

EUROPEAN ADMINISTRATIVE AREA

INTEGRATION AND RESILIENCE DYNAMICS

Proceedings of the International Conference EU-PAIR 2022



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EDITURA UNIVERSITĂȚII „ALEXANDRU IOAN CUZA” DIN IAȘI

Ana-Maria Bercu • Irina Bilan • Constantin-Marius Apostoaie
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2022

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TABLE OF CONTENTS

SCIENTIFIC COMMITTEE	8
LIST OF REVIEWERS.....	9
Diana-Elena Abalășei, Liviu-George Maha, THE NATIONAL INSTITUTIONAL FRAMEWORK FOR IMPLEMENTING THE EUROPEAN FUNDS IN ROMANIA. A COMPARATIVE ANALYSIS BETWEEN THE LAST TWO PROGRAMMING PERIODS: 2007-2013 AND 2014-2020	11
Monica Agheorghiesei, Ana-Maria Bercu, EDUCATION POLICY CHALLENGES IN TIMES OF PANDEMIC: SUSTAINABILITY AND RESILIENCE	31
Alina Artemenko, Iulian Ihnatov, FOREIGN EXCHANGE MARKETS EFFICIENCY DURING MACROECONOMIC INSTABILITY AND WORLD UNCERTAINTY: ROMANIAN AND UKRAINIAN CASES.....	41
Carmen Claudia Aruștei, ALIGNING HR PRACTICES TO REACH DESIRED HR OUTCOMES. A CASE STUDY APPROACH	75
Gabriela Boldureanu, Cornelia Iskra (Ghindă), BEHAVIOUR OF RESILIENT ENTREPRENEURS DURING CRISIS	89
Geanina Brînză, Maria-Magdalena Maftci, Gina Ionela Butnaru, ENTREPRENEURSHIP VERSUS EU LABOUR MARKET. CURRENT SITUATION AND PROSPECTS.....	97
Silvia-Maria Carp, Ana-Maria Bercu, HOW EFFECTIVE IS THE EU POLICY ON COMBATING THE VIOLENCE AGAINST WOMEN? KEY FACTS AND FURTHER DEVELOPMENTS	113
Victor-Andrei Cărcăle, OBSERVATIONS ON ESTABLISHING CAUSATION IN CRIMINAL LAW	127
Mirela Cerkez, RESILIENCE IN ADMINISTRATIVE REFORMS IN ROMANIA - THE RESILIENCE AND RECOVERY PLAN	139
Elena Cigu (Rusu), Mihaela Onofrei, Anca Florentina Gavriliuță (Vatamanu), FISCAL DECENTRALIZATION AND LOCAL GOVERNANCE QUALITY	147
Ruxandra Ciulu, HOW HAS THE COVID-19 PANDEMIC CHANGED THE RECRUITMENT AND SELECTION GAME IN THE IT INDUSTRY? A ROMANIAN PERSPECTIVE	155

Lenuța Cojocariu, Florin Oprea, INTERCONNECTIONS BETWEEN GOOD GOVERNANCE INDICATORS AND WELLBEING IN EUROPEAN CONTEXT	171
Nicoleta Dospinescu, Octavian Dospinescu, A MANAGERIAL APPROACH ON ORGANISATIONAL CULTURE’S INFLUENCE OVER THE AUTHENTICITY AT WORK.....	189
Jarmila Duháček Šebestová, THE EVALUATION OF PUBLIC AIDS TO BUSINESS ENTITIES DURING COVID-19 PANDEMIC: A SOAR ANALYSIS	199
Bogdan Florin Filip, CHALLENGES FOR EU PUBLIC ADMINISTRATION ON THE ROAD TO THE DIGITAL SOCIETY	215
Ioana Marinela Gavriliuță (Turtă), Grigore Nepotu, Maria-Simona Cuciureanu, INFLUENCE OF DIGITAL AGENDA FOR EUROPE ON THE DEVELOPMENT OF DIGITAL SERVICES IN ROMANIA. EVOLUTION AND OBJECTIVES	229
Sandra Gradinaru, ASPECTS REGARDING THE LIABILITY PRESCRIPTION OF A PUBLIC SERVANT INVESTIGATED BY NATIONAL INTEGRITY AGENCY	243
Gilles Grin, THE LINK BETWEEN ECONOMIC AND POLITICAL INTEGRATION IN EUROPE	253
Domnița Grițco, THE FINANCIAL DECISIONS ON HUMAN RESOURCE: SUSTAINABILITY OF SALES	263
Raúl Gutiérrez-Meave, FRAMING AND DECISIONS: THE PUNCTUATIONS OF THE MEXICAN POWER GENERATION POLICY SUBSYSTEM.....	275
Jaudat Khalaily, CRISIS MANAGEMENT: THE CASE OF MANAGING THE CORONA CRISIS IN NURSING HOMES FOR ELDERLY PEOPLE IN ISRAEL.....	287
Vlad Leontie, Liviu-George Maha, DIGITALIZATION IN THE CONSTRUCTION SECTOR. MAIN STRATEGIES AND POLICIES IN THE EUROPEAN UNION.....	309
Dan Lupu, COVID19 PANDEMIC AND PUBLIC PROCUREMENT IN ROMANIA	325
Dan-Pavel Matei, Constantin-Marius Apostoae, JUSTIFICATION OF INVESTMENT DECISIONS USING TECHNICAL AND FUNDAMENTAL ANALYSIS – A CASE STUDY APPROACH.....	337
Camelia Cătălina Mihalciuc, Maria Grosu, Liviu-George Maha, Ciprian Apostol, THE INFLUENCE OF THE COVID-19 PANDEMIC ON THE RESILIENCE OF COMPANIES. A BIBLIOMETRIC ANALYSIS	355
Carmen Moldovan, AN OVERVIEW ON THE TREATMENT OF UKRAINIAN REFUGEES AND THE ROMANIAN EXAMPLE OF GOOD PRACTICES	371

Ruxandra Răducanu, BRIEF CONSIDERATIONS REGARDING THE USE OF THE FUNCTION IN FAVOUR OF CERTAIN PERSONS	383
Christiana Brigitte Sandu, Elisabeta Jaba, THE RELATIONSHIP BETWEEN JOB SATISFACTION AND JOB CHARACTERISTICS OF OLDER WORKERS IN EUROPEAN ORGANIZATIONS. A PERSPECTIVE ON GENDER DIFFERENCES	391
Claudia Stoian, Patricia Berteza, Corina Cara, Tudor Tocilă, Oana Țugulea, A QUALITATIVE STUDY OF THE YOUNG BUYERS' MOBILE SHOPPING BEHAVIOR. AN EXPLORATION OF THE ADOPTION FACTORS, IMPULSE BUYING AND ENVIRONMENTAL AWARENESS	407
Claudia Stoian, Ioana Cernat, Adriana Prodan, Gabriela Boldureanu, EXPLORING CUSTOMER EXPERIENCE IN THE COFFEE SHOPS – A QUALITATIVE APPROACH.....	419
Silviu-Mihail Tită, Ana-Maria Bercu, IMPACT OF PERFORMANCE MEASUREMENT INDICATORS IN LOCAL PUBLIC ADMINISTRATION.....	427
Elena-Sabina Turnea, STUDENTS' PERCEPTION OF THE ADVANTAGES AND DISADVANTAGES OF REMOTELY, ONLINE WORK.....	437
Olga Andreea Urda, THE IMPACT OF MONEY LAUNDERING REGULATION ON THE EVOLUTION OF THE BUSINESS ENVIRONMENT.....	447
Ioana-Maria Ursache, Constantin-Marius Apostoiaie, THE SMART CITIES OF ROMANIA: AN OVERVIEW	455

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THE NATIONAL INSTITUTIONAL FRAMEWORK FOR IMPLEMENTING THE EUROPEAN FUNDS IN ROMANIA. A COMPARATIVE ANALYSIS BETWEEN THE LAST TWO PROGRAMMING PERIODS: 2007-2013 AND 2014-2020

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Abstract

Starting with 2007, Romania has benefitted from the European funding system, covering the 2007-2013 and 2014-2020 budgetary periods. Although it is among the EU Member States with the highest financial need for accelerating the economic and social development process, in the 2007-2013 programming period, Romania failed to maximize the impact of the European funds, having, practically, the lowest absorption rate among all the beneficiaries. Between the reasons that led to the achievement of this result, we can include some institutional and administrative factors that hindered both the access to European funds, as well as their effective use during the projects' implementation period. Considering that the experience of the first budgetary cycle can be considered a relevant and useful lesson for creating the conditions for a more efficient use of the European funds in the 2014-2020 multiannual financial framework, the purpose of this paper is to emphasize the institutional measures and changes that took place in order to ensure a smooth process for attracting and effectively using these financial instruments during the current programming period. Thus, we compared the two programming periods from the institutional point of view, to determine what measures have been taken so far and whether they were successful, taking into account all the stages of this process, from the project preparation to implementation and reporting phases.

Keywords: *European Funds; institutional framework; EU funds absorption process.*

JEL Classification: D73, F50, O18

1. INTRODUCTION

Becoming a member of the European Union in 2007, Romania has acquired the opportunity of using the European Funds for increasing and accelerating its economic development. Their main role is to lead to economic convergence and

to create favorable conditions in order to ensure European cohesion, support the economic growth, sustainability, improvement of the job creation mechanisms and contributing to the decrease of the regional disparities among the Member States. Although Romania is still the most underdeveloped Member State of the EU, with 7 out of 8 regions being recognized as “less developed regions”, during the 2007-2013 programming period it was ranked the least EU country in terms of absorption of the European Funds. By the end of 2018 it has absorbed 90.4% of the funds, compared to EU’s average of 97.77% absorption rate.

The Cohesion policy can be considered the main policy of the European Union, benefiting of the largest budget allocations in the last two periods of multiannual financial programming, in order to meet the challenges of globalization (Begg, 2010). In addition to its traditional role in promoting the convergence of the real economy by supporting less developed regions, largely through public investment financed by the Structural and Investment Funds (ESI), cohesion policy has become a significant tool for achieving the Europe 2020 goals. Although initially it had a more vaguely defined role in combating social exclusion, more recently, considerable attention has been paid to it, as well as to a “territorial” dimension of cohesion (Begg, 2010). Cohesion policy is mainly aimed at improving the least favored regions in terms of economic development, so that financial allocations are made on the basis of the specific needs identified by each Member State.

During the programming period of the allocated budget, a series of negotiations are taking place between the Member States and the institutions of the European Union, as well as at national level, between national institutions and between them and the civil society, in order to set development priorities for the Member State and its regions. So far, Romania has covered two programming periods, namely 2007-2013, which ended on 31st December 2015 (following the application of the “n+2” mechanism), and 2014-2020, whose expected end date is 31st December 2023, following the “n+3’ rule.

2. IS THE 2007-2013 PROGRAMMING PERIOD A LESSON TO BE LEARNED?

The European Funds are financial instruments developed by the European Union, applied in the public and private segments of the countries which are already Member States or are in the process of accession, with the intention of developing different domains and areas in order to achieve certain standards of economic, but also cultural or social development (Hen and Leonard, 2002). In underdeveloped countries, economic development appears as the primary consideration. Countries following the advice given by protagonists of the balanced-growth doctrine may strive for economic integration in order to ensure a sufficiently large market for the parallel development of new industries (Balassa, 1961).

Ever since its accession in the European Union, Romania has struggled with absorbing the financial instruments provided by the European Funds, while it has been ranked least in the economic development of the Member States. Even though the funds allocated during the period 2007-2013 to Romania were supposed to help improve the economic and social sectors, the results achieved in terms of absorption proved that Romania was not capable to efficiently use these instruments, as by the end of 2018 it only managed to absorb 90% of the funds, compared to almost 98% which was the average EU Funds absorption.

Recent literature has provided us with a series of factors that impact the use of EU Funds in order to lead to a better absorption. Several researchers have put emphasis on the administrative capacity of a country (Oprescu *et al.*, 2005; Țigănașu, Încălțărău and Pascariu, 2018) in terms of the ability and capacity of central and regional authorities to attract, manage and efficiently implement European projects. Other authors have underlined administrative characteristics such as bureaucracy and corruption (Bachtler and McMaster, 2008; Mihăilescu, 2012; Tătulescu and Pătruți, 2014) who tend to hinder the process of the management of EU Funds, taking into consideration the fact that Romania has lately been ranked in the last 30 countries in terms of favoritism in decision of government officials (Transparency International Romania, 2011). Also falling in the category of administrative characteristics that impact the use of EU Funds, other authors have identified the unclear provisions in national legislation (Zaman and Georgescu, 2014), political instability (Mihăilescu, 2012), lack of a long-term vision of the authorities in organizing the financial resources in order to be able to co-finance projects (Zaman and Georgescu, 2009). With regard to the preparation and effective management of the EU projects, other authors have emphasized the failure of the public-private partnership or lack of medium and long-term perspectives (Katsaitis and Doulos, 2009) in order to ensure sustainable projects, lack of experts specifically trained to work in the management and implementation of EU projects, lack of coordination between operational programs and projects (Zaman and Georgescu, 2014). The overall framework and architecture of the programs which need to respond to certain needs in society is underlined by (Cace *et al.*, 2009) who argue about the capacity of local, regional and national institutions to prepare projects, programs and plans in due time, to be able to organize an efficient framework for the development of the projects and partnerships, to be able to supervise the process of implementation by avoiding irregularities. Besides the administrative capacities of local and national authorities, the macroeconomic absorption capacity of a country is another area of interest, as the amount of money allocated annually from the Structural and Cohesion Funds to a member state cannot exceed 4% of its GDP, so that the member state has to prove its macroeconomic stability as it has to provide the amount of money needed for co-funding the approved projects.

Once the 2007-2013 programming period ended, different types of analysis have been realized by public and private institutions, in order to examine how the EU funds granted have been spent, to gather the results and to determine what problems have been encountered over the years.

