. 555.
7) Law on consumer protection no. 105 of 13.03.2003. Published on 27.06.2003 in the Official Gazette no. 126-131 art. 507.
8) Competition Law no. 183 of 11.07.2012. Published on 14-09-2012 in the Official Gazette no. 193-197 art. 667.
9) Civil Code of the Republic of Moldova, no. 1107-XV of 06.06.2002, in force 12.06.2003, published in the Official Gazette of the Republic of Moldova no. 82-86 art. no. 661 of June 22, 2002.
10) Directive 98/7 / EC of the European Parliament and of the Council of 16 February 1998 amending Directive 87/102 / EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to consumer credit. Official Journal of the European Union no. L 101/17. [online] Available at: https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A3 1998L0007 [Accessed 02.03.2021].
11) Directive 2005/29 / EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450 / EEC, Directive 97/7 / EC EC, 98/27 / EC and 2002/65 / EC of the European Parliament and of the Council and Regulation (EC) No. 2006 / 2004 of the European Parliament and of the Council, published in the Official Journal of the European Union (OJ) no. L 149/22 of 11 June 2005. [online] Available at: https://eur-lex.europa.eu/legal-content/RO/TXT/ PDF/?uri= CELEX: 32005L0029 & from = DE [Accessed 20.02.2021].

IMPACT OF DEFENSE INDUSTRY PRODUCTION FROM ROMANIA TO GDP

FLORIN ŞUHAN
Alexandru Ioan Cuza University of Iași
Iași, Romania
florin_suhan@yahoo.com

Abstract
The defense industry is a component of the national industry having, like the other branches of industry, the purpose of making a relevant contribution to the constitution of the gross domestic product. The more efficient a field of activity in the national economy is, the more it generates gross domestic product. In order to know and quantify the performance of the defense industry, we ask ourselves the question: how does the activity of defense contractors influence the gross domestic product? For this purpose, we carry out an investigation through the scientific method, using a database consisting of economic and financial information of economic operators in the field of defense industry in Romania. The working methods used are documentary research and the quantitative component materialized by a multiple linear regression model. The quantitative component is applied on a database corresponding to the period 2008 - 2018, being statistically processed by specialized software. Based on the interpretation of the links identified between the selected variables, we appreciate that the development of a multiple linear regression model with 5 variables in order to investigate the relationship between the results of defense contractors and the gross domestic product led to knowledge and reasonable quantification of defense industry performance. The correlation of the gross domestic product with the economic-financial indicators of capital and profit shows the significance of the field and the importance of supporting the production activity.
Keywords: *defense industry; GDP; assets; capital; profit.*
Jel Classification: H50, H56

1. INTRODUCTION

The defense industry is a component of the national industry, having like the other branches of industry in making a real contribution to the constitution of the gross domestic product. The more a field of activity in the national economy generates the gross domestic product, the better it performs (Bușe, 2014).

The component of the defense industry is a field with experience and tradition, which through the scope and importance of the contribution to strengthen the defense, security and national security, generates value transfer in the gross domestic product (Văcărel, 2008).

The starting point of this paper is that, in approaching the defense industry, most authors have investigated its impact on the public budget by assessing the level of defense spending. The approach is really relevant when we talk about the consumption of public resources used to implement national defense and security policies (Nastase, 2012; Constantinescu, 2011; Frunzeti, 2013; Badea, 2019; Popa and Pîrvuţ, 2017; Băhnăreanu, 2019).

Given the production of the defense industry and the existence of specialized and diversified markets in defense (Pucea, 2016), we consider that an approach to it as a resource in itself is absolutely necessary. National and international defense markets are influenced by economic measures promoted by both NATO and EU member states and those adopted at the national level (Fedorova, Nikolaev and Mazalov, 2016; Ivanov and Sotirov, 2018). The defense industry generates income and has a contribution to the gross domestic product (Guillo and Longhi, 2010).

In order to know and quantify the performance of the defense industry, we ask ourselves: how does the activity of defense contractors influence the gross domestic product? For this purpose, we carry out an investigation through the scientific method, using a database consisting of economic and financial information of economic operators in the field of defense industry in Romania.

The chosen working method is a multiple linear regression, through which the database corresponding to the period 2008 - 2018, will be statistically processed with the help of specialized software SPSS.

2. THE IMPACT OF DEFENSE OUTPUT ON GDP – APPLIED RESEARCH

Considering the number of companies identified by approximately 105 in the Romanian defense industry, the criteria used and the scientifically recognized techniques, we will proceed to determine a representative sample to obtain and capitalize on relevant information on this branch of industry. The theoretical condition of representativeness of one is that it respects the structure of the reference population and therefore the existing diversity at its level. When this structure is known, the sample can be determined based on this information and then can appear as a miniature of the total population (Jemna, 2005).

Taking into account this aspect of sampling and the fact that most of the economic operators of the Romanian defense market have reduced or non-existent contracts and transactions on the CAEN defense code 8422, characterized by opportunity and mutual advantage and that they operate mainly volumes larger than civil market transactions, we will approach their sampling with caution. This caution is also argued by the fact that based on the economic and financial data of these operators, which we have, we cannot know the exact or approximate volumes of defense and civil transactions carried out separately during the investigated period.

Sample size = [z2 * p (1-p)] / e2 / 1 + [z2 * p (1-p)] / e2 * = 82, in which N (number of units) = 105, z (score)= 1.96, e (margin of error) = 0.05, p (standard deviation) = 0.5.

The database subject to processing is presented in Table 1. The data were extracted from public databases and subsequently processed by grouping by fields of specialization, aggregation, and transformation into thousands of lei.

Table 1. Database on the evolution of turnover, net profit, total debts, own capitals, total assets, aggregate bank loans related to the sample of operators in the defense industry for the period 2008 - 2018 (thousand lei)

Period	C_afaceri	Profit_net	Dat_tot	Cap_proprii	PIB	Active_tot	Nr_angajati
2018	3,591,114	185,254	2,379,390	2,256,337	944,200,000	5,138,426	13619
2017	3,221,792	275,713	2,456,797	2,120,749	858,300,000	5,113,509	13804
2016	3,200,215	172,247	2,574,441	1,975,466	765,100,000	5,049,230	13836
2015	3,612,718	43,989	2,737,255	1,984,850	712,700,000	5,295,486	14465
2014	3,303,953	77,778	2,504,624	1,967,431	669,500,000	5,060,290	14557
2013	3,297,819	-154,649	2,663,751	2,015,163	637,500,000	5,043,676	13548
2012	3,709,838	60,962	2,677,413	2,233,072	596,700,000	5,270,070	15141
2011	3,726,854	102,192	2,250,104	2,346,241	557,300,000	4,892,458	12717
2010	3,483,761	86,760	1,998,135	2,398,980	522,600,000	4,641,052	13261
2009	2,942,779	63,520	1,834,011	2,388,343	501,100,000	4,414,232	15276
2008	3,545,175	44,234	1,733,075	2,434,655	514,700,000	4,353,205	18089

Source: own processing

In Table no. 1 are presented the variables considered in this analysis are the following: turnover (C_ afaceri), net profit (profit_net), total debt (Dat_tot), own capitals (Ca_proprii), gross domestic product (GDP), total assets (active_tot) and number average number of employees (Nr._angajați) expressed as standard in thousands of lei.

In the analysis we will investigate whether there is a dependency link between the chosen Gross Domestic Product (GDP) dependent variable and the four own capitals variables (Cap_proprii) Total debts (Dat_tot), Total assets (Active_tot) and average number of employees (Nr._angajați) defined as independent.

The proposed model of equation is: $Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$

in which :
Y = Gross Domestic Product - GDP (PIB)
X_1 = Own capitals (Cap_prop)
X_2 = Net profit (Profit_net)
X_3 = Total assets (Active_tot)
X_4= Number of employees (Nr_angajati)
b0, b_1, b_2 , b_3, b_4 – the correlation coefficients obtained.

The variables Cap_proprii and Nr_angajati could influence the volume of production and turnover, while the variables Active_tot and Profit_net could attract public or private financing through sources attracted by investments in the overall economic activities of contractors in the defense industry, influencing GDP.

Table 2. Variables entered/ removed

Model	Variables Entered	Variables Removed	Method
1	Profit_net Cap_proprii NR.angajati Active_tot[a]	.	Enter

a. All requested variables entered.

Source: Processed with SPSS, based on the data in Table 1

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936[a]	.876	.793	6.661E7

a. Predictors: (Constant), Profit_net, Cap_proprii, NR.angajati, Active_tot

Source: Processed with SPSS, based on the data in Table 1

The specified model explains 87% of the variation of the GDP dependent variable (Table 3).

Table 4. ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.876E17	4	4.691E6	10.572	.007[a]
	Residual	2.662E6	6	4.437E5		
	Total	2.143E7	10			

a. Predictors: (Constant), Profit_net, Cap_proprii, NR.angajati, Active_tot
b. Dependent Variable: PIB
Source: Processed with SPSS, based on the data in Table 1

Table 5. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.774E9	9.6498		1..838	.116
	Active_tot	46,889	108.42	.104	.432	.681
	NR.angajati	-35550.723	11722.427	-.516	-3.033	.023
	Cap_proprii	-415.568	185.31	-.528	-2.242	.066
	Profit_net	518.449	213.268	.382	2.431	.051

Dependent Variable: PIB
Source: Processed with SPSS, based on the data in Table 1

The results from Table 5 show that the variable Active_tot has a significant influence on GDP. The model is significant because sig. is 0.007 <0.05. The indicators Tolerance> 0.10 (0.116) and VIF <10 (1.838) indicate that there are no multicollinearity problems, respectively the independent variables have a strong correlation with each other (Pintilescu, 2017).