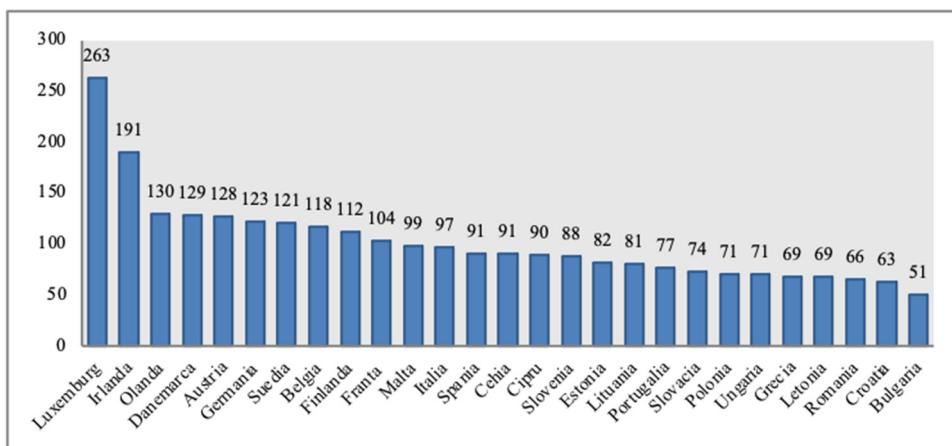
Such a report is the one issued by the Romanian Government, more precisely by the Ministry for Regional Development, Public Administration and European Funds in 2007 for the Regional Operational Program 2007-2013 (REGIO, 2015). Among the issues stated, the officials underlined that there is a need in the improvement of the public procurement verification system carried out within the implementation of the European-funded projects and that a reform of the public procurement system is needed. Furthermore, the report also stated that there was a lack of financial flaws at the beneficiaries' level, which caused delays in the implementation phase and also, in the case of some key areas of interest there was a lack of interest from the beneficiaries, which resulted in a low level of project submission. For the latter, the report mentions that part of the unused funds have been distributed to different key areas of interest, conditioned by the approval of the European Commission. According to the above-mentioned report, the recommendations on the project implementation process envisage, for example, the introduction of selection criteria that would contribute to increasing the relevance of interventions through a better territorial analysis (Key Area of Interest 3.2, Key Area of Interest 4.1.) or to increase the sustainability of interventions, but also aspects specific to the design of interventions. Horizontal recommendations also aim to simplify the public procurement process, develop support mechanisms for beneficiaries through help-desk systems or to organize specialized training activities for applicants to improve technical, planning and financial capacity. Another category of recommendations from the study is the evaluation activity on improving the mechanism for collecting and storing data for supported interventions, by typology of target groups and beneficiaries, taking into account all relevant indicators and monitoring of complementary indicators to better quantify the impact of each Key Area of Interest (KAI).

Taking into account the relatively poor results that Romania registered in the EU-funded projects during 2007-2013, the European Commission issued, in 2013, a set of recommendations (European Commission, 2014) regarding the management of European Funds for the period 2014-2020, based on the experience in the previous programming cycle. Also, its aim was to differentiate between the monitoring and evaluating phases of the European funds in order to achieve the European policy objectives. The intention was to encourage the implementation of a result-oriented policy and to remove the excessive focus from the absorption of funding. The second major concern of the document was to specify more clearly the differences between monitoring and evaluation phases, to establish more clearly the different types of evaluation and to call for more methodological rigor in capturing the effects of interventions.

3. THE 2014-2020 PROGRAMMING PERIOD. CURRENT SITUATION

There are still considerable disparities between EU Member States in terms of development and GDP per capita, but these gaps also exist within Member States, at regional level, between the most and the least developed regions, which is why the EU continues to promote a policy of economic, territorial and social cohesion.

The need for cohesion policy is best illustrated by the fact that EU Member States can be structured into 3 development categories, taking into account the GDP per capita indicator measured at the purchasing power standard (see Figure 1) so that: the first group has 12 Member States with a GDP/capita well above the EU average, the second group has 8 Member States, with a GDP/capita between 68-97% of the EU average, and the last group, which includes 8 Member States, has a GDP/capita below 60% of the EU average (Dobrescu and Pavel, 2014), which is 101.

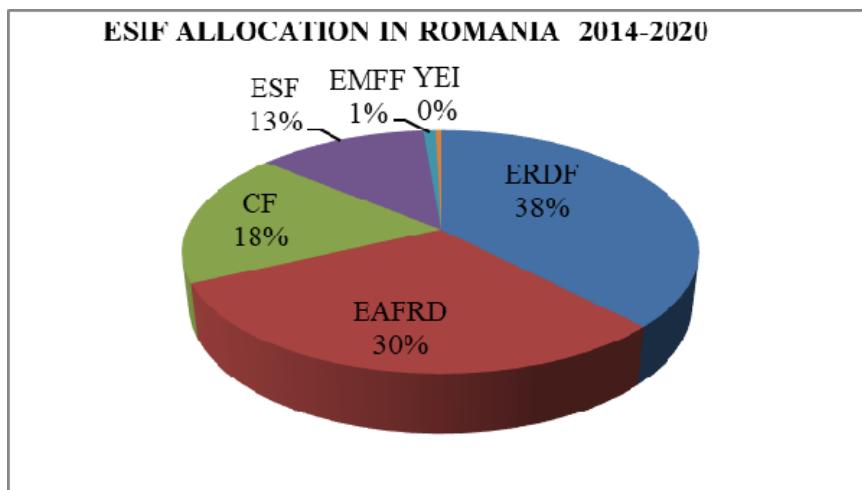


Source: own representation based on the Eurostat database

Figure 1. GDP of the Member States

The implementation of actions aimed at achieving the objectives of cohesion policy is carried out through structural financial instruments, namely the European Regional Development Fund, the European Social Fund and the Cohesion Fund. The 3 programs mentioned above are joined by the European Agricultural Fund for Rural Development (EAFRD) and the European Fisheries and Maritime Fund (EMFF), and all 5 constitute the European Structural and Investment Funds (ESI Funds).

These types of funds meet the needs identified by cohesion policy for the period 2014-2020, and are targeted by 11 thematic objectives (see Figure 2).



Source: own representation based on data from European Structural and Investment Funds – 2014-2020 ESIF Overview (<https://cohesiondata.ec.europa.eu/overview>)

Figure 2. ESI Funds allocation in Romania 2014-2020

The cohesion policy mobilizes different levels of government, at European, national and regional level, and the main benefits it offers compared to Member States' national resources are: aligning investments with EU priorities (resulting in coordinated actions at European level), contribution to economic governance in connection with country-specific recommendations; multiannual programming (which provides stability, certainty and sustainability through Member State's investment plans, reducing vulnerabilities in economic and political cycles); specific approach (the needs of each territory are identified and multi-thematic investment strategies are defined); efficient combination of resources from different sources.

Table 1. Total allocation for Romania 2014-2020

Country Budget 2014-2020	41,618,447,751
EU funding	35,207,348,734
National contribution	6,411,099,017

Source: own representation based on data from European Structural and Investment Funds – Country Data for Romania (<https://cohesiondata.ec.europa.eu/countries/RO>)

Table 2. Yearly allocation of ESI Funds for Romania 2014-2020

Year	Total Value	Contracted	% Contracted	Spent	% Spent
2015	36,466,182,262	1,009,077,412	3	166,100	0
2016	36,447,518,905	44,780,420,402	12	1,131,326,705	3
2017	37,370,222,767	14,502,253,173	39	4,370,886,093	12
2018	36,542,899,831	26,641,477,208	73	8,722,636,175	24
2019	36,540,922,726	36,748,651,515	101	12,510,321,721	34
2020	36,569,092,928	47,705,573,704	130	17,845,789,758	49
2021	28,042,284,053	42,608,092,104	152	15,316,186,625	55

Source: own representation based on data from European Structural and Investment Funds – 2014-2020 ESIF Overview (<https://cohesiondata.ec.europa.eu/overview>)

Table 1 shows us the amount of money available for the 2014-2020 programming period for Romania, while from Table 2 we can observe the absorption process of the ESIF Funds during 2014-2020 implementation period. As it can be seen, 7 years after the official beginning of the program, Romania has managed to absorb only 55% of the amount of allocated European Funds. Even so, taking into account the fact that the 2014-2020 program will come to an end in December 2023, Romania has now less than a year and a half in order to speed up its absorbing process, otherwise the unused money will be decommitted. As a comparison to the previous programming period, by the end of 2015, Romania had managed to absorb only 64% of its European financial resources, but until 2018 it managed to raise its percentage to 90%. This was due to the introduction of some financial instruments that permitted moving the amount of unspent money to other types of actions and priorities by the end of the program. Considering this, even if there is still almost a year and a half left until the end of the program, 55% indicates a slow absorption process after 7 years of program implementation.

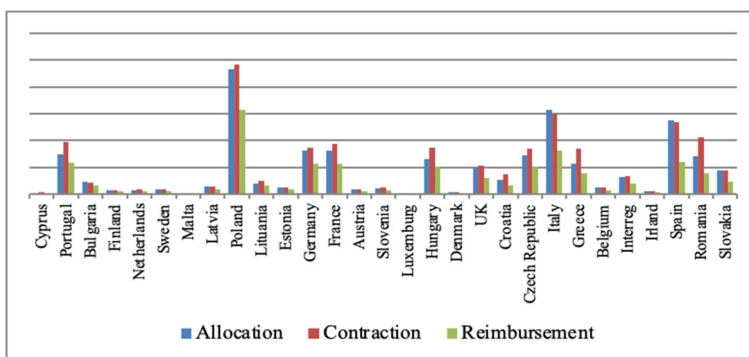
Table 3 presents the overall situation of the EU Member States by the end of 2021.

As it can be observed in Figure 3, Romania is situated at the bottom of the list, having absorbed only 55% of its destined money, which is almost 10 pp lower than the EU average of 64%. Even so, the fact that Romania has contracted 151% means that many projects have been accepted for financing and are currently in the implementation phase, which may lead to a better result in the following two years, after the ending period of the implementation phase. Although the previous programming period should have been a lesson learned for both the Romanian administration and the potential beneficiaries, it appears like there are still a lot of issues regarding the preparing, monitoring and management of the European Funds in Romania.

Table 3. Contraction and implementation rates of the Member States 2014-2021

Member State	Allocation	Contraction	Contraction (%)	Reimbursement	Reimbursement (%)
Lithuania	8,245,356,349	10,217,877,003	124	6,728,973,260	82
Portugal	29,767,444,586	39,173,869,320	132	23,173,729,036	78
Hungary	26,251,182,381	34,515,022,399	131	20,363,962,082	78
Slovenia	4,141,946,293	5,176,150,493	125	3,099,886,849	75
Finland	3,002,221,982	3,311,160,974	110	2,186,665,332	73
Netherlands	3,202,687,735	4,027,516,982	126	2,293,127,240	72
Irland	2,307,511,900	2,010,927,327	87	1,672,905,289	72
Cyprus	1,037,892,384	1,259,974,060	121	725,803,712	70
Bulgaria	9,222,723,828	8,982,653,221	97	6,426,059,834	70
Malta	1,002,789,043	1,010,613,160	101	698,256,198	70
France	32,467,788,557	37,553,910,528	116	22,667,581,524	70
Czech Republic	29,360,109,512	33,718,689,186	115	20,406,569,453	70
Estonia	5,005,819,020	5,197,009,461	104	3,441,710,773	69
Germany	32,758,676,375	34,628,288,875	106	22,702,906,572	69
Greece	22,766,317,162	33,720,124,451	148	15,739,101,181	69
Poland	92,835,710,028	96,459,067,795	104	62,896,696,153	68
Sweden	3,914,524,023	3,662,251,043	94	2,611,573,130	67
Latvia	5,616,339,314	5,694,542,763	101	3,645,675,332	65
Interreg	12,631,209,716	13,432,638,662	106	8,114,101,153	64
Croatia	10,818,519,882	15,102,943,310	140	6,802,912,204	63
Austria	3,442,094,143	3,903,455,597	113	2,142,171,201	62
Luxemburg	227,907,389	242,982,879	107	139,013,502	61
UK	19,630,834,857	21,142,246,771	108	11,898,341,964	61
Denmark	1,268,176,213	1,272,430,985	100	736,299,492	58
Belgium	4,982,302,610	5,104,746,732	102	2,787,616,098	56
Romania	28,266,110,516	42,798,964,048	151	15,435,775,368	55
Slovakia	17,698,424,703	17,904,473,805	101	9,384,237,450	53
Italy	62,788,128,624	59,737,818,097	95	32,834,572,531	52
Spain	55,242,752,851	53,757,954,944	97	23,796,250,785	43

Source: own representation based on the data from European Structural and Investment Funds – Data by country (<https://cohesiondata.ec.europa.eu/countries>)



Source: own representation based on the data from European Structural and Investment Funds – 2014-2020 ESIF Overview (<https://cohesiondata.ec.europa.eu/overview>)

Figure. 3 Situation of EU Member State’s allocation/contraction/ reimbursement (2021)

Even so, we cannot deny the external major issues that affected Romania and all the European countries in the two programming periods: during 2007-2013 there was a significant economic crisis worldwide, which, as expected, impacted more the less developed countries, while during the 2014-2020 programming period, the Member States have confronted with the Brexit – which influenced the common European budget, the Covid-19 pandemic and more recently, the Russian-Ukrainian war whose effects have a major impact on the whole world.

4. CHANGES IN THE 2014-2020 PROGRAMMING PERIOD

During the programming period 2007-2013 Romania was allocated 33,92 billion euro in EU Funds, while for the 2014-2020 period the amount was 31 billion euro. A series of changes have been proposed and taken for each programming period in order to ensure a level of absorption as higher as possible.

In 2018, the European Court of Audit (ECA) published a report (European Court of Audit, 2018) examining the actions tackled by the European Commission and the Member States regarding the absorption of the European Funds. Comparing the two programming periods (2007-2013 and 2014-2020), the Court found that for both of the above, the late adoption of the legislative framework led to the late adoption of the operational programs. For both periods, most of these programs were not adopted until one year after the start of the programming period, which had an inevitable domino effect on the start of spending from the allocated funds. Furthermore, another issue concluded by the ECA was that the two periods overlapped for 2 years (2014 and 2015) which meant that although the new program had already started, Member States were still spending the remaining funds from the previous period. Other factors identified as causes of the slow absorption process are the large number of actors and management authorities involved in the process, lack of efficiency and coordination between ministries, civil society, the business environment and the research and development institutions involved (Zaman and Cristea, 2011), increase in corruption practices and the lack of confidence of the private sector in the use of structural funds (Tătulescu and Pătruți, 2014), lack of flexibility in the organization of the programs and systems as well as a high level of bureaucracy.

The ECA report (European Court of Audit, 2018) mentions that during the 2007-2013 programming period, the Commission monitored the absorption of the EU funds, but only about 13 months prior to the end of the eligibility period it set up a task force in order to assist the Member States to face the poor absorption. As a result, a series of 8 countries benefitted from assistance from this group, so that the measures taken have significantly increased the absorption rate in these MS, leading the EU average spending at almost 98% in 2018 (for the programming period 2007-2013). Even so, some of the MS failed to use all the European Funds at their disposal so that the total amount of money left unspent was around 4.5 billion Euro. The report also mentions that among the measures

taken to increase the absorption rate there were: revisions of operational programs, phasing of project who develop during several successive programming periods, retroactive financing of certain projects, advances to financial instruments and contractual advances. The ECA also highlighted that some of these measures focused mainly on absorption and compliance with the rules, rather than focusing on the actual results and effects. In particular, the operational programs have been the subject of frequent revisions, which calls into question the actual analysis that underline the programming processes and subsequent revisions, as well as the ability to meet the objectives of cohesion policy and operational programs.

4.1. Differences regarding the strategic documents

The 2014-2020 programming period currently comprises of five types of funds, reunited under the name of European Structural and Investment Funds (ESI Funds), which are as it follows:

- ERDF-European Regional Development Fund – is one of the main financial instruments of the European Cohesion Policy and it aims at reducing disparities between the levels of development of European regions and to improve living standards in the most disadvantaged regions;
- CF- Cohesion Fund - provides funding for projects in the field of environment and trans-European networks in MS whose gross national income per capita is less than 90% of the EU average;
- EAFRD- European Agricultural Fund for Rural Development - encourages measures and projects that contribute to the objectives defined at EU level (increasing competitiveness of agriculture, encouraging the sustainable management of natural resources and climate action, achieving a balanced territorial development of rural economies and communities);
- ESF- European Social Fund - Europe’s main instrument for investing in people. It helps people find employment or create businesses, supports disadvantaged groups, improves education and makes public services more efficient;
- EMFF – European Maritime and Fisheries Fund - which focuses on the long-term objectives of the Europe 2020 strategy for a smart, sustainable and inclusive growth over the 2014-2020 period. It also contributes to sustainable and competitive fisheries and aquaculture, to a consistent framework for the Integrated Maritime Policy and to a balanced and inclusive territorial development of fisheries and aquaculture areas.

Alongside the above-mentioned types of funds, the 2014-2020 programming period also supports youth unemployment through measures destined to integrate young people in education, training or on the labor market, through the YEI – Youth Employment Initiative Funds.

Taking into consideration all the difficulties encountered while managing the 2007-2013 programming period, for the 2014-2020 funds the most significant word for management was simplification. During the current programming period, the aims are to achieve the two objectives of the “Europe 2020 strategy”, namely investments for growth and job creation and European territorial cooperation, compared to 2007-2013, when there were 3 strategic objectives, respectively convergence, regional competitiveness and employment and European Territorial Cooperation (as it can be seen in Table 4).

Another difference regarding the framework of management and implementation of the European funds during the two programming periods is observed in the top strategic documents. The rules governing cohesion policy in the 2007-2013 programming period were set out in a general regulation as well as in regulations specific to each of the ERDF, ESF and Cohesion Funds, namely the „Community strategic guidelines on Cohesion Policy” and „Community strategic guidelines on rural development”. In order to ensure harmonization of eligibility and sustainability rules at EU level, a set of general provisions were given for the period 2014-2020 in order to set common eligibility rules for all cohesion and structural funds in order to reduce complexity, under the form of the Common Strategic Framework covering all five European Funds (as it can be seen in Table 4). The general framework was updated because of a high risk of applying different rules in terms of eligibility for similar types of projects and because beneficiaries who applied and received funding from different sources had to get acquainted with several sets of rules, which required time and effort.

Furthermore, during 2007-2013, at national level, the National Strategic Reference Framework mainly covered the three Cohesion Policy funds and only certain parts of it have been formally approved by the Commission, while national strategic plans covering rural development and fisheries programs were drawn up by the Member States in close cooperation with the Commission and its partners. On the other hand, for the 2014-2020 the general national framework was the Partnership Agreement, which covers all five ESI Funds and most of its elements require formal approval by the Commission, including in the event of an amendment. The Partnership Agreement serves as a general strategic document providing an overview of how ESI funds will be used in each Member State and has been introduced in order to reflect the new improved governance system of the Europe 2020 strategy, as well as the reform of Cohesion Policy, EAFRD and EMFF, aimed at increasing the effectiveness and efficiency of the ESI Funds.

Also, while the 2007-2013 programming period provided separate programs for the ERDF, CF and the ESF, the 2014-2020 programming period gave the opportunity for beneficiaries to benefit from multiple funding for ESF-ERDF or ESF and CF programs during the same project, as certain projects may need to interlink several types of programs in order to achieve their objectives and results. Furthermore, certain elements of the programs remain the sole responsibility of

the Member States and, as such, may be modified without the need for formal Commission’s approval, compared to the previous programming period when any change in the programs could only be accepted upon the approval of the European Commission.

Table 4. Differences in terms of strategic documents

2007-2013	2014-2020
Community strategic guidelines on cohesion policy. Community strategic guidelines on rural development	The common strategic framework covering the five ESI funds
The National Strategic Reference Framework mainly covered the three Cohesion Policy funds and only certain parts have been formally approved by the Commission. National strategic plans covering rural development and fisheries programs were drawn up by the Member States in close cooperation with the Commission and its partners.	The Partnership Agreement covers all five ESI Funds and most of its elements require formal approval by the Commission, including in the event of an amendment.
Different content of Cohesion Policy, EAFRD and EMFF programs.	A set of basic elements common to all ESI program programs.
Separate programs for ERDF (+ FC) and ESF.	Multiple funding for ESF-ERDF (or ESF-FC) programs is also allowed.
Objectives: 1. Convergence (through ERDF, ESF, CF) 2. Regional Competitiveness and Employment (ERDF, ESF) 3. European Territorial Cooperation (ERDF)	Objectives: 1. Investments for growth and job creation 2. European territorial cooperation

Source: own summary from the literature

4.2. Differences regarding the organization of the programs and the architecture of the Cohesion Policy

The majority of the common budget of the European Union is mainly managed in partnership with national and regional authorities in a shared management system (Paul, 2021). According to the Partnership Agreement (2014, p. 196, article 905), “in order to ensure the relevance of actions supported and the effective delivery of ESI Funds, the partnership framework will operate beyond the programming phase and will be extended to the management, implementation, monitoring and control. Institutional coordination for 2014-2020 involves three

levels in which economic and social partners will represent 40%, the remaining 60% being represented by the central and local public authorities”.

The European Union budget for the period 2014-2020 was approved by the EU Council and Parliament in December 2013 and set out priorities for spending on sustainable growth, jobs and competitiveness, in line with the Europe 2020 Strategy. The current Multiannual Financial Framework (MFF) introduced, in Article 2, the need to revise it in the middle of the program period, (in 2016), in order to allow the institutions to re-evaluate their priorities, if necessary. At the same time, the purpose of this review was to examine the most appropriate duration for the next MFF in order to ensure the right balance between the term of office of Members of the European Parliament and the European Commission and the stability needed for programs and predictability of investments (...) taking full account of the current economic situation and the latest macroeconomic projections (Council of the European Union, 2013). As we can see from the above, the new MFF is characterized by greater flexibility of expenditure and increased control over the review mechanism, compared to the previous programming period, which did not benefit from these processes (as it can be seen in Table 5).

With regard to cohesion policy, the current MFF has specific provisions on the adjustment of cohesion policy packages, which is currently the most funded policy in the EU. Thus, article 7 of EU Regulation, EURATOM 1311/2013 (Council Regulation No. 1311/2013), taking into account the situation of the Member States affected by the crisis, introduced in 2016 an assessment of the total allocations for Member States for the "investment for growth and jobs" objective of the cohesion for the period 2017-2020, based on the latest available statistics. Thus, in case of cumulative divergences of more than +/- 5%, the Commission will adjust these total allocations, with the corresponding ceilings 2017-2020 changing accordingly. In this context, in the current MFF, in April 2017, the European Parliament adopted a resolution amending the MFF Regulation, which approved the provision of an additional financial support of EUR 6 billion for migration-related measures (3.9 billion) and for measures aimed at jobs and growth (2.1 billion).

Given the experience of the forecasts made during the previous multiannual financial programming periods, the current MFF has improved the programming activity and the efficiency of the allocated resources, by adopting a series of innovative tools, such as:

- Flexibility for commitments and payments in all categories of expenditure and for all years, in order to make full use of the amounts provided (which allowed for the above-mentioned 6 billion financial reallocation);
- A mandatory review clause to reassess budgetary adjustments and adjust them, if necessary;

- Greater flexibility in spending on reducing youth unemployment, as well as on strengthening research activities without reducing the resources allocated to other programs;
- Creation of the Solidarity Fund for help provided in case of disasters.

Table 5. Differences regarding the organization of the programs and the Cohesion Policy architecture

2007-2013	2014-2020
<p><i>Lisbon Strategy</i> Cohesion policy has been linked to the Lisbon Strategy by requiring the funds allocated to include the contribution of Cohesion Policy funds (60-75%) to be used in investment areas under the Lisbon Strategy.</p>	<p><i>Europe 2020 Strategy</i> All ESI Fund interventions should contribute to the Europe 2020 strategy, but the new rules on thematic concentration have provided for a minimum level of resources that can be used in certain specific areas of intervention, as well as a minimum allocation for the ESF.</p>
<p>Indirect link between cohesion policy and the Lisbon strategy through national reform programs that focus only on the programming phase.</p>	<p>Direct and explicit links between country-specific recommendations and partnership and program agreements at the programming and implementation stage.</p>
<p>Separate strategic reports for cohesion policy, EAFRD and European Fisheries Fund (EFF), with vague links to reports on the Lisbon Strategy.</p>	<p>The 2017 and 2019 progress reports cover all ESI funds and are integrated into the European Semester.</p>
<p>Each fund has its own thematic area defined by a set of priorities.</p>	<p>A set of thematic objectives common to the five ESI Funds is introduced, according to which the scope of each fund is translated into concrete investment priorities (in the case of cohesion policy) or Union priorities (in the case of the EAFRD and the EMFF).</p>
<p>National Strategic Reference Framework Strategic and programming orientation – EC guidelines on economic, social and territorial cohesion, taking into account the relevant European legislation (EFDR, CF, ESF) Performance reserve, 3% at Member State’s discretion Outcome indicators and immediate achievement (output) achieved based on EC guideline (communicated during implementation)</p>	<p>Partnership Agreement (ERDF, CF, ESF, EMFF, EARDF) Europe 2020 Strategy EC services position Paper Specific country Recommendations Performance reserve, 6% mandatory Common indicators established through background regulations – output (ERDF, ESF, CF, EARDF) and result (ESF)</p>

2007-2013	2014-2020
Thematic concentration – no Without conditioning financing	11 Thematic objectives - financial allocations conditioned by specific fund regulations Ex-Ante conditionalities
<i>Programs</i> Regional Operational Program Increase of the Economic Competitiveness Sectoral Operational Program Development of Human Capital Sectoral Operational Program Transport Sectoral Operational Program Environment Sectoral Operational Program Fisheries Sectoral Operational Program Administrative Capacity Operational Program Technical Assistance Operational Program National Program for Rural Development	<i>Programs</i> Regional Operational Program Competitiveness Operational Program Human Capital Operational Program Large Infrastructure Operational Program (new program – which includes sectors economy, transport, energy, environment) Administrative Capacity Operational Program Technical Assistance Operational Program National Program for Rural Development Operational Program for Helping the Disadvantaged Operational Program for Fisheries Connecting Europe Facility

Source: own summary from the literature

Another novelty of the current MFF is the creation of a new category of transition regions, whose GDP per capita is between 75-90% of the EU average, in order to facilitate the process of phasing out regions from the Convergence objective.

The 2014-2020 MFF also introduced the ex-ante conditionalities to be met by a Member State before European funds are allocated (see Table 5), before the submission of partnership agreements and programs. These are either thematic (related to specific Union investments or priorities, as set out in the Fund-specific rules and regulations) or general ex ante conditionalities (not related to investment or specific Union priorities). Member States must assess whether the ex-ante conditionalities applicable to their programs have been met. If they are not met by the date of submission of the program, the Member State must draw up a plan defining the actions to be taken to ensure that they are implemented.

4.3. Administrative measures and reduction of bureaucracy

As the majority of studies and analysis regarding the 2007-2013 programming period by national institutions, private bodies or by researchers have shown that there was a high level of administrative burden on both the authorities and the beneficiaries involved in European projects, which slowed down the evaluation, management and reporting processes, a set of measures were taken at both European and national levels, part of which we present in what follows:

Flexibility in the organization of programs and systems - the implementation of the funds takes place at the appropriate territorial level: member states can plan ERDF, ESF and CF together or in separate operational programs, can change the financial allocation by up to 2% by category of regions and can combine project financing from many EU-funded instruments.

Increased proportionality of the reporting, evaluation and management methods - the application of risk-based sampling methods in the case of controls by the managing authority which allows a more efficient use of the resources; the Commission's audit activities focus on higher risk areas. This will eliminate the possibility for smaller project beneficiaries to face multiple audits, which would distract them from the main activities of the project.

Achieving objectives more efficiently and facilitating reporting - generating direct reductions in administrative costs in order to focus on common core indicators facilitates data aggregation and reporting on EU results; more simple annual reporting in which only essential data on progress are provided to the Commission; simplified annual reports with predominantly numerical data reported on indicators and results.

Reducing bureaucracy - as the Partnership Agreement 2014-2020 states at article 784, “the absence of single access point systems, underdevelopment of e-government systems and insufficient use of IT tools results in excessive bureaucracy for citizens and businesses and excessive inter and intra-institutional bureaucracy” (Partnership Agreement, 2014). This is why starting with 2014-2020 the Ministry of European Funds implemented the new MySMIS system, through which potential beneficiaries in Romania are able to request European money for the 2014-2020 programming period. The system is a direct interface between the management authorities and the beneficiaries during the project submission, contracting, implementing, reporting and post-implementation phases. The application is unique and is being used for all the programs, each call of projects having its own particularities, while also the instructions for completion will also be customized. Furthermore, in order to reduce bureaucracy, to optimize the time spent in order to originally sign the official documents of the projects, it was waived the original transmission and handwriting of all documents to the national Management and Audit authorities and it was accepted the electronic signature.