Interpretation of parameters:

- b0 = 1.774E9 (average value of GDP when Profit_net, Active_tot, Cap_proprii and Nr_angajați if they are equal to 0 is 1.774E9);
- b1 = -415,568 (the variable Cap_proprii influences the variation of GDP, sig. = 0.66> 0.05 reason for which we will interpret the result b);
- b2 = 518.44 (the variable Profit_net influences the GDP variation, sig. = 0.051> 0.05 reason for which we will interpret the result b2);
- b3 = 46,889 (the variable Active_tot influences the variation of GDP, sig. = 0.681> 0.05 reason for which we will interpret the result b3);
- b4 = -35550, 723 (variable Nr_angajați influences the variation of GDP, sig. = 0.023 <0.05 reason for which we will interpret the result b4).

Table 6. Correlations

		PIB	Profit_net	Cap_proprii	NR.angajati	Active_tot
Pearson Correlation	PIB	1.000	.554	-.518	-.623	.660
	Profit_net	.554	1.000	.072	-.380	.138
	Cap_proprii	-.518	.072	1.000	-.116	-.734
	NR.angajati	-.623	-.380	-.116	1.000	-.224
	Active_tot	.660	.138	-.734	-.224	1.000
Sig. (1-tailed)	PIB	-	.038	.051	.020	.013
	Profit_net	.038	.	.417	.125	.343
	Cap_proprii	.051	.417	.	.367	.005
	NR.angajati	.020	.125	.367	.	.254
	Active_tot	.013	.343	.005	.254	.
N	PIB	11	11	11	11	11
	Profit_net	11	11	11	11	11
	Cap_proprii	11	11	11	11	11
	NR.angajati	11	11	11	11	11
	Active_tot	11	11	11	11	11

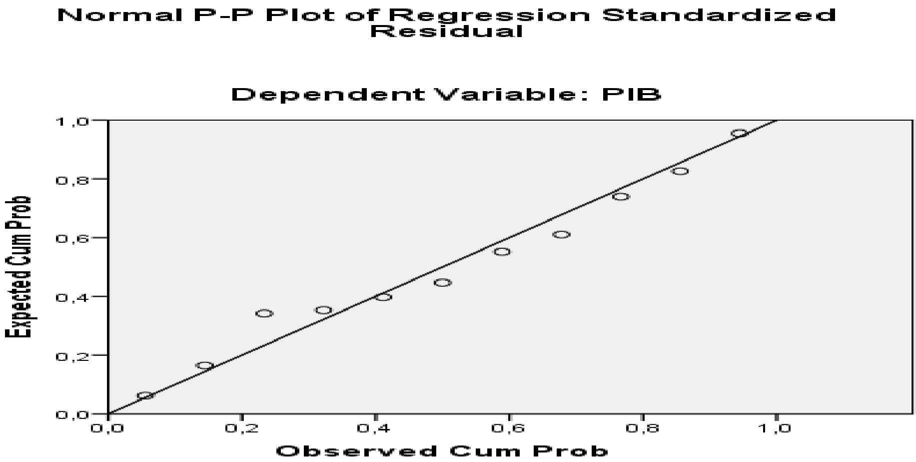
Source: Processed with SPSS, based on the data in Table 1

Table 6 shows the simple correlations of each independent variable (predictor) with the dependent variable GDP. It is observed that the value of the coefficients on the diagonal is equal to 1 because each variable is perfectly correlated with itself. It is found that there are significant links between the dependent variable and all the independent variables included in the model. Thus, between GDP and net profit, respectively total assets there is a strong direct link, with values of the correlation coefficient equal to 0.554, respectively 0.660 and a Sig value. equal to 0.038 less than 0.05 in the case of net profit, respectively Sig. equal to 0.013 in the case of total assets.

Between equity, the number of employees and GDP there is a strong indirect link, with values of the correlation coefficient equal to -0.518, respectively -0.6623 and a value of Sig. equal to 0.51, slightly above the limit Sig. in the case of equity, respectively Sig. equal to 0.028, a value less than 0.05 in the case of the number of employees.

For the developed model, we checked the error hypotheses and for all four checks the values of sig> 0.05 confirm the truth of the error checking hypotheses.

Figure 1. Residue diagram



Residue analysis from Figure 1 reflects the residual dispersion constancy for the whole range of the GDP dependent variable. Other forms of residue distribution lead to important conclusions for the adequacy of the model in terms of the independent variables involved.

3. RESULTS AND DISCUSSIONS

We can say that by developing the multiple linear regression model with the four independent variables (Profit_net, Active_tot, Cap_proprii and Nr_angajati) we were able to test the variation of the GDP dependent variable. It is obvious that the selected independent variables Profit_net, Active_tot, Cap_proprii and Nr_angajati have a significant influence on the dependent variable, in the sense that when the net profit increases by 1% the GDP level will increase by 0.518%.

On the other hand, when own capitals increase by 1%, GDP will decrease by 0.415%, and when assets increase by 1%, GDP will increase by 0.46%. It appears that the explanatory model contains an influencing factor representative of the economic-financial indicators having relevance and influence on the gross domestic product.

Given the low turnover rate of fixed assets and the evolution of turnover, there is a need for equity or public or private sources in support of specific activities of the defense industry in order to have a positive influence on gross domestic product.

4. CONCLUSION

The development of a model of multiple linear regression with five variables in order to investigate the relationship between the results of the activity of defense contractors and the national gross domestic product led to the knowledge and reasonable quantification of the performance of the defense industry. The correlation of the gross domestic product with the economic-financial indicators of capital and profit shows the significance of the defense industry and the importance of supporting the production activity.

The application of linear regression also revealed some important aspects regarding the need to finance economic operators in the defense industry such as the fact that fixed and current assets are a working lever in avoiding underfunding. Equity and labor are not useful indicators in terms of slow financing and significant total debt accumulation.

The working model adopted as a methodology has a perspective in terms of arguing and confirming the hypotheses formulated, bringing a substantial contribution to the relevance of the research.

5. RESEARCH PERSPECTIVES

Approaching qualitative research by applying a relevant questionnaire to a significant sample of defense economic operators is a necessary step to probe the need for non-traditional state funding. Qualitative research could clarify some aspects of production regarding the contribution of the defense industry to the creation of the gross domestic product.

ACKNOWLEDGMENTS

The author would like to thank for the financial support provided within the project "Doctoral students and postdoctoral researchers ready for the labor market!", Contract POCU / 380/6/13/123623, financed by the Human Capital Operational Program 2014 - 2020.

References

1) Badea, D. (2019). Conceptualization of a knowledge management framework dedicated to the security of critical infrastructures. In: M. Popa and V. Dumitrache, coord., *Defense Resources Management in the 21st Century.* Brașov: National Defense University Carol I Publishing House, pp. 13-17.
2) Băhnăreanu, C. (2019). The balance of military expenditures în 2019. *Impact strategic,* 3-4, pp. 65-67.
3) Bușe, M. (2014). European Defence Agency – Role and Achievements. *Buletinul Universităţii Naţionale de Apărare "Carol I",* 02, pp. 158-163.
4) Constantinescu, M. (2011). Defense and security effects of the economic crisis. *Journal of Defense Resources Management (JoDRM)*), 2(2), pp. 143-148.
5) Guillo, S. and Longhi, C. (2010). Defense financing of private R&D: evidences from French firms. *International Journal of Technology Management, 50(1), pp. 99-118.*
6) Fedorova, E. A., Nikolaev, A. E. and Mazalov, E. S. (2016). Spillover effect in the defence industry. *Finance and Credit*, 1(2016), pp. 2-11.

7) Frunzeti, T. (2013). Content and Dynamics of the Current Revolution in Military Affairs. *Impact strategic,* 4, pp. 7-12.
8) Ivanov, V. and Sotirov, I. (2018). A new approach to building and developing defense capability of the Republic of Bulgaria. *Journal of Defense Resources Management (JoDRM),* 9(1), pp. 34-44.
9) Jemna, D. V. (2005). Conceptul de reprezentativitate în cercetarea statistica pe bază de sondaj (The concept of representativeness in survey-based statistical research). *Analele Stiinţifice ale Universităţii Al. I. Cuza,* Tomul L/LI, Ştiinţe economice, pp. 413-418.
10) Năstase, G. (2012). *Tehniques et procesus de reconversion dans l'industrie de la defense*, Revista Univers Strategic, 9, pp. 147-158.
11) Pintilescu, C. (2017). *Analiză statistică multivariată (Multivariate statistical analysis).* Iasi: Alexandru Ioan Cuza University Publishing House, pp. 30-108.
12) Popa, G. and Pîrvuţ, V. (2017). Study regarding the defense expendure analysis in NATO. In: *The 23rd International Conference THE KNOWLEDGE-BASED ORGANIZATION,* „Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania, 15-17 June 2017.
13) Pucea, L. F. (2016). The European defence market. *Buletinul Universităţii Naţionale de Apărare "Carol I",* 01, pp. 49-55.
14) Văcărel, I. (coord.) (2008). *Finanţe publice (Public Finance)*. Bucureşti: Editura Didactică şi Pedagogică, pp. 340-348.

FINTECH AS FINANCIAL INNOVATION – CHALLENGES AND IMPLEMENTATION IN THE PANDEMIC PERIOD

CARMEN TODERAȘCU
Alexandru Ioan Cuza University of Iași
Iași, Romania
carmentoderascu@gmail.com

VLAD GABRIEL NICOLĂESCU
Valahia University
Târgoviște, Romania
vladgnicolaescu@gmail.com

Abstract
This paper aims to investigate the changes encountered on the financial market related to FinTech technology in the pandemic period that we are all going through. In these conditions, we consider that this technology has more attention compared to the traditional innovation. In our opinion, the implementation of this technology in the pandemic period has to do with the ability to adapt, with the proven potential in economic practice to change financial services. Of course, these changes will produce immediate effects in the market, effects that could affect the financial stability of a country. The insurance industry is significantly influenced by the rise of FinTech, changing consumer behavior and advanced technologies, and also InsurTechs and technology startups stimulate the customer experience through innovations such as risk-free underwriting, on-site procurement, activation and damage processing. Through this article we aim to see what is the impact of FinTech on the economy, especially on the insurance market, and what would be the beneficial measures to counteract the potential negative effects.
Keywords: *FinTech; InsurTech; financial innovation; financial stability; financial services.*
JEL Classification: O33, O38, G22, G28

1. INTRODUCTION

As part of the overall response to COVID-19, the digital finance industry has played a key role role in the development and provision of services and innovations that have mitigated, at least in part, pandemic disruptions multiple aspects of people's lives.

In the global financial system, the desire to innovate may be strained by the need to promote resilience and financial stability, as incumbent financial institutions will enjoy the benefit of being regulated, which will help them defend their models, against FinTechs that proved their worth as „challenging" institutions during the COVID-19 crisis.

A key factor in the change in the financial sector that has has led to significant efficiency gains, even in the field of insurance, is represented by innovation through new technologies.

For both financial supervisors and the insurance industry, financial technologies or FinTech innovations are reshaping the provision of financial services, creating new opportunities and new challenges. Technology continues to evolve, bringing new opportunities, social change and new expectations for consumers, companies in the financial system develop and review business models.

Efficiency improvements, cost reductions, improved risk assessment, superior customer experience and greater financial inclusion are some of the benefits provided through FinTech innovations.

Innovation and technology can have the greatest impact on emerging markets due to the fact that they have less established insurance distribution network.

Even during this period, when faced with the uncertainties caused by the coronavirus crisis, the insurance industry is effectively keeping track of its efforts to innovate and embrace the digital transformation of their business.

Although the Coronavirus pandemic has a significant impact on people and businesses globally, bringing the financial sector and economy into chaos, some FinTech experts believe that the outbreak could mean a benefit for some insurers.

2. LITERATURE REVIEW AND CONTENT ANALYSIS

According to studies conducted on this topic, the Coronavirus pandemic has affected the FinTech market, both in the short and long term.

Regarding the short-term effects, we can say that the most affected are FinTechs that get a significant share of their revenues from F2F (face-to-face) companies, due to the difficulty of processing payments for airlines or travel platforms. Regarding long-term effects, we can say that the pandemic will primarily determine the digitization of payments and the virtualization of financial services, the pandemic acting as an accelerator. Another long-term effect could be increased regulatory control over business continuity or contingency planning, as banks and FinTechs should also develop, implement, test and review sound business continuity plans activity/contingency continuously (Hastings, 2020).

IAIS (The International Association of Insurance Supervisors) built three scenarios to assess the positive and negative effects of these technologies on the insurance business model (Table 1):

Scenario 1: Existing insurers successfully maintain relationships with customers and capitalize on technology companies to their own advantage.

Scenario 2: The value chain of insurance becomes fragmented as players with new technology enter the market. The traditional relationship with customers weakens.

Scenario 3: Incumbent and traditional insurers are completely overtaken by “big tech” companies (Bank for International Settlements, 2019).

Table 1. Scenario analysis

Theme	Main finding	Supervisory consideration
Competitiveness	Expected to decrease in the long term, assuming that innovations will create competitive advantages for tech-savvy firms and that those insurers with greater difficulty in adapting to the new tech-heavy environment will suffer from pressure on profit margins, possibly reducing the number of insurers that can adapt.	How to do more to encourage or accommodate competition and new entrants?
Comparability	Expected to decrease (although the extent varies by scenario), mainly due to an increase in the customization of products and thus a reduction in comparability.	How to ensure that the ability to compare products between providers is not compromised as new technology seeks to find even smaller segmentations?
Interconnectedness	Expected to increase, mainly due to the limited number of tech platforms that support big data storage and processing.	How to enhance regulatory reports to capture the additional information needed to monitor potential risks of interconnectedness?
Regulatory oversight	Expected to decrease, mainly as a result of an increase in the number of unregulated participants providing technological services in the different areas of the insurance value chain.	How to reassess the regulatory perimeter in order to ensure adequate consumer protection and to continue to monitor market trends?
Business model viability and capital requirements	The resilience of the current business model is expected to decrease, assuming that the efficiencies of insurers' back office processes and systems enable insurers to operate with reduced premiums on a larger scale. In a cyclical effect, the reduction of premiums can initially endanger the sustainability of business models, until there is accommodation between risk and financial return, and insurers begin seeking new profit sources.	How to adjust the regulatory capital framework to adequately capture the new business models and changing risk profile of insurers?
Conduct of business	Potential increase in conduct of business risk due to a disproportionately higher focus on the objectives of firms rather than on those of consumers, mainly through provision of more bespoke products with reduced insurance coverage.	How to require a minimum level of disclosure to consumers to highlight the potential conflicts of interest?
Data ownership	Potential increase in the risk of unauthorized access to and use or transfer of personal data.	How to strengthen regulatory requirements regarding data access, use and transferability between providers, as well as requirements related to IT management, cyber-security and internal controls for outsourcing of technical services?

Source: (Bank for International Settlements, 2019, p. 2)

According to another study, we can say that the disruptive forces of innovation play out, we can count on a few things:

- New technology is modularizing the insurance value chain;
- Customers are seeking complex, highly personalized products;
- FinTech companies are raising expectations for a frictionless customer experience;
- Growing connectivity points to a foundational shift from risk assessment to risk prevention (Deloitte, 2018).

"InsurTech" is a concept that symbolizes insurance innovation, offering the opportunity to use new methods of service delivery as well as greater opportunities for data collection that can lead to better risk identification and mitigation measures (OECD, 2017).

Rapid increase in interest in FinTech (from governments, businesses and the general public) must have substantial implications in terms of growth potential for the promotion of digital channels of global financial inclusion as a result of the effects of the pandemic (Benni, 2021).

Figure 1. First-half 2020 funding puts InsurTech on track for at least second-highest annual total

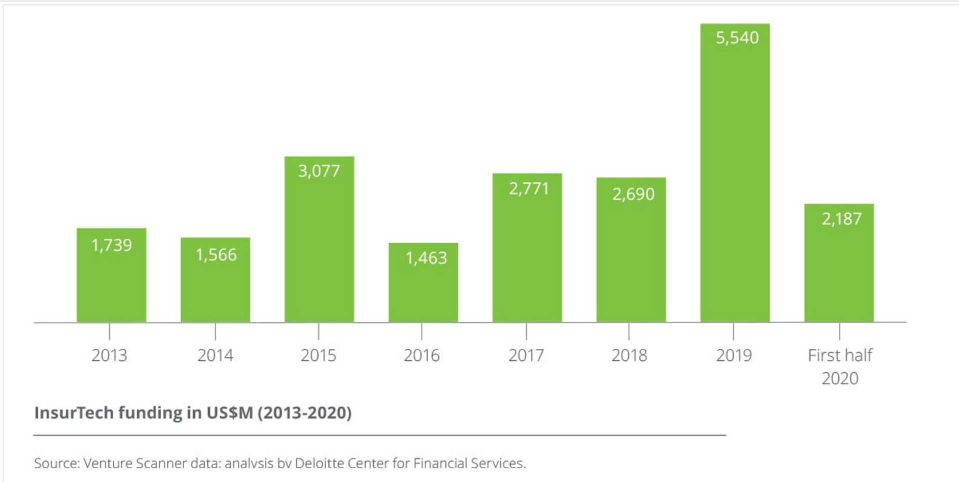


Figure 1 shows that InsurTech's investments have remained robust over time, reaching even extreme values during the pandemic (5.54 billion USD in 2019), despite a significant increase in unemployment, a GDP negative and volatile capital markets (Deloitte, 2020).

More than that, the European Insurance and Occupational Pensions Authority (EIOPA) has identified increasing complexity in the way insurance is distributed, with new types of distributors and new types of products emerging. One of the major challenges seems to be the emergence of platforms and ecosystems that can significantly „disrupt" existing production and distribution. Digitization has an impact at all stages of the value chain in products and services in the insurance and pension sectors. EIOPA analyzes the situation in order to support supervisors in the challenges arising from new business models and the possible fragmentation of the insurance value chain as a result of new technologies (EIOPA, 2019).

According to a study by KPMG, the main recommendations that should be followed are automatic renewal with a grace period for the payment of insurance premiums, acceleration of premium payments for government policies in order to ensure a steady cash flow for companies, increase the limit of foreign investment direct to reduce the stress of lack of capital, and last but not least, economical products for which an accelerated approval process will be vital (KPMG, 2020a).