5. CONCLUSIONS

The implementation of European-funded projects is a complex process, managed at several levels of decision-making and in partnership between the European and national institutions, in order to meet the objectives identified for a given period at EU and Member State level.

The management and monitoring of projects whose source of funding is European grants involves the observance of a series of well-defined steps to achieve the objectives of the Union's strategies, as well as in accordance with the development strategies of the Member States or regions. Thus, the adoption and implementation of cohesion policy takes place through 3 significant stages, namely the programming period, the implementation period and the evaluation period, which are interdependent and involve both the existence of specific documents and the implementation of certain activities by the institutions involved, both at national / European level and by those directly involved in the implementation of the project.

As Romania was among the last Member States in absorbing European Funds during 2007-2013 programming period, a set of measures needed to be taken in order to improve this process. As the analysis carried out by European institutions have revealed that several countries have faced common administrative issues, the strategic documents for 2014-2020 have somehow corrected part of these problems. The Partnership Agreement 2014-2020 also clarifies the phases of EU-funded projects, sets up clear and more precise indicators and outcome results of the established problems. Furthermore, the national authorities have also tried to correct part of the administrative issues by re-organizing the roles of the authorities involved in the management and evaluation processes, by offering a more flexible communication between the authorities and the Beneficiaries of the funds, with the aim of increasing the absorption rate of Romania. At the moment, Romania is still under the EU average in terms of reimbursements, but as the 2014-2020 program will officially end in December 2023, there is still time to successfully finish the ongoing projects and to benefit from the European funds provided in order to ensure the achievement of the indicators and outcome results stated in the Partnership Agreement.

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EDUCATION POLICY CHALLENGES IN TIMES OF PANDEMIC: SUSTAINABILITY AND RESILIENCE

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Abstract

The COVID-19 pandemic has enormous social and economic consequences and lasting effects on teachers, students, their parents and society. To prevent the educational crisis from degenerating into a disaster for an entire generation, all the actors involved must act together as effectively as possible.

Education can thrive based on standard content created in the academic system, and especially on human, direct relationships between teachers and students.

Educational policies have caused all the factors involved to modify their pedagogical activity and the teaching-learning process in the context of the COVID-19 pandemic, from face-to-face teaching to distance education, thanks to digital technologies.

A coherent vision of education during crisis can only be developed and implemented by calling on the 2030 Agenda for Sustainable Development, a program that includes a series of concrete objectives that OUN member states must meet in order to fully integrate the concept of sustainability in their actions.

Keywords: *sustainable education; digitization; educational policies.*

JEL Classification: H83, I23, I28.

1. THE PANDEMIC – ROLE OF CHANGE FOR EDUCATION

The COVID-19 pandemic has subjected education systems to an unprecedented shock in history, changing the lives of nearly 1.6 billion pupils and students in more than 190 countries on all continents. (Antonowicz, 2020). The crisis has intensified existing educational disparities, putting especially residents of poor or rural areas at risk of not returning to college. Similarly, the shock to education systems has had and will continue to have significant effects beyond the educational sphere. Faculty closures have prevented the provision of basic services to both students and the community. Education also faced serious funding problems, which worsened the already existing situation. To protect education funding, national authorities have improved domestic resource mobilization, prioritizing the

share of budgets allocated to education and addressing resource allocation inefficiencies. But at the same time, the crisis stimulated innovation in the education sector. Some initiatives were put into practice that allowed the continuation of online training activities through specialized platforms or on different networks. Various forms of distance learning have been rapidly developed to ensure educational continuity.

The rapid changes in teaching/assessment methods cannot be sustainable unless no one is left behind and only if everyone involved has access to technology and training. Among the vulnerable students are those with low digital skills and who do not have the means to follow distance education, i.e. they do not have a computer and access to the Internet. It also applies to teachers who need to be better trained in new ways of teaching and who need to be supported in this regard.

To accelerate the reopening of faculties and the resumption of onsite studies, those in the health field have made efforts to stop the transmission of the virus and have controlled, and continue to control, the epidemic at the national and local levels. New, even severe hygiene rules were imposed.

By building the resilience of their education systems, they were able to safely address the challenges of safely reopening their faculties and thus better deal with other crises. In this sense, measures can be taken into consideration to promote equity and inclusion, strengthen risk management capacities at all levels of the system, improve consultation and communication mechanisms.

The considerable efforts made in a very short time in the face of the shock suffered by the education systems show us that change is possible. This occasion was an opportunity to find new ways to address the education crisis and tackle solutions that were considered difficult or impossible to implement before the pandemic.

In this perspective, several objectives must be established:

- bringing students up to standard and preventing school dropouts, especially for those from marginalized groups;
- developing skills that lead to professional integration;
- supporting teaching staff in training at the level of current requirements;
- elimination of shortcomings regarding connectivity;
- strengthening data and learning monitoring;
- strengthening the connection between the different levels of education (the transition from high school to college);

Online platforms have generally taken over traditional teaching, with some universities suspending classes until further notice due to a lack of IT equipment for their students and teachers. Harmonization of the university curriculum continues to be a problem, with some courses being able to continue online and others not.

It was necessary to modify the evaluation procedures, which were sometimes very undermined, and the unprecedented methods of continuous monitoring were the object of special attention.

In many higher education institutions, the shift to distance learning has provided an opportunity to develop flexible modes of teaching, paving the way for the expansion of online learning in the years to come. Based on the experience of the massive use of technology, sustainable solutions could ensure the continuity of education during the pandemic, especially for those from disadvantaged categories.

One thing is certain about adaptation challenges: they cannot be solved in the same way that problems are solved in a predictable and stable world, when there are technical solutions to the problems that arise.

Adaptation problems require rapid learning, innovation and risk-taking. They require the willingness to step out of the comfort zone, the willingness to participate, the ability to collaborate and, above all, a clear reflection on what is important.

The traditional organization of classrooms must give way to a multitude of ways of "doing school", but the classroom must be preserved as a space-time distinct from collective life, specific and different from other learning spaces. It is essential to support current educational resources and open access digital tools.

All actors involved must commit that any regression will be temporary, truly forced by an urgent situation, and corrected as soon as possible, so as not to erase the progress of the past decades. The Covid-19 crisis has shown us that the right to education must be flexible and adapted to different contexts and the needs of changing societies. An update and expansion of the right to education has clearly become necessary.

2. RECONFIGURING STUDENT-STUDENT, STUDENT-TEACHER RELATIONSHIPS AND RETURNING TO THE PRE-PANDEMIC STAGE

The pandemic has forced a massive shift away from the traditional model of learning and teaching characterized by physical interactions.

Education cannot thrive based on standard content created outside the pedagogical space and outside the human relationships between teachers and students. Education cannot depend only on digital platforms.

Student life is not just a "plus" alongside courses and training. It is an essential component that contributes to the balance of young people, through socialization, self-realization, relaxation and spending free time, the implementation of concrete projects. Positive traces will remain in the way of adaptation and definition of priorities.

The resumption of face-to-face classes was a real "pleasure" and was decisive for the rest of the year. Young people's priorities are social contacts and returning

to campus for certain activities related to their training. For many, this period was an opportunity to become aware of several realities and to learn useful lessons, especially regarding the dynamics of solidarity, collegiality and mutual support.

In terms of assessment, students who did not have full access to connectivity (computer and internet) were more susceptible in terms of outcomes, with isolation having a negative effect on their outcomes.

Living conditions decreased especially for students who faced a death in the family during the pandemic, while under normal conditions, together with the collective (teachers and colleagues), it would have been easier.

Another consequence of this crisis at the academic level is reflected in the way of interaction and communication between its members. Communication is a dynamic process being the basis of social interaction without which man cannot exist. Online communication only kept students in front of computers more, making them feel unfocused and very lonely. As there are differences between face-to-face and online forms of interaction, face-to-face interaction lacks the most meeting with teachers and colleagues and especially a different space meant to separate professional life from personal life. It is a tradition to keep in touch with colleagues, but also between students and teachers and after graduation, the pandemic making it difficult to know and strengthen them.

For university education, the transfer to the virtual environment of courses and seminars proved to be more than a temporary challenge, it deeply affected the pace, but above all the efficiency of the activities.

The crisis that accompanied the COVID 19 pandemic severely influenced both personal and professional experiences. Educational institutions and their actors felt the negative impact of this crisis, through significant alterations at the level of all levels of operation and even the quality of the educational act. Its demanding and unpredictable nature has been and continues to be a good opportunity to test and validate the skills of resilience combined with the ability to successfully adapt to new contexts. On the other hand, it constitutes a test through which the usefulness of experience and didactic recognition could be verified.

Looking at things at the current moment, in certain fields and within certain limits, didactic activity on digitized platforms is welcome.

A correct approach always starts from a good knowledge of the psycho-pedagogical conceptualizations that underpin the complex teaching/learning/evaluation process. According to them, regardless of the delivery method of an informational content (face-to-face, online, hybrid), of the teaching strategies chosen, the teaching staff must focus on the relevance and quality of the learning experiences they intend to offer his students. The teaching/learning process is based on interactions and cannot be reduced to a simple process of knowledge transfer from teacher to student.

The student is the one who, correctly and constantly assisted by the teaching staff, builds his own knowledge and skills. To achieve this, he needs a lot of interactivities both as informational content provided by the teaching staff and as social interaction with the teaching staff and colleagues. The prolongation of the COVID 19 crisis forces the reconsideration of the approach to the teaching-evaluation process. An optimized didactic strategy could be teaching based on interactivity, highlighting the role of student interactions with colleagues and teachers.

3. DIGITIZATION AND INNOVATIVE PEDAGOGICAL TECHNIQUES

Digital technologies would make it possible to develop the autonomy of teachers, promoting their responsibility and leaving them considerable latitude to organize and direct their training.

The use of digital technologies in the initial training of teaching staff makes it possible to develop certain transversal skills essential for the exercise of the teaching profession, primarily collaboration. On the other hand, several authors highlight the fact that teacher educators often consider digital technologies with reluctance, which they use mainly for the transmission of information, rather than for building knowledge (Chai *et al.*, 2011) or developing skills (Caneva and Akkari, 2018).

Teachers with no digital experience reported some challenges they face, such as difficult adaptation to a new form of teaching and learning and the use of digital technologies for teaching; difficulty in motivating and involving students in the virtual environment; managing the challenges students face, which is reflected in the pedagogical relationship; the obligation on the part of the accommodation institution in a short time to the new conditions.

Other research related to distance education (Lazzarotti Filho *et al.*, 2015) and the integration of digital technologies have also highlighted the difficulties related to the insecurity and lack of mastery of digital technologies, the intensification of didactic activity and the lack of physical presence in the virtual environment (Bianchi and Pires, 2015).

Teachers also said that one of the challenges they face is motivating and engaging students in the new form of teaching with the help of technology. This is very different from the face-to-face interaction they were used to. One of the challenges is precisely to encourage students to understand that this technological space is also a space for building collective knowledge.

Digital divides between students are a challenge for teachers and seem to be exacerbated by the new teaching system. Students must be followed individually and treated according to everyone's need.

The transition from the face-to-face environment to the virtual environment highlighted a resistance to novelty among students not used to digital

technologies, the shyness of students to express themselves as well as financial difficulties and access to the Internet, the lack of interaction leading to different states.

As university policies, we can list:

- the challenge of responding to requirements by using new applications or technological tools
- using tutorials to help colleagues or students
- different organization of pedagogical work
- the offer of attractive courses, otherwise motivating and attracting students
- experimenting and discovering new ways of teaching
- building virtual classrooms
- forms of communication mediated by technology, which involve not only restrictions, but also learning
- maximum exploitation of the digital potential (not just news, Facebook) by improving the use of technologies

Those working in higher education have had to change their pedagogical activity and the teaching-learning process in the context of the COVID-19 pandemic, from face-to-face teaching to distance learning, thanks to digital technologies.

This process presented several challenges:

- technical, adapting to new digital technologies
- organizationally, adapting to a new form of teaching that requires an additional investment of time
- psychological, management of uncertainty and anxiety
- contextual, development management

Regardless of the pandemic, the use of digital technologies in higher education becomes a necessity to prevent the future generation of teachers from reproducing the same difficulties of pedagogical intervention with digital technologies (Bianchi and Pires, 2015). It could be seen that the forced use of digital technologies encouraged them to train more, experiment and discover new tools.

We need to consider the evolution of the uses of digital technologies in teaching/learning/assessment practices following the experience of this period.

4. EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD)

Education for Sustainable Development (ESD) is a multidimensional field of research, training and action that seeks to restore a dynamic balance between environment, society, economy and culture, helps to understand the complexity of the world in its scientific, ethical and civic dimensions.

In the current epidemiological context, education has faced massive challenges and the traditional problems of this system have been accentuated by the global health crisis. The need for rapid digitization, school dropouts during the pandemic, the lack of access to the educational process from the online environment, the limited training of teaching staff in terms of technology or the phenomena of social exclusion in the school environment have suddenly become urgent topics on the social agenda, and some of them have launched major impediments, which the actors involved must combat together.

International cooperation for the revitalization of education systems around the world is becoming, now, the most relevant instrument of cohesion against the profoundly negative effects exerted by the pandemic on the most important field of social activity.

The proposed policies must be related to at least one of the following Sustainable Development Goals (SDGs): SDG 1 – no poverty, SDG 4 – quality education for all, SDG 5 – gender equality, SDG 10 – reduced inequalities, SDG 11 – sustainable cities and communities, SDG 13 – climate action, SDG 16 – peace, justice and effective institutions.

With Sustainable Development Goal number 4, Guaranteeing quality education and promoting lifelong learning opportunities for all, the UN has set 10 targets and 11 indicators (according with the International Cooperation Agency for Development – RoAid (2022) that is the national institutional mechanism dedicated to Official Development Assistance, established by law under the coordination of the Ministry of Foreign Affairs in Romania.