Moreover, another study stated that the most effective principles of good practice that guarantee successful customer relationships are integrity, by pursuing customer interests, resolution, finding solutions to problems in a timely manner, expectations (of customers), which need to be properly coordinated, time and effort, personalization of services, using an approach tailored to the profile of each client, and also empathy for the client (KPMG, 2020b).

In Table 2, we can see that due to the pandemic, the emphasis on the expectations of consumers of insurance services, according to which the policy of insurers regarding the supply of insurance products and customer services should also change, is constantly changing.

Table 2. Compliance of insurers' policies with customer expectations

Customer expectations	Compliance of insurers' policies with customer expectations
Good faith of insurer	Facilitating customers' access to the necessary information
Facilitating access to insurance services	The use of financial technology tools on all phases of the insurance process
Understanding of customers' individual needs	Personalization of insurance services
The need for certain insurance preferences	Using a model of changing consumer behavior based on the awareness of initial condition; an offer for good consumer behavior and a reward for it. In the future, such a model reduces the possibility of risks' realization for the customer and the insurer

Source: (Volosovych *et al.*, 2021)

Due to the negative effects of the pandemic, the business continuity plan for various companies should take into account, in addition to the influence that the coronavirus has on employees, agents and customers of the insurer, and gender differences, because the need for childcare in the COVID-19 era it is much higher (they have to stay at home for the longest period of time), and the way in which employers can support the needs of employees in this regard and the necessary financial resources play an extremely important role (International Finance Corporation, 2020).

The pandemic led to major challenges for the functioning of the insurance market and formed the basis for further prospects for its development, so 61% of insurers in July 2020, compared to 57% in April, believed that the pandemic affects the attraction of new customers and 42% considered to influence customer retention (ITAPRO, 2020).

3. CONCLUSIONS

In the insurance sector in general, InsurTech will play a key and ongoing role in bringing digital innovation. This role will be manifested mainly by stimulating transport operators to achieve these long-term ambitions, either as partners or as acquisition targets.

In the next period, insurers need to focus significantly on customer service, crisis management, real-time response, a good image of the partner and the promotion of useful insurance products, in order to compete with companies in the information technology industry.

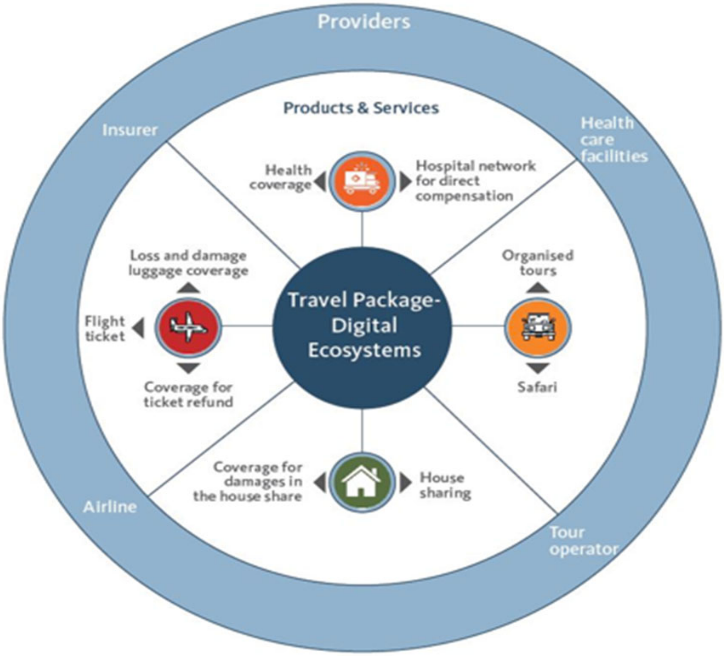
Due to the fact that technologies play a key role in the development of insurance companies, stimulating the improvement of the product range, InsurTech and insurers should cooperate in order to establish an ecosystem capable of providing added value to customers by meeting their digital needs.

The pandemic poses many challenges for the insurance market, enabling it to accelerate digital transformation and implement innovations, significantly increasing the need for insurers to streamline, improve and digitize loss management operations and functions.

The way in which insurance claims are processed and contracts are evaluated have been deeply favored by the development of new technologies and the diversification of the insurance sector, which will stimulate structural changes in the insurance market, which will drive the transition from insurer the stage of collaboration with them.

During the pandemic, people became more concerned about their health than data privacy and agreed to install mobile applications to track the evolution of the pandemic, although the biggest obstacle to greater personalization was customers' reluctance to available to insurance companies the necessary personal data.

Figure 2. An example of ecosystem



Source: (EIOPA, 2019)

References

1) Bank for International Settlements (BIS), (2019). *FinTech developments in the insurance industry – Executive Summary.* 28 February 2019. [online] Available at: https://www.bis.org/fsi/fsisummaries/fintech.htm [Accessed 25.01.2021]
2) Benni, N. (2021). *Digital finance and inclusion in the time of COVID-19. Lessons, experiences and proposals*. Rome: Food and Agriculture Organization of the United Nations.
3) Deloitte, (2018). *How fintech sparked a revolution in insurance. A catalyst for change.* [online] Available at: https://www2.deloitte.com/au/en/pages/financial-services/articles/how-fintech-sparked-revolution-insurance.html [Accessed 25.01.2021].
4) Deloitte, (2020). *COVID-19 pandemic shifts InsurTech investment priorities. Bolstering virtual customer engagement and operational efficiency***.** [online] Available at: https://www2.deloitte.com/us/en/pages/financial-services/articles/fintech-insurtech-investment-trends.html [Accessed 16.01.2021].
5) Hastings, P. (2020). *Fueling Innovation in Times of Crisis: The Impact of COVID-19 on FinTech*. [online] Available at: https://www.paulhastings.com/insights/client-alerts/fueling-innovation-in-times-of-crisis-the-impact-of-covid-19-on-fintech [Accessed 18.02.2021].

6) EIOPA, (2019). *Travel Insurance Thematic Review*. [online] Available at: https://www.eiopa.europa.eu/media/news/eiopa-identifies-consumer-protection-issues-travel-insurance-and-issues-warning-travel_en [Accessed 22.01.2021].
7) International Finance Corporation, (2020). *COVID-19 and the Insurance Industry: Why a Gender-Sensitive Response Matters*. [online] Available at: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/women+insurance+and+covid19 [Accessed 27.02.2021].
8) ITAPRO, (2020). *COVID-19 Accelerates Insurance Digitalization to Meet Customer Demand: World InsurTech Report 2020*. [online] Available at: https://www.businesswire.com/news/home/20200914005893/en/COVID-19-Accelerates-Insurance-Digitalization-to-Meet-Customer-Demand-World-InsurTech-Report-2020 [Accessed 01.03.2021].
9) KPMG, (2020a). *Customer experience and digital insurance under COVID-19*. [online] Available at: https://home.kpmg/xx/en/home/insights/2020/05/covid-19-customer-and-digitization-in-insurance.html [Accessed 09.03.2021].
10) KPMG, (2020b). KPMG explains how coronavirus can impact insurance sector. *BFSI.com* [online] Available at: https://bfsi.economictimes.indiatimes.com/news/insurance/kpmg-explains-how-coronavirus-can-impact-insurance-sector/75067123 [Accessed 10.03.2021].
11) OECD, (2017). *Technology and innovation in the insurance sector*. [online] Available at: https://www.oecd.org/finance/Technology-and-innovation-in-the-insurance-sector.pdf [Accessed 05.04.2021].
12) Volosovych, S., Zelenitsa, I., Kondratenko, D., Szymla, W. and Mamchur, R. (2021). Transformation of insurance technologies in the context of a pandemic. *Insurance Markets and Companies*, 12(1), pp. 1-13.

THE IMPACT OF FINANCIAL INNOVATION IN THE CONTEXT OF THE COVID-19 CRISIS IN EMERGING ECONOMIES

CARMEN TODERAȘCU
Alexandru Ioan Cuza University of Iași
Iași, Romania
carmentoderascu@gmail.com

OTILIA-ROXANA OPREA
Alexandru Ioan Cuza University of Iași
Iași, Romania
otiliaoprea40@gmail.com

Abstract
The impact of the COVID-19 pandemic is global. In order to combat the uncontrollable spread of the virus and the transformation of the COVID-19 crisis into a humanitarian crisis, developing countries and emerging economies have implemented extremely strict blocking measures. This study aims to review the literature in this area to show the effects of financial innovation in the context of the pandemic and to find the best policy recommendation in order to save the economy.
Keywords*: Covid-19 crisis; innovation; FinTech; financial policy.*
JEL Classification: B27, E52, G01, G23

1. INTRODUCTION

The key challenge facing communities during crises consists of access to financial services. Local exchange rate volatility, falling oil prices and rising prices for basic necessities, such as food, have been significantly affected by the pandemic crisis.

Due to declining incomes, a large proportion of daily employees, micro-entrepreneurs and small entrepreneurs will be able to repay their loans with great effort.

An active role in society due to the large number of people they reach can be represented by the financial institutions in the emerging markets that serve the base of the pyramid.

Innovative technologies can provide people with solutions to maintain social distance, ensure business continuity, strengthen healthcare outcomes and prevent service disruptions, in order to support the domestic and international business environment.

FinTech can help government responses and provide clear ways for governments and suppliers to reach vulnerable populations quickly and efficiently.

In order to keep risks afloat in the context of the pandemic, there is a growing need to strike a balance that will influence innovation and efficiency and reduce financial and economic vulnerabilities.

To help develop more discreet, secondary reforms and staff changes, some states have used the implementation of new laws to increase their mandate and to develop their capacity and responsibility.

One of the essential forces shaping human society is considered innovation.

Facilitating financial intermediation is considered a key goal of financial innovation. However, for financial innovation to positively influence financial intermediation, it must allow for economically productive use.

This study aims to review the literature in this area to show the effects of financial innovation in the context of the pandemic and to find the best policy recommendation in order to save the economy. This will be done through the content analysis of the revised articles.

2. THEORETICAL BACKGROUND AND CONTENT ANALYSIS

According to research, the rapid transition to a (almost) entirely digital banking experience will foster a continuous increase in partnerships between financial institutions and BigTech companies for the provision of technology services and infrastructure (e.g., AI, cloud computing and data analysis) to financial institutions, which will materialize in BigTechs' participation in financial regulation as part of the financial infrastructure (Hastings, 2020).

According to another study, it is essential, especially for states developing to strengthen commitments to support investment in science, technology and innovation and to create recovery packages that leverage technology and innovation for sustainable development (UNCTAD, 2020).

We can also say that during the pandemic crisis the functions of digital creditors are different depending on the policy of each state, online platforms and real-time information, reaching the immediate solution of the liquidity needs of SME influenced by blockades and measures because their technology-based and online business models are more beneficial than traditional financial institutions in terms of digital valuation and the integration of new customers, especially in the context of the need for social distancing (Sahay *et al.,* 2020).

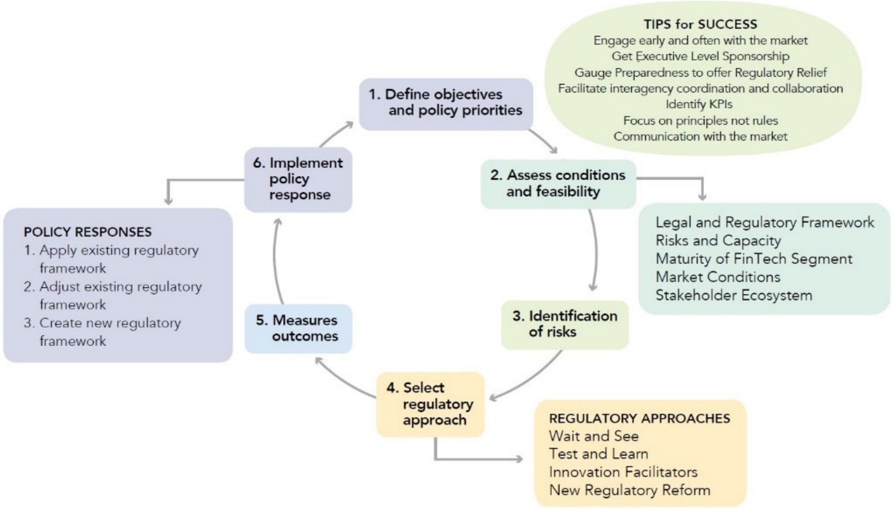
According to the European Commission, the proposal for an investment initiative for the coronavirus response has been approved by the European Parliament and the Council and entered into force on 1 April 2020, which favored the use of EUR 37 billion in cohesion policy for the effects of the COVID-19 crisis, and the scope of the Solidarity Fund was expanded to include major public health crises (Council of the EU, 2020).

FinTech firms are altering traditional online financial models through mechanisms of disintermediation, extension of access, hybridization, financialization and personalization. (Puschmann, 2017; Chen, Wu and Yang, 2019; KPMG, 2019; Karagiannaki, Vergados and Fouskas, 2017; Al Nawayseh, 2020). During the pandemic risk perceptions did not influence customers' idea of using FinTech applications, but negatively influenced them trust in the service, thus, consumers will be more tempted to make FinTech transactions when the potential gains are known, the social value and trust are high and when risk perceptions are low (Al Nawayseh, 2020).

These approaches (represented in Figure 1) can be applied either in combination or solely, and more than one initiative can be adopted in tandem to maximize its impact and efficiency. In the report, they were classified into four categories:

- **“Wait and See”**. This approach has commonly emerged when there is regulatory ambiguity on whether an activity falls under the scope of a particular institution, or when there is a need to further build regulator capacity and understanding prior to issuing a response.
- **“Test and Learn”**. The creation of a custom framework for each individual business case, allowing it to function in a live environment.
- **Innovation Facilitators**. A point of contact or a structured framework environment created to promote innovation and experimentation. This approach can be divided into three sub-categories:
    1. **Innovation Hubs:** Most often a central point of contact to streamline queries and provide support, advice, and guidance to help firms navigate the regulatory, supervisory, policy, or legal environment.
    2. **Regulatory Sandboxes:** A controlled, time-bound live testing environment that allows innovators to test new products, services, or business models on a small scale, in a controlled manner, subject to regulatory discretion and proportionality.
    3. **Regulatory Accelerators:** Enables partnership arrangements between FinTech firms and policymakers to innovate on shared technologies, most commonly to solve pre-defined use cases.
- **Regulatory Laws & Reform.** New laws, licenses or amendments of existing laws to capture economic functions are introduced in response to innovative firms or business models.

Figure 1. Regulatory approaches



Source: (Appaya, Luskin Gradstein and Mathurin-Andrew, 2020)

E-commerce is essential if social distance is to be considered. So far, this has been widely available in countries most affected by the pandemic crisis, but it will be much less common in developing countries, and, moreover, it will be crucial to use technology to facilitate deliveries, to limit human contact between the delivery service provider and the recipient. Examples of ranges of initiatives are presented in Table 1.

Table 1. Tools & Examples

Tools	Example	Relevance	Beneficiary
Digital Identity	Aadhar	Identification of individual health status	Gov/ Public
Transfer	e-Tunai Rakyat	Instant disbursement of fund to beneficiary in closed loop	Public/ SME
Peer-to-Peer	Lending Club	Direct lending origination & ROI above central banks	SME/ Public
Crowdfunding	GoFundMe KickStarter	Pre-finance products using public support	SME/ Public

Tools	Example	Relevance	Beneficiary
Invoice factoring	Funding Society	Unlocking future income to limit liquidity issues	SME
AML / KYC	Comply Advantage	Scalable identification of source of fund of micro- donation	NGO
InsurTech	Ping An	Shorter reimbursement of cost to provider / claimant	Public/ Hospitals
Sharing economy	Uber/ Grab/ Gojek	Mobilized under-utilized assets & co-ordinate resources	Gov/ SME

Source: (Arner *et al.,* 2020)

We need to explore more in the long run the dimensions of how the pandemic affected the adoption of financial applications, supported by different waves of policy strictures caused by fluctuating virus rates to assess how the end of blockages or other blocking waves could influence application adoption, all to see if the increased digital acceleration of financial intermediation favored by the government blockade has been a short-term phenomenon that can return to pre-pandemic levels (Fu and Mishra, 2020).

Digital financing provides important tools for directing resources quickly and efficiently to the stakeholders who need it most, focusing in particular on the strategies and solutions available to limit the economic and human impact, the economic one being determined in particular by short-term factors (but these could at some point turn into structural factors, which in turn would require different strategies), (Arner *et al.,* 2020).

Similar to advanced economies, the emerging markets and developing economies have implemented restrictive measures that have led to the partial closure of economic activity, reducing production, but its economic impact is favored by more internal vulnerabilities, including a larger informal sector, a higher proportion of jobs, which cannot be met remotely and limited fiscal space to offset the economic impact (Djankov and Panizza, 2020).

Financial dynamics have real consequences, because they increase the cost of capital, risk aversion of creditors and negatively influence the quality of debtors' balance sheets. The net value of firms - required to secure a loan - has a double effect: selling on the market reduces the value of assets, while currency depreciation increases the value of liabilities expressed abroad which negatively influences access to credit (Hardy and Saffie, 2019).

Policies should focus in particular on the procurement of an adequate level of resources in the health system, the amortization of household income losses and the implementation of limitation policies (Tekin-Koru, 2020). Also, to stimulate liquidity conditions, several central banks in emerging markets have tried to buy bonds in local currency, acting as buyers of last resort, which has led to lower bond yields (Arslan, Drehmann and Hofmann, 2020), although weaker institutional settings should facilitate the use of such programs to prevent the 'discoloration' of inflation expectations **(**Benigno *et al.,* 2020**).**

People have started using digital financial products more and more to limit severe restrictions and the challenges that the pandemic has brought personal and professional life. Financial institutions have invested heavily in offering digital financial services to deal with the crisis, and governments have supported the use digital financial services through policies, both to limit the spread of the virus and as a tool for social protection and livelihood stimulation (Benni, 2021).

The COVID-19 health crisis has created new opportunities for digital financial services to accelerate financial inclusion amid social distancing (Agur, Martinez-Peria and Rochon, 2020).

3. CONCLUSIONS

Although crises usually have negative effects, we can say that this crisis also presents an opportunity, which is that new technologies, new leaders, new service providers and new ideas will emerge from this crisis and the right participants in the industry will become stronger to deal with the revised economy.

The increase in digital financial services will be favored in the next period by the pandemic crisis and government implications, with measures such as lowering taxes and raising limits on mobile money transactions could stimulate the transition to digital financial services, even for traditional financial institutions.