As policies accepted and applied by higher education, as the main actor, we can talk about the National Strategy for Sustainable Development in Romania (2018):

- social scholarships and scholarships for occasional social assistance, subsidized accommodation for certain categories of students, students from disadvantaged socio-economic backgrounds, from children's homes or foster care, students orphaned by one or both parents
- supporting entrepreneurial education and the training of future entrepreneurs to develop sustainable businesses in the community
- informing the local and national community about the various risks associated with health and well-being, developing partnerships with key public and private institutions
- supporting the increase of general well-being by providing access to educational resources, postgraduate courses, scientific events partially or fully online
- awareness of the importance of ethics in the academic environment and its effects on society through educational resources accessible online
- preparation for the baccalaureate exam, preparation for admission to the faculties
- the role of universities as an active partner in the development of society

5. CONCLUSIONS

The pandemic has exacerbated the global education crisis even more than initially anticipated. As education systems have shifted to distance learning, many have quickly implemented digital strategies. However, access to distance education varied widely, as did its quality. This crisis has in many ways widened the educational gaps that existed before the crisis, which is why it is essential that education policies focus on recovery and equity. As a result, education has changed dramatically with the dynamic growth of e-learning, where the teaching/learning/assessment process is delivered remotely on digital platforms.

Research suggests that online learning has proven to improve information retrieval and take less time, meaning changes caused by the coronavirus could be part of the current education system.

The decisions made in the context of Covid-19 will have long-term consequences for the future of education. Policymakers, teachers, and communities have made high-stakes choices, and so their decisions should be inspired by shared principles and visions of the future of education.

Covid-19 has revealed vulnerabilities, but it has also brought to the surface the ingenuity and extraordinary potential of actors involved in education policies. Choices must be based on a humanistic vision of education and development.

The 2030 Agenda for Sustainable Development provides many of the necessary benchmarks and directions. In this report, the International Commission on the Future of Education, composed of leaders from academia, science, government, business and education, presents ideas today for concrete actions to advance tomorrow's education. In education, as in health, we are safe when everyone is safe; we thrive when everyone else thrives.

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FOREIGN EXCHANGE MARKETS EFFICIENCY DURING MACROECONOMIC INSTABILITY AND WORLD UNCERTAINTY: ROMANIAN AND UKRAINIAN CASES

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Abstract

The study is aimed at a comparative analysis of foreign exchange markets of Romania and Ukraine and investigating their efficiency during macroeconomic instability and world uncertainty from January 2015 to February 2021. This paper is structured as follows: the first Section provides the theoretical motivation to form the general scientific view regarding the problem of world uncertainty and how to deal with macroeconomic instability in such conditions. Based on theoretical and empirical evidence in Section 2 it is outlined the econometric framework and groups of variables used for testing the three hypotheses: H1 – monetary policy instruments mitigate the national currency depreciation; H2 – monetary policy instruments correct the country's output; H3 – the FX market is efficient during macro-instability and world uncertainty. Section 3 provides an initial specification of the behaviour of the USD/RON and USD/UAH exchange rates and main counties' monetary indicators; structural analysis for time series stationarity (ADF-test); analysis of external shocks' effect on the USD/RON exchange rate and Romanian economic output, as well as on the USD/UAH exchange rate and Ukrainian economic output (VAR-model and Granger causality test). In Section 4, the models' quality is checked by summing up key findings (R², RMSPE, roots of companion matrix, Lagrange-multiplier test). Nine parameters are used in the VAR(1) model for Romania and 8 in the VAR(3) model for Ukraine. All parameters are grouped into three groups: macroeconomic, monetary and unconventional monetary indicators. The exchange rate and GDP are the primary dependent variables.

Keywords: *foreign exchange rate; global uncertainty; macroeconomic stability; market efficiency; monetary policy.*

JEL classification: E00, F31, D81

1. INTRODUCTION

In a market economy the pricing of goods and services occur due to interaction between citizens and businesses. Accordingly, market volatility is inevitable and may be accompanied by extreme instability, and economic crises as supply and demand change freely and unexpectedly. In one line with market volatility, countries face macroeconomic instability, but sometimes it is even desirable if it is overcome with quantitative and qualitative changes in the economic and social sectors.

However, if macroeconomic instability persists in the country and the government does not attempt to overcome it, the production, investment, job creation and innovation development is slowed down. In addition to the decline in economic activity, macroeconomic instability causes the volatility of foreign exchange rates and the financial markets as well.

The foreign exchange rate is a monetary policy tool, as well as inflation and the discount rate. Altogether, they determine the level of price stability in the country and the particular level of foreign exchange market efficiency. Therefore, it makes sense that the country's macroeconomic stability influences the exchange rate volatility, currency restrictions and basics of foreign exchange regulation.

The last crisis caused by the global COVID-19 pandemic has highlighted the detrimental effects of macroeconomic instability and living standards. After this, society became concerned about inequality and possible human rights violations due to the fragility of institutions and political leadership.

According to the "Our Common Agenda – the UN Secretary-General's report", as a result of the COVID-19 crisis, world GDP in 2020 fell by about 3.5%. The pandemic has led to the extreme poverty of 124 million people, with the widening gender gap as more women outnumber extreme poverty than men. Also, the total number of working hours in 2020 decreased by 8.8%, which is equivalent to 255 million full-time jobs.

Despite global uncertainty and instability, developed countries are more likely to return to pre-crisis conditions due to significant fiscal support and effective monetary policy. At the same time, emerging markets (EMEs) are provided insufficiently with macroeconomic support (World Bank, 2021a). This raises the following dilemma: why are some countries more macroeconomically stable than others?

Today, countries face complex challenges to achieve financial and macroeconomic stability as there are different barriers of various origins (economic, political, environmental, epidemiological, etc.). In addition, economic activity has become increasingly globalized, and it has raised vulnerability to redistribution of capital between countries.

This situation requires new approaches in the study of macroeconomic instability in different countries, as well as the development of new mechanisms to improve macroeconomic policy and monetary discipline in an unstable

macroeconomic and financial environment that disproportionately affect the world economy. The realities of the current financial and economic development are the basis for the study of modern instruments of foreign exchange regulation in order to ensure macroeconomic stability in the country under the peculiarities of its development and accumulated problems.

2. LITERATURE REVIEW

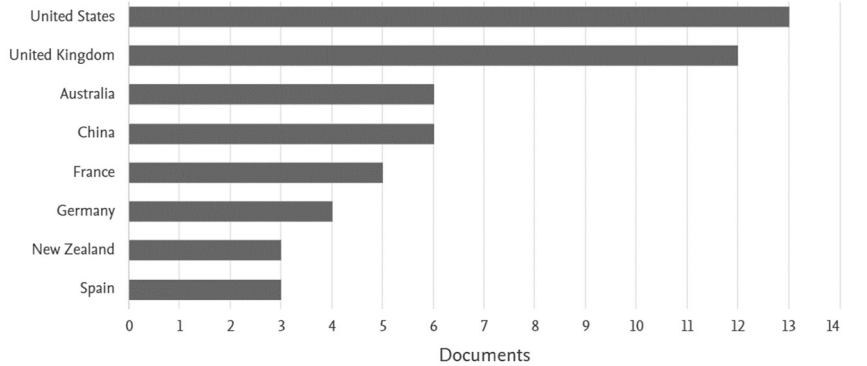
Foreign exchange market (FX market) efficiency is an essential consideration for all its participants. If it is efficient, then the current exchange rate is hypothesized to incorporate all the information in past rates according to Fama (1970) and Lee, Choi and Pae (2021).

The case of the central European countries shows that the FX market is a market with greater trading volumes of financial assets. Either the rejection or the confirmation of the efficient market hypothesis (EMH) highly influences the regulation or liberalization of financial services (Makovský, 2014). However, the empirical evidence has shown the strong tendency of nominal convergence in EU countries.

Frankel (2019) found that most countries tend to neglect officially established exchange rate regimes and de-facto come to residual regimes, such as managed floating. It is believed that it allows the central bank to respond quickly to changes in the economy and foreign exchange market.

At the same time, Rey (2018) concluded that the critical factor of the global financial cycle course is the certain country's monetary policy, which influences other central banks and capital flows. To be precise, the monetary policy of the United States is determined as this driver. Indeed, Ilzetzki, Reinhart and Rogoff (2019) have an idea that the US dollar is an "anchor currency country" that underestimate the role of the other world's leading currencies.

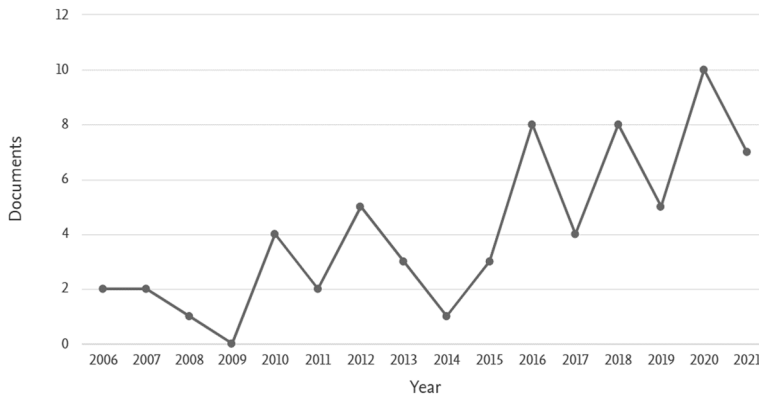
The general literature review concludes that most macroeconomic instability and world uncertainty studies are directed at developed countries. Significantly, the review of research in this field based on the Elsevier database shows that the USA, the UK, Australia, China and France are the top studied countries (Figure 1).



Source: Elsevier database

Figure 1. The number of research in the field of macroeconomic instability and world uncertainty by country, 2006-April 2021

Also, it was found that the interest in this topic increases, especially during and after crisis periods (Figure 2).



Source: Elsevier database

Figure 2. The total number of research in the field of macroeconomic instability and world uncertainty, 2006-April 2021

There are several studies devoted to Romanian and Ukrainian cases. For example, Pop and Man (2017) concluded that the Romanian capital market is a young emerging market with considerable growth potential. Although, it is a challenge to reach a high level of development due to its strong correlation with domestic economic and political uncertainties. Vancea, Aivaz and Duhnea (2017) also revealed that political events influence the foreign exchange and the capital market, but they react differently: the first is much faster, the second is slower but stronger.

Ignatyuk *et al.* (2020) indicated that today the Ukrainian FX market is relatively efficient but stable since its reaction to external shocks is short-term, insignificant and tends to fade out. Although, they support the idea that the exchange rate formation is a multifactorial process that depends on several macroeconomic factors.

The year 2020 is associated with the COVID-19 pandemic. It has made a significant corrective, and financial markets were in an atypical condition. Accordingly, governments and central banks respond to the pandemic, which inevitably reflects countries' monetary policies.

Benmelech and Tzur-Ilan (2020) identified that high-income countries had entered a crisis with historically low-interest rates and, as a result, actively used unconventional monetary policy instruments to correct the economic downturn. Also, they are able to decrease their interest rates less than in low-income countries. This situation shows that countries with lower credit ratings and lower incomes cannot effectively use fiscal and monetary policy instruments during the economic crisis (Bianchi, Ottonello and Presno, 2019).

As for the exchange rates, Putnam (2020) suggests that the fundamental factors impact them during the corona crisis due to changes in market expectations. The world's first lockdown hit the economies hard, as expectations were negative for fear of an economic downturn.

A study by Ilzetzi, Reinhart and Rogoff (2020) show that one of the most remarkable features of the corona crisis is the impressive stability of foreign exchange rates despite the global recession. G4 currency volatility (dollar, yuan, euro and yen) declined markedly in March-June 2020 due to global uncertainty, low inflation (due to inflation targeting approach in countries' monetary policies), lower interest rates and maintaining the key role of the USA dollar, which encourages central banks to stabilize FX rates.

According to the OECD (2020) survey, the COVID-19 crisis has triggered major disruptions to FX rates and global capital flows. Even though the pandemic is one global shock, it has made many different impacts on different countries. With this aim, in this study, we provide a comparative analysis of the foreign exchange markets of Romania (developing country) and Ukraine (country in transition) and investigate their efficiency during macroeconomic instability and world uncertainty. For this purpose, the following hypotheses are tested out:

H1 – monetary policy instruments mitigate the national currency depreciation;

H2 – monetary policy instruments correct the country's output;

H3 – the FX market is efficient during macro-instability and world uncertainty.

3. METHODOLOGY

This study is based on commonly accepted macro-econometric models. The motivation for the variables is formed under theoretical underpinnings that many scientists covered. The special contribution is based on Lastauskas and Nguyen

(2021), Ilzetzki, Reinhart and Rogoff (2020), Benmelech and Tzur-Ilan (2020), Ignatyuk *et al.* (2020), and Beirne and Fernandez (2020).

The study investigates the reaction of foreign exchange rate and economic output on different shocks in uncertain conditions. Also, the critical issue is to evaluate the effects between macroeconomic and monetary variables and confirm or reject the presence of interconnections between them. A VAR model (Vector Autoregressive Model) is used to achieve this goal. that allows identifying the level of market efficiency based on impulse response functions, according to Lütkepohl (2005).

Lastauskas and Nguyen (2021) suggest that the VAR model is not based on economic theory but on representing time-series dynamics, including the long-term memory of a data series. It determines the effects of the second-moment shocks (uncertainty shocks) and the role of different transmission channels between variables

The models of this study are estimated over the period January 2015-February 2021. It is used monthly statistics regarding the official exchange rate of Romanian leu and Ukrainian hryvnia against the US dollar and other macroeconomic and monetary variables. All information is taken from the databases of the National Bank of Romania (NBR), National Institute of Statistics in Romania, National Bank of Ukraine (NBU), the State Statistics Committee of Ukraine, and Ministry of Finance in Romania and Ukraine.

The selection of variables for a structural VAR analysis was made according to the country-specific shocks, economic activity and monetary conditions. For this reason, there are nine parameters in the VAR(1) model for Romania and eight parameters in the VAR(3) model for Ukraine. The research includes the following stages:

1. Providing descriptive statistics and an initial specification of the behaviour of the USD/RON and USD/UAH exchange rates.

2. Structural analysis for time series stationarity (ADF test) in three specifications: test for a unit root; test for a unit root with drift; test for a unit root with drift and deterministic time trend.

3. Evaluating the effect of external shocks on the exchange rate dynamics of the leu and hryvnia against the US dollar (VAR model, Granger causality test, impulse functions).

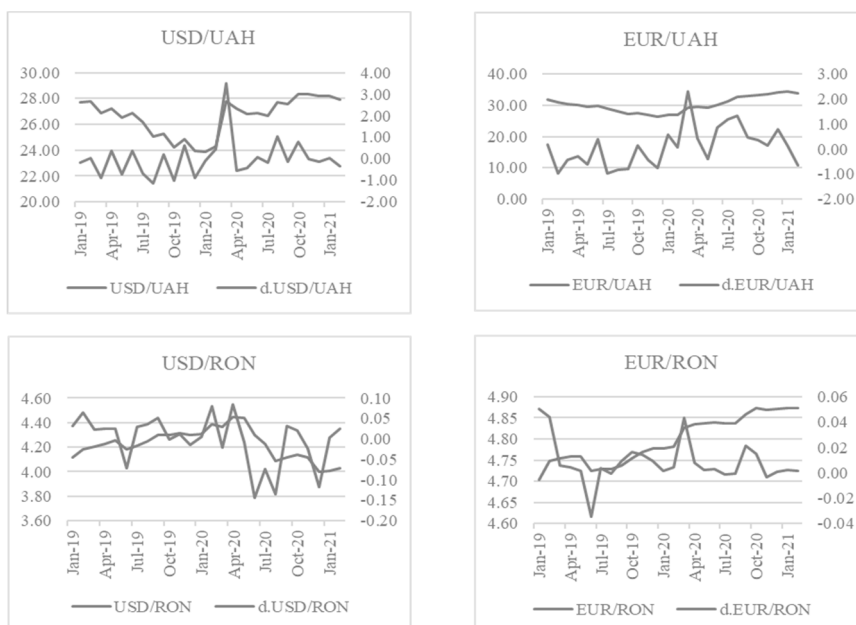
4. Checking the quality of models and summarizing key findings (R-squared, RMSPE, roots of companion matrix, Lagrange-multiplier test).

4. RESULTS

4.1. An initial specification of the behaviour of the USD/RON and USD/UAH exchange rates and counties' monetary indicators

The previous global crises (the Global Economic Recession in 2007-2009, the Latin American Debt Crisis in 1994-2002, the East Asian Economic Crisis in 1997-2001, etc.) are associated with sharp currencies depreciations. The COVID-19 crisis has also led to big swings in foreign exchange markets, especially in key emerging market economies (EMEs). The depreciation of such currencies as BRL, MXN, RUB, ZAR, IDR and TRY accelerated between end-February and mid/end-March 2020. On the contrary, the currencies of advanced economies (AEs) such as USD, JPY, EUR, and CHF have generally strengthened over the pandemic, mainly. Even after a notable drop in the first half of March, the currencies rebounded (OECD, 2020).

Like many other EU countries, Romania is strongly hit by the current pandemic that started in February 2020, when the first case of COVID-19 was reported. Despite the growing crisis, the leu had lost 1.5% against the US dollar and 1% against the euro at the end of March 2020 compared to year-end 2019. In February 2021 leu exchange rate against the US dollar averaged 4.02 and the euro 4.87 (Figure 3).



Source: based on National Bank of Romania (2021) and National Bank of Ukraine (2021)

Figure 3. Foreign exchange rates of national currencies of Romania and Ukraine (dynamics in absolute value and growth rate), 2019-February 2021

As for Ukraine, before the crisis, the hryvnia unpredictably appreciated. In December 2019, the exchange rate achieved a minimum of 23.46 and 22.95 hryvnias per US dollar and 26.79 per euro. Such an anomaly occurred due to the growth of non-residents' demand for UAH-denominated government bonds, record crop capacity of cereals in Ukraine, the rapid growth of sunflower oil prices and stable price level of grain, an increase of remittances of workers from abroad and significant optimism of investors and society (Ignatyuk *et al.*, 2020).

However, the positive dynamics ended in March 2020 when the first confirmed COVID-19 case was reported, and by mid-May, the USD/UAH exchange rate had fallen by 14.5% and EUR/UAH by 21.5% since the beginning of 2020. From that moment till February 2021, the hryvnia rebounded slightly and keeps at a level of 27.6-28.2 USD/UAH and 33.7-34.3 EUR/UAH (Figure 3).

It is known that many countries entered the corona crisis with historically low-interest rates and continued monetary policy easing by cutting them. Such an accommodative approach aimed to prevent the crowding from private spending and ensure access to low-cost financing for the private and public sectors. The Central Bank of Romania has also cut its key policy rate by 50 basis points to 2% in April 2020 and lately to 1.75%, 1.50% and finally to 1.25% in January 2021.

In Ukraine, the interest rate is high compared to EU countries, which indicates a rather strict monetary policy. At the beginning of 2020, the NBU decided to reduce it from 18% to 11%, declaring a course of monetary easing to ensure the inflation rate at the 5% target level and support sustainable economic growth. With pandemic and quarantine measures, the NBU reduced the rate to 8% in April 2020 and 6% in June (Table 1).

Table 1. Central bank interest rates of Romania and Ukraine

Country	2016	2017	2018	2019	Jan-2020	Feb-2020	Mar-2020	Apr-2020	Jun-2020	Aug-2020	Jan-2021	Feb-2021
Ukraine	22	14	16	18	11	11	10	8	6	6	6	6
Romania	1.75	1.75	2.00	2.50	2.50	2.50	2.50	2.00	1.75	1.50	1.25	1.25

Source: based on National Bank of Romania (2021) and National Bank of Ukraine (2021)

As we can see, the monetary policies of Romania and Ukraine have been eased in response to the pandemic and to ensue foreign exchange market panic. The other key policy responses to corona-crisis in countries are summarized in Table 2.

Table 2. The comparison of monetary and macro- economic key policy responses to corona-crisis in Romania and Ukraine

Measures	Romania	Ukraine
Monetary and macro-economic	<ul style="list-style-type: none"> - reducing the monetary policy rate to 1.25%. - providing liquidity to credit institutions via repo transactions (RON 42 billion in 2020); - purchasing government securities on the secondary market (RON 5.3 billion); - banks defer loan repayments for households and businesses affected by COVID-19 for up to 9 months; - the European Central Bank has set up a euro repo line with Romania's central bank (EUR 4.5 billion) that extended until June 2021. 	<ul style="list-style-type: none"> - the NBU cut the key policy rate to 6% (June 2020); - onsite inspections and stress testing of banks have been postponed; - penalties on clients should not apply if there are reasonable grounds for not paying loans; - prohibition of the opening new bankruptcy cases against legal entities on creditors' claims opened after February 1, 2020, 90 days after the quarantine period ends; - abolition of the requirements for minimum statutory capital to increase from UAH 200 million up to UAH 300 million by end-2020; - procedures for banks' restructuring and recapitalization were simplified.
Exchange rate	FX intervention has been undertaken to smooth excessive volatility and stabilize the exchange rate to protect financial stability.	The NBU and EBRD have agreed to partially activate a USD 500 million FX swap facility to support the real economy and strengthen Ukraine's macro-economic stability.

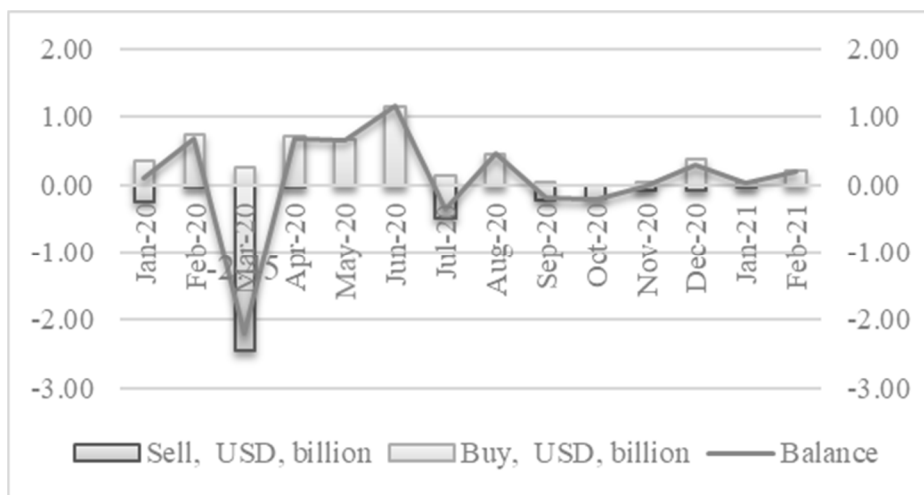
Source: National Bank of Romania (2021) and International Monetary Fund (2021)

Countries tend to rely on foreign exchange reserves in the context of rapid currencies depreciation and extreme financial markets stress. With this aim, foreign exchange interventions were intensified significantly since February 2020, especially in Ukraine. According to the Foreign Exchange Intervention Strategy, the National Bank of Ukraine actively participates in the interbank market, especially during inflation targeting and flexible exchange rate regime. Currency interventions are necessary for:

- mitigating the foreign exchange market, avoiding the negative impact of excessive exchange rate volatility and force-majores on price and financial stability, as well as the economic growth;
- accumulation of international reserves;
- supporting the interest rate transmission as the main instrument of monetary policy when it works insufficiently.

The case of the corona crisis is a real force-majeure with unpredictable consequences. Figure 4 shows that the central bank's response was rapid, and in March 2020, the NBU sold a record USD 2.5 billion. It was made to keep the hryvnia devaluation due to economic entities' exceeding negative market

expectations after the beginning of coronavirus spreading in Ukraine. In general, during 2020, the NBU bought foreign currency on the interbank market for USD 4.93 billion and sold for USD 3.89 billion.



Source: based on National Bank of Ukraine (2021)

Figure 4. FX interventions by the National Bank of Ukraine during January 2020-February 2021

As for Romania, to defend against excessive depreciation of the local currency, the NBR conducted open market operations at its initiative. That is why the information regarding the FX intervention is not disclosed fully by NBR. However, as a member of the EU, Romania can receive support from European Central Bank (ECB). For example, under the repo line, the NBR borrowed up to EUR 4.5 billion from the ECB in exchange for euro-denominated collateral in 2020. Also, parties have agreed to extend the respective euro liquidity lines by six months until the end of June 2021 (ECB, 2020).

The macroeconomic consequences of the COVID-19 outbreak are also essential for studying in this research. Since Romania is a EU country and Ukraine is in transition and just in the process with EU integration. That is why it is reasonable to show how they responded because a countries' economic position determined the conditions of their monetary policy responses, too (Table 3).

Table 3. Key economic indicators of Romania and Ukraine (pre and during COVID-19 years)

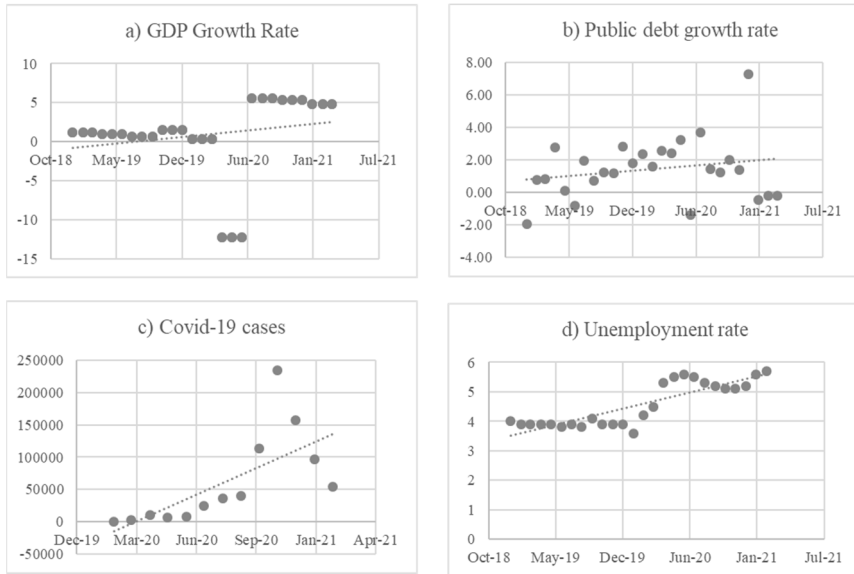
No	Indicator	Ukraine		Romania	
		Pre-COVID-19	During-COVID-19	Pre-COVID-19	During-COVID-19
		2019	2020	2019	2020
Macro-variables					
1	GDP (current USD billion)	153.78	151.54	250.07	247.21
2	Population (total)	44,385,155	43,733,762	19,356,544	19,237,691
3	Unemployment rate (%)	8.2	8.93	3.9	3.92
4	Public debt (USD billion, % of GDP)	843.6 (50.3%)	902.5 (51.8%)	104.4 (33.8%)	147.5 (47.3%)
5	Covid-19 cases (per one million people)	n/a	298.88	n/a	283.73
6	Fitch sovereign credit rating	B*	B*	BBB-**	BBB-**
Monetary variables					
7	Central bank interest rate (%)	18	5	2.5	1.5
8	CPI (%)	4.1	5	3.8	2.6
9	FX rate (average)	25.84	26.96	4.24	4.25
		USD/UAH	USD/UAH	USD/RON	USD/RON
		28.95	30.79	4.74	4.83
		EUR/UAH	EUR/UAH	EUR/RON	EUR/RON
10	FX rate regime	Floating	Floating	Stabilized arrangement	Stabilized arrangement
<i>Fitch sovereign credit rating grades:</i> <i>*B – degrading financial situation; highly speculative (non-investment grade);</i> <i>**BBB – a low default expectation; business or economic factors could adversely affect the company.</i>					

Source: Data compiled from World Bank (2021b), Statista (2021), Fitch Ratings (2021), National Institute of Statistics of Romania (2021), Heritage Foundation (2021), Ministry of Finance of Ukraine (2021), Ministry of Finance in Romania (2021), Our World in Data (2021), OECD, The Global Economy (2021), Publications Office of the European Union (2021), YCharts (2021)

The first indicator the attention is paid to is the GDP ratio. It is used to test the second hypothesis of whether monetary policy instruments may correct the country's output. Unfortunately, currently, there is no way to measure precisely the economic damage from the COVID-19 pandemic as it is still wide-spreading, but as we can see from table 3.3, Romania lost at least 1.1% and Ukraine 1.5% of their output over 2020. Also, panel A of Figures 5-6 shows that Romania as an emerging market is more economically stable than the Ukrainian transition market in the force-majeure conditions since the decline was significant just in the first months and then rebounded to the pre-COVID conditions.