In order to support economic activity and to prepare the ground for recovery, a coordinated and comprehensive strategy is needed to meet emergency health needs, which could combine short-, medium- and long-term initiatives, given the losses and relationships between our economies and the need for to maintain confidence and stability.

The perception of benefits, social impact and trust significantly influences the customer's intention to use FinTech applications.

The domestic and traditional incumbents fared particularly well during the pandemic period, at least in terms of driving increased uptake of their digital offerings, relative to “BigTech” and other FinTech providers.

Political decision-makers should give universities sufficient autonomy to enable them to develop internally financial allocation mechanisms, adaptation of strategies and efficient use of resources accordingly with key institutional goals and objectives.

The ability to structure and scale the stimulus accurately is given to policy makers by the information-based nature of digital funding.

References

1) Agur, I. Martinez-Peria, S. and Rochon, C. (2020). Digital Financial Services and the Pandemic: Opportunities and Risks for Emerging and Developing Economies. *Special Series on COVID-19*, IMF Research, 1 July 2020.
2) Al Nawayseh, M. (2020) FinTech in COVID-19 and Beyond: What Factors Are Affecting Customers' Choice of FinTech Applications? *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 153.
3) Arner, D. W., Barberis, J. N., Walker, J., Buckley, R. P., Dahdal, A. M. and Zetzsche, D. A. (2020). Digital Finance & the COVID-19 Crisis. *University of Hong Kong Faculty of Law Research Paper* No. 2020/017, UNSW Law Research.
4) Arslan, Y., Drehmann, M. and Hofmann, B. (2020). Central Bank bond purchases in emerging market economies. *BIS Bulletin* No. 20.
5) Benigno, G., Hartley, J., García-Herrero, A., Rebucci, A. and Ribakova, E. (2020). Credible emerging market Central Banks could embrace quantitative easing to fight COVID-19. *VOXEU*, 29 June 2020. [online] Available at: https://voxeu.org/article/credible-emerging-market-central-banks-could-embrace-quantitative-easing-fight-covid-19 [Accessed 19.04.2021].
6) Benni, N. (2021). *Digital finance and inclusion in the time of COVID-19. Lessons, experiences and proposals*. Rome: Food and Agriculture Organization of the United Nations.
7) Chen, M. A., Wu, Q. and Yang, B. (2019). How Valuable Is FinTech Innovation? *Review of Financial Studies*, 32(5), pp. 2062-2106.
8) Council of the EU, (2020). *Report on the comprehensive economic policy response to the COVID-19 pandemic.* [online] Available at: https://www.consilium.europa.eu/ro/press/press-releases/2020/04/09/report-on-the-comprehensive-economic-policy-response-to-the-covid-19-pandemic/ [Accessed 17.02.2021].
9) Djankov, S. and Panizza, U., eds. (2020). *COVID-19 in Developing Economies*. London: CEPR Press.
10) Fu, J. and Mishra, M. (2020). FinTech in the Time of COVID-19: Trust and Technological Adoption During Crises. *Swiss Finance Institute Research Paper* No. 20-38.
11) Hardy, B. and Saffie, F. (2019). From Carry Trades to Trade Credit: Financial Intermediation by Non-Financial Corporations. *BIS Working Paper* No. 773, Bank for International Settlements.
12) Hastings, P. (2020). *Fueling Innovation in Times of Crisis: The Impact of COVID-19 on FinTech.* [online] Available at: https://www.paulhastings.com/insights/client-alerts/fueling-innovation-in-times-of-crisis-the-impact-of-covid-19-on-fintech [Accessed 14.02.2021].
13) Sahay, R., Eriksson von Allmen, U., Lahreche, A., Khera, P., Ogawa, S., Bazarbash, M. and Beaton, K. (2020). The Promise of FinTech: Financial Inclusion in the Post COVID-19 Era. Departmental Paper 20/09. Washington D.C.: International Monetary Fund.

14) Karagiannaki, A., Vergados, G. and Fouskas, K, (2017). The Impact of Digital Transformation in the Financial Services Industry: Insights from an Open Innovation Initiative in FinTech in Greece. *MCIS 2017 Proceedings*, 2.
15) KPMG, (2019). *People. Perspectives. Possibilities*. [online] Available at: https://assets.kpmg/content/dam/kpmg/dk/pdf/dk2020/01/KPMG_2019_annual_report_web.pdf [Accessed 15.03.2021].
16) Puschmann, T. (2017). FinTech. *Business & Information Systems Engineering*, 59(1), pp. 69–76.
17) Tekin-Koru, A. (2020). COVID-19 and industrial production in Turkey. *VOXEU,* 14 May 2020. [online] Available at: https://voxeu.org/article/covid-19-and-industrial-production-turkey [Accessed 17.02.2021].
18) UNCTAD, (2020). The Need to Protect Science, Technology and Innovation Funding During and After the Covid-19 Crisis. *Policy Brief No. 80*. [online] Available at: https://unctad.org/webflyer/need-protect-science-technology-and-innovation-funding-during-and-after-covid-19-crisis [Accessed 18.04.2021].
19) Appaya, S., Luskin Gradstein, H. and Mathurin-Andrew, T. (2020). *FinTech can help in the response to COVID-19. But where should policymakers Start?* World Bank Blogs. [online] Available at: https://blogs.worldbank.org/psd/fintech-can-help-response-covid-19-where-should-policymakers-start [Accessed 19.04.2021].

FINANCING OF THE HEALTHCARE SYSTEM - AN ASPECT THAT INFLUENCES THE PERFORMANCE OF HOSPITAL UNITS. ROMANIA IN THE EUROPEAN CONTEXT

MIHAELA TOMAZIU- TODOSIA
Alexandru Ioan Cuza University of Iași
Iasi, Romania
mihaela.tomaziu@gmail.com

IULIANA- CLAUDIA MIHALACHE
Alexandru Ioan Cuza University of Iași
Iasi, Romania
mihalacheclaudia22@yahoo.com

FELICIA- CĂTĂLINA APETROI (RACOARE)
University of Seville
Seville, Spain
apetroifelicia@yahoo.com

Abstract
In the context of the dynamics of the evolution of health services, the evaluation of the performance of the healthcare units raises problems, in terms of size, the complexity of these services, the specialization, as well as the observance of certain European norms. Taking into account the fact that the performance of health institutions contributes to a great extent to the health of the population, this article aims at identifying, from the point of view of the performance of sanitary institutions regarding the number of beds in hospitals, the place of Romania in context. As well as the correlation between the percentage of GDP allocated to the health sector and the performance level of the hospital units. Knowing performance indicators in hospital units can trigger a wide range of improvement activities. In this respect, regarding the performance of the Romanian health system in the European context, referring to hospital performance indicators regarding the number of hospitals beds, Romania is positively positioned, the ranking made by the authors places Romania on a middle position regarding these indicators. During the analyzed period, the influence of the percentage of GDP allocated to the health sector on the performance of the hospital units is observed. Thus, in most cases, an increase in the percentage of GDP allocated to this sector determines, to a large extent, also an increase of the three performance indicators analyzed.
Keywords: *financing; economy; management; performance; healthcare system.*
JEL Classification: A12, B26, H51, I15

1. INTRODUCTION

The main objective of this paper is to contribute to the effort to measure how effective health spending translates into better health of the population through the efficiency of health care units. The focus of the research is on the performance of the hospital units in Romania compared to the rest of the EU member states. The scientific contribution of this paper consists in the determination and argumentation of the importance of financing the health sector in order to increase the performance of the hospital units; identifying the ways in which the state of the economy influences the state of health of the population and the percentage of GDP allocated to the healthcare system. Thus, funding for this sector should be a priority in order to increase the health of the population.

The approach of the topic is motivated by the fact that at present the health status of the population is directly influenced by the performance level of the sanitary units, as well as by the level of the national economy and represents an essential point in assessing the economic evolution, by the degree of evolution of the system sanitary, in order to align with the contemporary requirements. An important aspect is the possibility to follow the economic effects on the performance of health services and to align the accelerated pace of the expectations of the development of this segment to the national economic development. Thus, the questions we want to answer are: "the state of the economy, through the degree of financing of health services, influence the performance of health institutions?" and "Does the performance of health institutions affect the health of the population?"

The issue of research refers to the identification of the level of performance of the hospital units in Romania, as well as the alignment of the improvement of these services to the evolution of the European health system, through the measurement of performance indicators in this sector. The dynamic nature of healthcare developments has a strong impact on the economy of each state as it requires strong and sustained financial support. Also, an important aspect of the research refers to the correlation of the percentage of GDP allocated to the health sector and the performance of the hospital units, on the assumption that the financing influences, to a great extent, the performance of any system. The issue of research refers to the fact that the state of the economy at national level influences the health status of each individual citizen and also influences the performance of health institutions, by the percentage of GDP allocated to this sector. Thus, the purpose of this article is to replicate the way in which the economy directly influences the health of the population by financially supporting health services.

2. RESEARCH METHODS

The research methodology of this study is based on qualitative and quantitative research; qualitative research of data comprises three main stages, namely (1) the identification of the specialized literature, articles, books and studies, (2) its selection, (3) the corroboration of the studies and their summary. In order to identify the influence of the percentage of GDP allocated to the health sector on the performance level of the hospital units, we chose the performance indicators used in the D.R.G. system. (Diagnosis Related Groups), used in the Center for Research and Evaluation of Health Services, a number of 3 performance indicators and hospital performance indicators for the number of hospitals in the European Union in 2018: (1) the number of hospital beds, (2) the number of hospital beds per 100,000 inhabitants, (3) the number of people returning to a hospital bed. The quantitative data needed to analyze the performance of health institutions in Romania and the United States were collected from official sources, www.drg.ro, www.insse.ro, www.ec.europa.eu.

3. LITERATURE REVIEW

In the 1980s, three events prompted a deepening of research into the measurement of healthcare performance and the emergence of performance management in this field; the first event, an article published in the New York Times in 1986, lists the mortality rate in hospitals in the United States. Consequently, in 1987, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) launched the Agenda for Change, which focused on clinical measurements and organizational outcomes. (The New York Times Archives, 1986, p. 00018). The second set of events emerged in the form of publications by researcher John Wennberg about large regional differences in health outcomes (Bunker and Wennberg, 1973, pp. 1249-1251). The third problem came from Donabedian, who made a clear distinction between the three aspects of healthcare management: the structure (the resources available for care), the process (the extent to which professionals follow the rules) and the outcome (changing the health of a patient after treatment) (Donabedian, 1982, pp. 99-106). Thus, the concepts of "performance management" in the health field have been developed, with reference to the use of indicators to measure and improve the performance of individuals, teams, and organizations. This means, in particular, measuring and increasing the performance of the care process, using resources in the most efficient way.

According to Bottle and Aylin (2017), the first series of performance monitoring programs in health services were implemented in the United States in the cardiology sector. In 1995, the National Committee for Quality Assurance (NCQA) launched its first HEDIS Health Performance Reporting Program in the United States, a program used in over 90% of health plans and a number of organizations that measure performance both at the system level and provider level (Bottle and Aylin, 2017, pp. 42 - 44).

In 1996, Kaplan and Norton combined the performance of a hospital unit with financial balance, patients, internal processes and innovation, perspectives that respond to patients and employees, and the concerns of public authorities. Thus, the performance of a sanitary institution was considered one of the key factors for a company's success (Kaplan and Norton, 2010, pp. 1-16). According to Conway and Willcocks (1997, pp. 131-140), the level of healthcare performance is somewhat difficult to measure, given that these services have features such as intangibility, heterogeneity, and inseparability. In this regard, the authors Butler, Oswald, and Turner (1996, p. 8) argue that medical care is, by its very nature, a creditable acquisition.

The literature also illustrates the impact of the cultural factor on the performance of health services, which determines differences in this segment from one country to another. In general, the characteristic ideologies, language, clothing codes, patterns of behavior, signs of status and authority, modes of difference and treatment, rituals, myths, predominant beliefs, values are studied. (Scott, *et al.,* 2003, p. 58). Intervention in changing the culture, such as an attempt to encourage different values, can lead to increased performance in this sector.

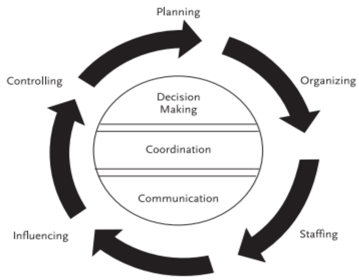
4. HEALTH SYSTEM PERFORMANCE MANAGEMENT

The basis for the performance management of the health system is the efficient use of resources, measured by the quantification of processes and results, using indicators that measure the performance of an organization on certain segments. (Bergeron, 2018, p. 2).

Donabedian (2003), the author of the Health Service Quality Study, reports nine steps as a determinant of monitoring and improving the performance of health services: (1) establishing the objective to be monitored; (2) setting priorities for monitoring; (3) selecting one or more evaluation methods; (4) formulating criteria and standards; (5) obtaining essential information; (6) choosing the right time for monitoring; (7) choosing the way to monitor; (8) building a system monitoring; (9) introducing changes to improve the situation. (Donabedian, 2003, p. 27).

In order for the performance management to work well within the hospital units, Gittell (2009, p. 234) identified a series of steps that influence the medical system in this respect: (1) identifying errors and changing leadership; (2) the extension of the branches of the sanitary unit; (3) measuring the key results of quality and efficiency; (4) relational coordination and identification of weak links; (5) measuring the high-performance work system and identifying bottlenecks; (6) transformation of working practices and their systematization.

Figure 1. The importance of Healthcare Management



Source: (Dunn, 2002, p. 20)

The health services management (Figure 1) has the role of planning, organizing, coordinating, training and controlling all the decisions, actions and resources available or to be attracted within the sanitary unit. Thus, the management of sanitary institutions is a dynamic process that is based on principles, functions and legal provisions, carried out in a certain succession, closely linked and contributing to the achievement of the objectives.

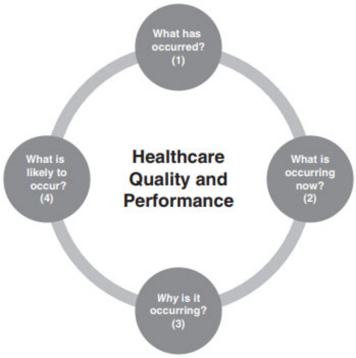
5. THE IMPORTANCE OF THE PERFORMANCE OF HOSPITAL UNITS

In medical services, there are a number of methods used to describe the elements of performance improvement. In order to identify the safe means that lead to the performance of sanitary institutions, the easiest way is represented by financial resources. However, both material and human resources contribute to increasing the performance of hospital units. So, resources need to be used with caution and transparency, both micro and macro. In this sense, Leatherman (2009) supports a category of actions that could increase the performance of this sector:

- External oversight, which refers to regular checks by the authorities on the accreditation and certification of institutions, as well as on the setting of performance targets to be achieved in a given period of time;
- Involvement of the patient and his/ her freedom to choose the services provided to him, based on the information provided by the sanitary institution and on the knowledge of the laws in force;
- Establishing strict national rules for decision-makers and health professionals;
- The knowledge of health professionals contributes to improving the quality of healthcare delivery and, therefore, it is necessary to periodically evaluate them, establish certain professional conduct norms, protocols to be followed;

- Financial incentives, such as remuneration for performance gains, as well as non-financial incentives to increase the professionalism of health professionals. (Leatherman, 2009, pp. 323-324).

Figure 2. Reporting and Analytics Capabilities for Quality and Performance Improvement

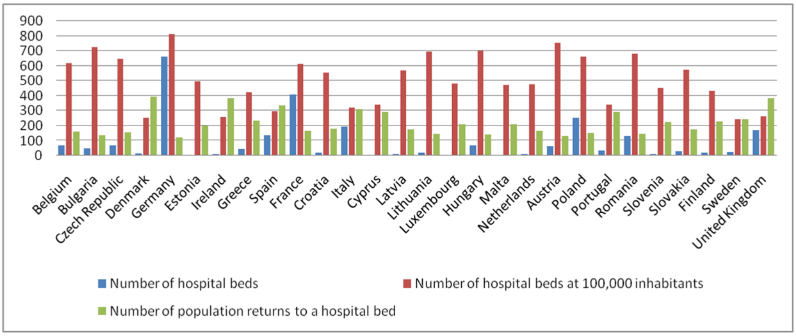


Source: (Strome, 2013, p. 18)

Considering that healthcare is one of the most complex sectors, improving its quality and performance is also being done with a high degree of difficulty. Thus, (Figure 2) questions like "What has occurred" (circle 1) and "What is occurring now" (circle 2) can help highlight the current performance, and identify improvement or, on the contrary, worsening, deterioration. The question "Why is occurring" (circle 3) goes one step further and helps the hospital unit to identify the causes of certain types of problems, highlights the relationship between expectations and reality. The question "What is likely to occur" (circle 4) allows, given the appropriate models and data, the anticipation of future outcomes and the problems that may arise, as well as their causes, in the sense of acting, at the right time, on causes rather than on effects. These approaches help to highlight the relationships between different factors, which, different in intensity, can have a negative impact on the quality and performance of hospital units.

The use of performance indicators in hospital units can trigger a wide range of improvement activities. However, it is important for the organization to focus on the areas requiring the majority of improvements, given that each organization has different needs, required to identify and consolidate the priorities of its own pressure points. In Romania, the AR-DRG classification system v.5 is used. The Diagnosis Related Groups (DRG) was developed in the 1970s in the US at Yale University by a group of doctors, economists, and statisticians who have tried to imagine a system of evaluation of results hospitals.

Figure 3. Performance indicators of hospitals on the number of beds in hospials, in the European Union, in 2018



Source: authors' elaboration based on data from INSSE (2019)

Regarding the level of performance of the Romanian health system in the European context (Figure 3), referring to hospital performance indicators regarding the number of beds in hospitals, Romania is positively positioned. Thus, with reference to the number of beds in hospitals, Romania ranks 7th, with 134,572 beds in hospitals. Germany ranks first, with 664,364 beds in hospitals followed by France with 408,245 beds. Regarding the number of hospital beds per 100,000 inhabitants, Romania ranks 6th, respectively 679,1 hospital beds per 100,000 inhabitants; Germany ranks first with 818.3, followed by Austria with 754,5 hospital beds per 100,000 inhabitants. Regarding the number of the population returning to a hospital bed, Romania is ranked 6th, with 147.3 people in a hospital bed; the first place in Germany, with 123 people on a hospital bed, followed by Austria with 132.4. The rankings ranked Romania in a middle position as regards hospital performance indicators on the number of beds in hospitals.