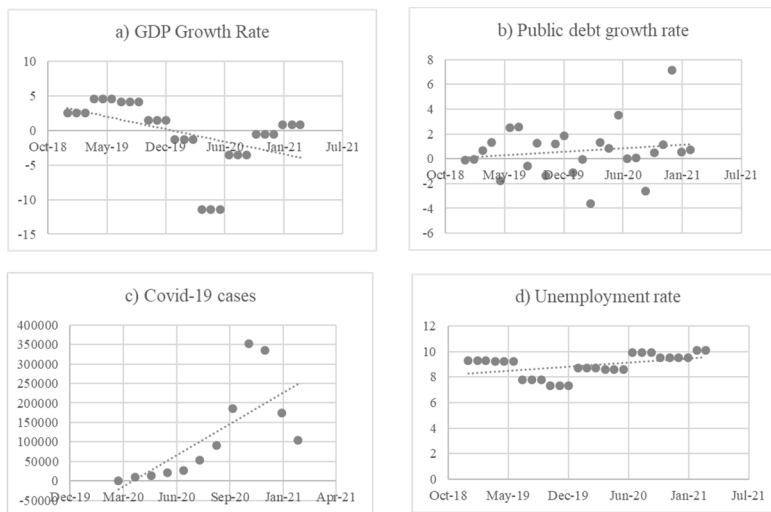
Figures 5-6 depict a scatter plot across Romania and Ukraine. In general, comparing the dynamics of main economic indicators such as GDP, public debt,

unemployment rate, it is evident that the drastic decline started in Romania in February and Ukraine from March with the beginning of the Covid-19 spreading.



Source: based on National Bank of Romania (2021) and National Bank of Ukraine (2021)

Figure 5. Pre- and during COVID-19 economic conditions in Romania, 2019-February 2021



Source: based on National Bank of Romania (2021) and National Bank of Ukraine (2021)

Figure 6. Pre- and during COVID-19 economic conditions in Ukraine, 2019-February 2021

Such an indicator as a population shows a decreasing trend, especially in Ukraine. Currently, the country suffers from a depopulation crisis due to working emigration and the exceeding of death rates upon birth rates. Although Romania, like other European countries, also experiences negative demographic trends, but not so drastically (the decrease by 0.6%). The Ukrainian population decreased by 1.5% during 2019-2020.

The labour markets are constantly decreasing, especially in transition countries, and COVID-19 intensified this tendency presented in panel D of Figures 5-6. For instance, Ukraine unemployment rate increased to 8.93% in 2020, from the previously reported number of 8.2% in 2019. Thus, while in Romania just by 0.6% (from 3.9% to 3.92%).

According to Ilzetzki, Reinhart and Rogoff (2020), public debt is one of the financial crisis predictors. Indeed, during recessions, the government tend to spend more to support the economy and repay debts during economic booms. As we can see from panel B of Figures 5-6, both countries continue to increase debts. Romania's public debt registered a growth of approximately USD 40 billion from 2019 to 2020. By December 2020, its public debt worthen around 47.3% of GDP. This debt level is likely healthy and gives the government of Romania scope to borrow more.

Ukraine's public debt accounted for 51.8% of the country's GDP in 2020, compared with the ratio of 50.3% in the previous year. On the contrary to Romania, Ukraine's public debt is a burden of the financial system with the allowable level of risk of revaluation pressure on the balance of payments (Trusova *et al.*, 2018) because of the weak exchange rate and lower-than-expected output growth.

The Fitch offers sovereign credit ratings that describe each nation's ability to meet its debt obligations. It reports the evaluation results of countries' economic and political environments and financial situations. As for Romania and Ukraine, their credit ratings remain unchanged (BBB- and B respectively), but negative. As for Romania, its negative outlook reflects a weak fiscal consolidation despite high growth in recent years and high budget rigidities that pose significant finance challenges.

In contrast, Ukraine's "B" reflects a credible macroeconomic policy framework that has underpinned a relatively high degree of resilience to the coronavirus shock. However, there is weak governance indicators, a high degree of legislative and judicial risk to policy implementation, and low external liquidity relative to a large sovereign external debt service requirement.

Before moving on to the main results, it is important to mention another difference between Romanian and Ukrainian principles of conducting monetary policy, especially in the context of a foreign exchange regime. In Ukraine, the floating exchange rate regime is established in February 2014 as an anti-crisis measure. It means that the NBU does not aim to maintain the foreign exchange rate at a certain level.

As for Romania, till 2019, it also supported the floating regime, but the NBR reclassified to a stabilized arrangement. It is not the first time when country's national currency exchange rate regime was reclassified. For example, in July 2016, it was changed to crawl-like from floating and stabilized from crawl-like in January 2018 (IMF, 2019). Such a difference is used in the VAR models to identify the necessity and level of influence on the foreign exchange market and the country's output by the foreign exchange regime.

4.2. Structural analysis for time series stationarity (ADF-test)

Tables A1 and A2 (Annex A) represent the summary statistics of the variables used for VAR models from January 2015 to February 2021. All indicators are divided into three groups: macroeconomic, monetary and unconventional monetary variables. The mean value of the GDP Growth Rate is 1.11, with a standard deviation of 3.01 for Romania and -0.48 and 5.76 for Ukraine, accordingly. The maximum and minimum public debt growth rate values range between -4.15% and 7.51% (Romania) and -15.66% and 11.88% (Ukraine).

On average, the central bank interest rate of the Romanian sample is 2.01%, with a standard deviation of 0.38%, and the Ukrainian sample is 15.89% and 6.03%. The maximum and minimum exchange rates are 3.77 and 4.45 USD/RON and 15.81 and 28.33 USD/UAH, respectively. The mean value of CPI is 1.76% (Romania) and 16.33% (Ukraine). The mean value of Romania's Broad money (M3) is 0.88, with a standard deviation of 1.19 and 0.94 and 3.37 for Ukraine.

FX exchange rate regimes (floating/stabilized) are a qualitative variable used for the Romanian VAR model. The set of unconventional monetary variables for the Ukrainian VAR model includes FX Interventions (buy/sell) with the mean value 0.32 and -0.14, respectively. Interbank operations are used as an unconventional monetary variable for the Romanian model. Its mean value is 13.2.

When a time series is stationary, it is easier to build an effective model. Dickey-Fuller test is used to identify non-stationary data. Also, this test confirms whether a unit root is present in an autoregressive model of a given time series or not. The original test is a simple lag-1 AR model (Elliott, Rothenberg and Stock, 1996), and in tables B1 and B2 (Annex B) it is taken a first look at a time series specification.

The results of the ADF test show that not all-time series are stationary, and there are different types of stationarity processes in samples for Romanian and Ukrainian models. For example, there are time series that are strict stationary, even from the first lag like GDP, Public debt and Broad money in both cases, and FX Interventions (buy/sell) for the Ukrainian model.

Time series often have either deterministic or stochastic trends. In this research, several time series show a trend stationary such as GDP, Public debt, Interbank operation and USD/UAH exchange rate. Furthermore, after the third difference, they become pure stationary. Drift specification help to identify whether the time series is a random walk. For such variables as USD/RON,

Interbank operation, USD/UAH and CPI the presence of drift specification is confirmed. With this aim to make a time series stationary it is shifted by two or three lags. As can be seen, some variables are stationary at the first level, and others become with the first and more differences.

Hence, an important practical issue for the building of the VAR models is their lag length identification. For this purpose, it is used such tests as FPE (final prediction error), AIC (Akaike's information criterion), SBIC (Schwarz's Bayesian information criterion), and HQIC (Hannan and Quinn information criterion) for a series of vector autoregressions of order 1 through a requested four maximum lag. The results of the lag structure tests indicate that one lag low order has to be included in the VAR model for Romania since FPE, AIC, HQIC, and SBIC have the highest probability of correct estimation (Table 4).

Table 4. Results of the lag structure tests of the VAR-model (Romania)

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-774.48	...	...	...	0.7072	22.35	22.45	22.61
1	-398.58	751.81	64	0.000	0.0001*	13.44*	14.36*	15.75*
2	-355.67	85.80	64	0.036	0.0001	14.04	15.78	18.41
3	-320.18	70.97	64	0.256	0.0005	14.86	17.41	21.28
4	-251.80	136.77*	64	0.000	0.0006	14.73	18.10	23.21

Note: * – the optimal lag according to the criterion value indicates.

Source: own calculations

For Ukraine, it is advisable to include three lags as the probability of correct estimation for FPE and HQC is highest for these lags (Table 5).

Table 5. Results of the lag structure test of the VAR-model (Ukraine)

lag	LL	LR	df	P	FPE	AIC	HQIC	SBIC
0	-1084.65	...	...	...	4991.79	31.21	31.32	31.47
1	-698.04	773.2	64	0.000	0.5014	22.00	22.92	24.31*
2	-612.71	170.6	64	0.000	0.2917	21.39	23.12	25.76
3	-498.52	228.3	64	0.000	0.0836*	19.95	22.50*	26.38
4	-426.15	144.7*	64	0.000	0.0966	19.71*	23.08	28.19

Note: * – the optimal lag according to the criterion value indicates.

Source: own calculations

4.3. Analysis of external shocks' effect on the leu's exchange rate against the US dollar and Romanian economic output

According to the motivation of the research, the main interest focuses on studying the effect of macroeconomic, monetary and unconventional monetary indicators on the national currency exchange rate and the country's output. Therefore, the exchange rate and GDP are the primary dependent variables.

However, the other interconnections are also crucial for confirming or rejecting the three hypotheses.

The VAR(1) model's results for Romania are shown in Table C1 (Annex C). Accordingly, we can conclude on the first findings. During the last five years, the significant effect on USD/RON was caused by monetary indicators such as central bank interest rate and CPI. As for other regressors, the p-value coefficient is higher than 0.05, so the results are statistically insignificant.

An interest rate is a tool used by central banks to implement monetary policy. According to the standard transmission mechanism, its increase causes a rise in prices, then create a possible inflationary situation, and as a result, the currency depreciates and vice versa. As for CPI, one standard deviation cases appreciation (if CPI grows) of Romanian leu.

Inflation also dramatically impacts the decisions made by central banks regarding monetary policy. That is why it affects the foreign exchange rate too. As we can see, in Romania, inflation is likely to contribute to currency strengthening, while it might, on the contrary, intensify pressures and lead to greater uncertainty about future inflation and currency movement. However, the possible explanation might be the following. Romania set up stabilized exchange regime that remains a margin within 2% for six months or more. For this reason, the exchange rate of the leu remains stable as a result of the official action of the central bank. All in all, these facts allow neither confirming nor rejecting the *H1* hypothesis.

The effect of any variables on the GDP growth rate was not discovered because of the low R-squared (50.74%). So, we reject hypothesis *H2* in the case of Romania.

We found that the public debt growth rate has a positive effect on the central bank interest rate. Thus, one standard deviation causes the decrease of interest rate by -0.02%. However, empirical evidence shows that in all cases, a more sustained debt accumulation leads at least temporarily to higher long-term interest rates (Paesani, Strauch and Kremer, 2006). The interest rate of Romania is continuing to cut. It can partly be explained that in the wake of the pandemic crisis, policy rates of the country have been lowered with the further growth of public debt to compensate economic imbalances. Although this situation may continue for a certain time, and rates will grow or rebound to the pre-crisis level.

The last finding is a negative relationship between broad money (M3) and CPI since its increase causes the growth of the inflation rate by 0.14%. Romania's monetary system is fiat-based. It means that when much new money is created, it may lead to more inflation. It is explained by the Quantity Theory of Money which proves that a change in the money supply results in a change in the price levels or the supply of goods and services, or both. In Table C2 of Annex C, there are the results of a Granger causality test. They confirm the interconnections found in VAR(1) model.

4.4. Analysis of external shocks' effect on the hryvnia's exchange rate against the US dollar and Ukrainian economic output

The case of Romania showed some limited evidence about the transmission mechanism between monetary policy tools and the foreign exchange market, and the country's output. The reason for this might be the stabilized exchange rate regime set up since 2019. However, the foreign exchange market effectiveness does not entirely depend on the FX regime. At the same time, a flexible exchange rate aimed at generally reducing external shocks might create excessive exchange rate volatility and eventually undermine financial stability. This scenario is typical for the Ukrainian market.

The VAR(3) model for Ukraine differs first of all by the number of interconnections found. In the context of USD/UAH exchange rate depreciation, it is caused by the increase of central bank interest rate (+0.2837), broad money (+0.1125) and positive FX Interventions (+0.5149) (Tables C3-C4 of Annex C).

Initially, the case with the interest rate and broad money is similar to Romanian. So, we concentrate attention on FX Interventions (buy) transmission mechanism. The unconventional monetary toolkit helps avoid considerable fluctuations in the exchange rate and reduce economic imbalances. As we can see, it works for the Ukrainian foreign exchange market, when a central bank buys a currency, but negatively.

This reaction occurs since interventions are effective during macroeconomic stabilization, economic development, and favourable FX market conditions. When Ukraine faced with a pandemic crisis and financial imbalances, this tool was insufficient to ensure the stable exchange rate of the national currency. On that account, the primary aim of buying currency on the interbank FX market is to raise international reserves and mitigate currency volatility but not fully ensure currency stability.

In the case of Ukraine, we can entirely confirm *HI* as all main monetary variables produce a positive effect (in case of decreasing) and a negative effect (in case of increasing) on the USD/UA exchange rate.

Moving to the interconnections with GDP, it was found that they are almost the same as with the exchange rate. Negative effect – an increase of public debt and FX Interventions (buy); positive effect – interest rate and FX Interventions (sell). Such results can be explained as follows. Firstly, Ukraine depends on public debt, but public debt is not a destructive factor for the economy. It requires significant budget expenditures, good governance of public debt can be a factor of economic growth, but not in Ukraine. The reasons for the sharp rise in the debt of Ukraine are excessive growth of government expenditures, raising funds to stabilize the national currency and ensure national military defence, as well as servicing the public external debt. Hence, it negatively impacts the country's output (Lyuty, Nakonechna and Demydenko, 2019).

Ultimately, the central bank supports economic activity by changing the interest rate. According to VAR(3) model, the shock in the interest rate causes an increase in

GDP. For one thing, this may be explained by inflation targeting when the central bank increases the interest rate to decrease the inflation rate. However, it can be explained by the Taylor rule too. It suggests that the interest rate should be raised if inflation is above target or when GDP growth is above potential (Taylor, 1993). In Ukraine, inflation tends to be lower or equal to the target value, and GDP growth is negative. Accordingly, the increase of rate possibly could raise the economic output.