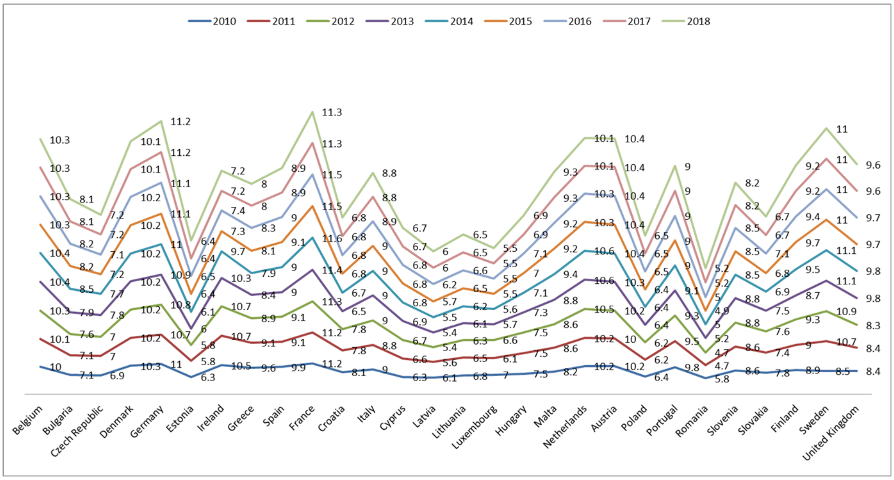
6. THE IMPORTANCE OF FINANCING THE HEALTH SECTOR

It is known that in most EU member states there is dissatisfaction with the ways of funding and providing health services. The main common problems, which occupy different places in the order of national concerns, are the existing equity deficiencies in accessing this system, efficient and transparent use of existing resources, control over expenditures and the quality of services provided (Drucker, 1993, pp. 125-126). The basic purpose of any health system is to respond appropriately to the patients' specific needs, and in this sense, the performance of public health institutions is directly proportional to the budget allocated to the system. Romania's accession to the EU has determined that the level of funding and services offered at the level of EU member states. to become a reference framework for the Romanian population as well.

The level of performance of a system is essentially determined by the way it is funded and organized, including in terms of collecting and attracting resources, as well as their use. The percentage of financing of health services in the Gross Domestic Product (GDP) is constantly subject to change, taking into account aspects such as the state development priorities, the continuous and rapid evolution of the system, the changes taking place at political and economic level, but also the factors that determine the incidence of affections. Although the funding system for the health sector differs from one country to another, shared by them, there is a need for a sustainable health financing mechanism.

Healthcare sub-financing also influences other performance indicators of hospital units, such as clinical efficiency, the number of patients treated per physician, average hospitalization duration, patient satisfaction. In general, there is a positive correlation between health sector financing and its performance, given that financial resources remain key to ensuring the smooth operation of any system.

Figure 4. Percentage of GDP allocated to healthcare in EU countries



Source: authors' elaboration based on data from INSSE (2011-2019)

During the analyzed period, respectively 2010 – 2018 (Figure 4), based on the data provided by INSSE (2011-2019), the influence of the percentage of GDP allocated to the health sector on the performance of the hospital units is observed. Thus, in most cases, an increase in the percentage of GDP allocated to this sector determines to a large extent an increase in the three performance indicators analyzed, ie hospital performance indicators on the number of beds in hospitals in the European Union: (1) Number of hospital beds, (2) Number of hospital beds per 100,000 inhabitants, (3) Number of population returning to a hospital bed. Regarding Romania, it is observed that the financing of health services is much below the average of the European Union, aspects that are also reflected in the precarious health of the population, through the existing deficiencies in the system. Financial resources are essential in supporting the health system in general. In the health system, financial resources have a decisive role, as they determine the quantity and quality of material and human resources, aspects on which human lives depend.

7. CONCLUSIONS

The performance of the healthcare system is influenced by the country's economic development, is a long-term problem. The high degree of performance of sanitary institutions and, implicitly, of hospital units is important at the individual level and at the level of society as a whole for many reasons, such as: (1) determines the increase of the population's trust for the respective institution; (2) allows the coverage of a wide range of applications in this area; (3) reduces the number of people on waiting lists for specialized consultations; (4) contribute to attracting patients from other countries, thus developing medical tourism; (5) increase the health of the population.

As medical care becomes more complex, spending continues to grow, and in this context, it is important to know the degree of performance of the health system by the patient choosing a particular institution, by healthcare professionals who continually improve their abilities, by the manager responsible for the proper functioning of the hospital unit as well as by the regulatory authorities that assess the whole system. On the basis of the specialized literature analyzed and the correlation of the quantitative data, we can state that the financing of the health care system influences the performance of the sanitary institutions and thus also influences the health of the population.

References

1) Bergeron, B. P. (2018). *Management in Healthcare, From Key Performance Indicators to Balanced Scorecard*, 2nd ed. LLC., UK: Taylor & Francis Group.
2) Bottle, A. and Aylin, P. (2017). *Statistical Methods for Healthcare Performance Monitoring.* London: CRC Press.
3) Bunker, J. P. and Wennberg, J. E. (1973). Operation Rates, Mortality Statistics and the Quality of Life. *The New England Journal of Medicine*, 289(23), pp. 1249-1251.
4) Butler, D., Oswald, S. and Turner, D. (1996). The effects of demographics on determinants of perceived health-care service quality. *Journal of Management in Medicine*, 10(5), pp. 8-20.
5) Conway, T. and Willcocks, S. (1997), The role of expectations in the perception of health care quality: developing a conceptual model. *International Journal of Health Care Quality Assurance*, 10(3), pp. 131–140.
6) Diagnosis Related Groups – DRG, (2021). *Diagnosis Related Groups website*. [online] Available at: https://www.drg.ro/index.php?p=drg [Accessed 05.02.2019]

7) Donabedian, A. (1982). Advantages and Limitations of Explicit Criteria for Assessing the Quality of Health Care. *The Milbank Memorial Fund Quarterly, Health and Society*, 59(1), pp. 99 – 106.
8) Donabedian, A. (2003). *An Introduction to Quality Assurance in Health Care*. USA: Oxford University Press
9) Drucker, P. (1993). *Managing for Results Economic Tasks and Risk-taking Decisions*. UK: Harper Collins Publishers, Inc.
10) Dunn, R. (2002). *Haimann's Healthcare Management*, 7th ed. Illinois: Health Administration Press Chicago.
11) Gittell, J. H. (2009). *High Performance Healthcare- Using the Power of Relationships to Achieve Quality, Efficiency and Resilience*. USA: The McGraw-Hill Companies.
12) INSSE, (2015). *The activity of sanitary units*. [online] Available at: http://www.insse.ro/cms/sites/default/files/field/publicatii/activitatea_unitatilor_sanitare_anul_2015.pdf [Accessed 20.01.2021].
13) INSSE, (2016). *The activity of sanitary units*. [online] Available at: http://www.insse.ro/cms/sites/default/files/field/publicatii/activitatea_unitatilor_sanitare_anul_2016.pdf [Accessed 20.01.2021].
14) INSSE, (2017). *The activity of sanitary units*. [online] Available at: http://www.insse.ro/old/sites/default/files/field/publicatii/activitatea_unitatilor_sanitare_anul_2017.pdf [Accessed 20.01.2021].
15) INSSE, (2019). *The activity of sanitary units*. [online] Available at: https://insse.ro/cms/sites/default/files/field/publicatii/activitatea_unitatilor_sanitare_anul_2019.pdf [Accessed 21.02.2021].
16) Kaplan, R. S. and Norton, D. P. (2010). Dealing with Dilemmas: Redefining Strategy. *Balanced Scorecard Report - the Strategy Execution Source*, Harvard Business Publishing, 12(5), pp. 1-16.
17) Leatherman, S. (2009). *Performance measurement for health system improvement, Experiences, challenges and prospects*. New York: Cambridge University Press.
18) Scott, T., Mannion, R., Davies, H. and Marshall, M. (2003). *Healthcare Performance and Organisational Culture*. UK: Radcliffe Medical Press.
19) Strome, T. L. (2013). *Healthcare Analytics for Quality and Performance Improvement*. New Jersey: John Wiley & Sons.
20) The New York Times Archives, March 17, 1986, Page 00018 [online] Available at: https://www.nytimes.com/1986/03/17/opinion/how-to-read-the-hospital-death-list.html [Accessed 29.01.2021].

MIHAELA TOFAN
IRINA BILAN
ELENA CIGU
(EDITORS)

EUFIRE 2021

Pandemic Challenges for European Finance, Business and Regulation

This volume is the result of the project Jean Monnet CHAIR European Financial Regulation, reference no. 574702-EPP-1-2016-1-RO-EPPJMO-CHAIR, supported by the Erasmus+ Programme of the European Union, and reunites the papers presented at the International Conference “European Finance, Business and Regulation – EUFIRE 2021”, organized at “Alexandru Ioan Cuza” University of Iasi, in May 2021. In the extraordinary context of the global pandemic Covid-19 crises, the conference was organized using the on-line only format and it reunited an impressive number of researchers, academics and pracvtitioners. Through its interdisciplinary contents, the volume approaches different aspects of the financial, business and public administration regulatory framework in the European Union, especially focusing on its dynamics, recent developments, deficiencies and means of reinforcement, given the current global challenges.

ISBN *online*: 978-606-714-682-0

EDITURA UNIVERSITĂŢII „ALEXANDRU IOAN CUZA” DIN IAŞI