We concluded that FX interventions limit exchange rate volatility, although it affects the economic output. A positive FX interventions (buy) lead to a decrease in GDP by 0.82%. Negative FX interventions (sell), on the contrary, stimulate GDP growth (+4.94%). The channel through which interventions can affect macroeconomic stability is liquidity, rates, and consumption, but not directly. Because, fundamentally, this instrument aimed at influencing inflation and expectations about depreciation/appreciation of the country's currency in the event of a prolonged recession and a need for further monetary easing (Lízal and Schwarz, 2013).

For example, purchasing foreign currency on the FX market causes narrowing the interest rate and sharply raising the supply of liquidity. Eventually, the change in interest rates causes economic fluctuations. As evidence, even VAR(3) model indicates that intensification of FX Interventions (sell) cause the increase of central bank interest rate (1.66%). Accordingly, we can confirm **H2** and conclude that monetary policy instruments can correct a country's output in Ukraine.

Lastly, there is causality between public debt and CPI. The transmission of these variables can be explained by the fact that an increased level of debt leads to a higher demand for currency needed to cover maturities and interest rates, followed by the higher exchange rate and consumer prices.

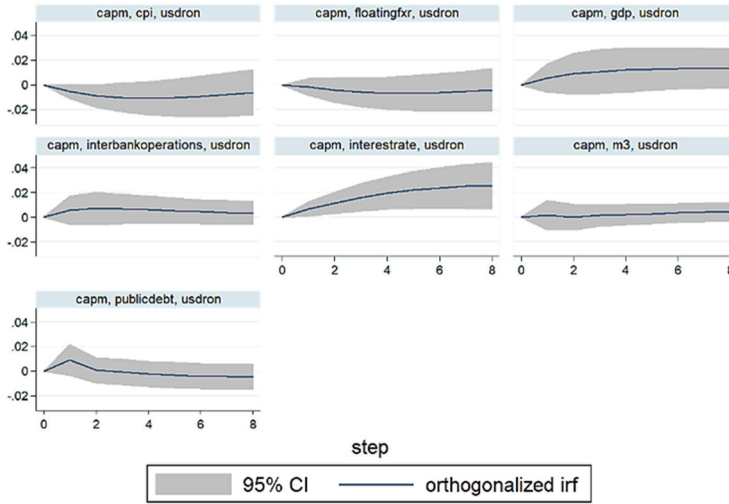
5. SUMMARIZING KEY FINDINGS

This Section provides the impulse responses results from VAR(1) and VAR(3) models. According to the hypotheses, the main variables are the exchange rate and economic output, so we provide impulse responses to all the shocks for them in Figures 7-8. The horizontal axis shows the period (months) and the horizon after the initial shock, while the vertical lines show the magnitude of the response to the shocks.

It can be seen that the initial macroeconomic shock causes a slight depreciation of the Romanian leu, but it is a short-lasting effect in the case of public debt and mainly long-term in the case of GDP. The effects of monetary impulses are controversial. The most intensive depreciation is caused by interest rate shock. The USD/RON exchange rate may react faster with initial appreciation and further rebound to the previous level on the CPI shock. Broad money (M3) shock is not persistent and almost neutral.

As for unconventional monetary variables, establishing a floating exchange regime positively corrects the exchange rate of the Romanian leu, but after

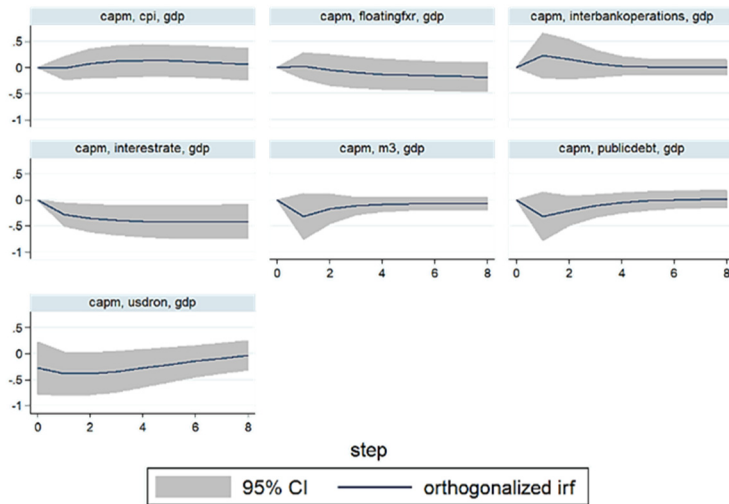
appreciation, the currency tends to the pre-shock value. The interbank operations generate at the beginning exchange rate growth, and after two months, the reaction fades out (Figure 7a).



Graphs by irfname, impulse variable, and response variable

Source: own calculations

Figure 7a. Decomposition of USD/RON responses to macro and monetary shocks



Graphs by irfname, impulse variable, and response variable

Source: own calculations

Figure 7b. Decomposition of Romanian GDP rate responses to monetary shocks

Given the fact that according to the results of the VAR(1) model, the two regressors are statistically significant and they cause the exchange rate changes (interest rate and CPI), we can conclude that the foreign exchange market of Romania works effectively, but throughout the mechanism of traditional monetary policy tools despite macroeconomic instability and uncertainty.

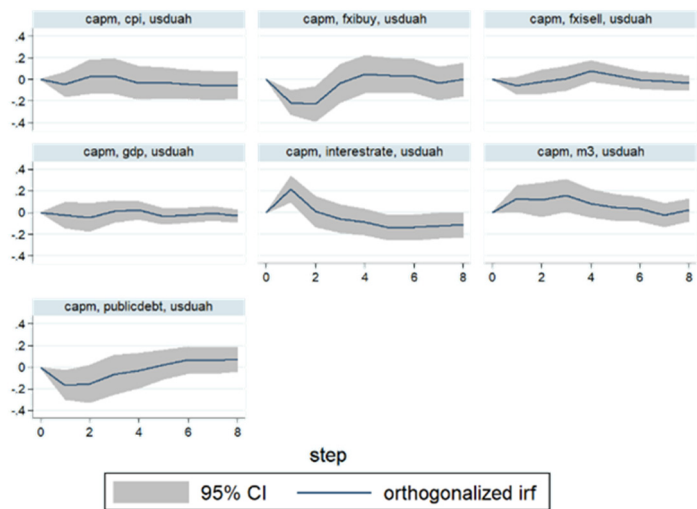
This fact confirms hypothesis **H3**. The results of the implicit reaction of the GDP rate on monetary policy instrument shocks can be eliminated because of the statistical insignificance of the VAR(1) model equation for GDP growth rate. Even impulse functions are with neutral effects. It enables us to estimate the actual effects that monetary policy instruments have on the economic output of Romania (Figure 7a).

Figure 8 presents the impulse responses for a one-standard-deviation shock on the USD/UAH exchange rate. One of the biggest depreciation shocks made by interest rate. Thus, a one-standard deviation shock leads to a 0.21% increase in the USD/UAH exchange rate. This shock is sudden and remains significant only for one month as, after that, the appreciation starts. The impact of broad money (M3) on the exchange rate is also positive, but in the long run, since the currency begins to appreciate after three months. The minimum effect caused by CPI. The maximum deviation is from -0.05% to 0.02%, with the further slow rebound to the previous level over the time horizon.

The exchange rate increases by close to 0.07% on the impact of public debt shock but before permanent stabilization occurs. However, the impact of economic growth is neutral as it remains on the low level, and recently there was no positive economic shock in Ukraine.

We find that unconventional monetary tools as FX interventions (buy/sell) are also drivers of foreign exchange volatility. For instance, positive FX interventions decrease the exchange rate, but the effect becomes insignificant after two months and the price returns to its previous level. Interestingly, we find no significant impact of negative FX interventions on the USD/UAH exchange rate. The reaction appears after four months and becomes weak.

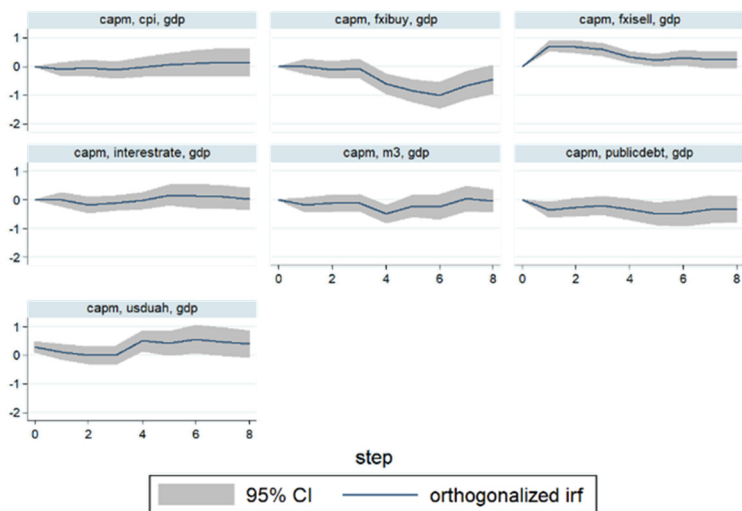
These findings allow concluding that the Ukrainian foreign exchange market is efficient. It tends to be highly volatile after macro and monetary shocks, but after some period rebounds, generally, via monetary tools that confirm hypothesis **H3**.



Graphs by irfname, impulse variable, and response variable

Source: own calculations

Figure 8a. Decomposition of USD/UAH responses to macro and monetary shocks



Graphs by irfname, impulse variable, and response variable

Source: own calculations

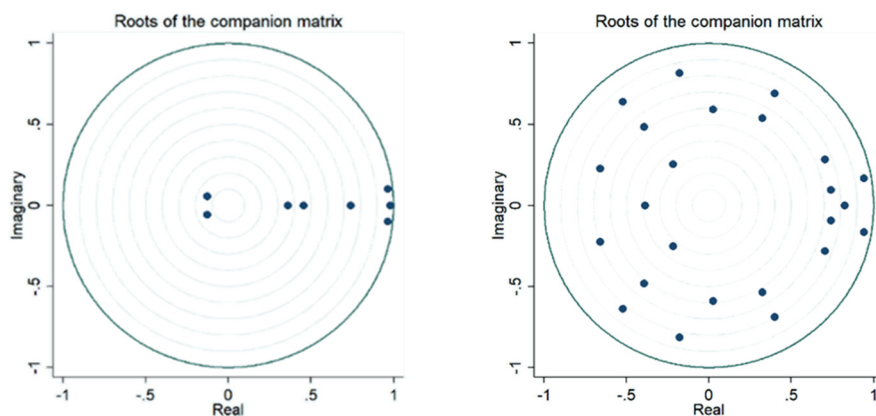
Figure 8b. Decomposition of Ukrainian GDP rate responses to monetary shocks

Next, we examine the impact of monetary variables on the economic output of Ukraine. Figure 8b depicts the impulse responses based on the VAR(3) model that helped identify many interconnections in this case. It was found that unconventional monetary policy tools have a powerful impact, but indirect because of the origin of such instruments. Thus, a one-standard deviation of FX interventions (buy) shock

decreases GDP. The impact is negative, but it appears after three months and reaches its peak at the sixth month with a decrease in GDP of -1.01%. The effect remains significant for a bit of time and then fade out. As for FX interventions (sell), the situation is the opposite. It causes an immediate increase in GDP by 0.71%. The effect is persistent and remains significant for the entire horizon with a minor decline.

The decomposition of Ukrainian GDP rate responses to monetary shocks also emphasizes the impact of the USD/UAH exchange rate and broad money (M3). The role of CPI and interest rate is relatively neutral, and the GDP remains unchanged for the all-time horizon.

Figure 9 and Table 6 summarize the final evaluation results of both VAR models. With this aim, we apply some diagnostic techniques and tests to examine stability and model limitations. First of all, check VAR estimates' stability condition by using matrix eigenvalues (Lütkepohl, 2005). The VAR is stable if the modulus of each eigenvalue is strictly less than 1. According to the roots of companion matrix of both VAR models satisfy the stability condition as all eigenvalues are inside the unit circle.



Source: own calculations

Figure 9. The stability graphs (left side – Romanian VAR(1) model, right side – Ukrainian VAR(3))

Next, we conduct the Lagrange Multiplier (LM) test for autocorrelation in the residuals of a VAR model. As it can be seen, we cannot reject the null hypothesis that there is no autocorrelation in the residuals for any of the four orders tested. It means that there is no autocorrelation. So, both models are adequate.

Table 6. Results of Lagrange-multiplier test for models VAR(1) and VAR(3)

VAR(1) Romania				VAR(3) Ukraine			
lag	chi2	df	Prob > chi2	lag	chi2	df	Prob > chi2
1	61.49	64	0.5657	1	77.47	64	0.1201
2	48.97	64	0.9175	2	52.28	64	0.8522
3	85.54	64	0.0373	3	68.63	64	0.3231
4	43.88	64	0.9742	4	61.54	64	0.5637

H0: no autocorrelation at lag order

Source: own calculations

6. CONCLUSIONS

This study is motivated by the crisis in 2020, which is associated with the COVID-19 pandemic that has detrimental effects on macroeconomic instability and people's living standards. The preliminary literature review showed that, currently, the interest in macroeconomic instability and world uncertainty topic increases, especially in the economic field. However, the main focus of most studies is directed on developed countries such as the USA, the UK, Australia, China and France.

Despite the pandemic being one global shock, it has made many different impacts on different countries. With this aim, in this study, we provide a comparative analysis of foreign exchange markets of developing country (Romania) and country in transition (Ukraine) and investigate their efficiency during macroeconomic instability and world uncertainty over the period January 2015-February 2021. It was tested out three hypotheses: *H1 – monetary policy instruments mitigate the national currency depreciation; H2 – monetary policy instruments correct the country's output; H3 – the FX market is efficient during macro-instability and world uncertainty.*

A VAR model was used to test hypotheses, as well as ADF-test for structural analysis for time series stationarity, Granger test and impulse functions for analysing the effect of external shocks on the exchange rate dynamics, as well as R-squared, RMSPE, roots of companion matrix and Lagrange-multiplier test for checking the quality of models.

It was found that the significant effect on USD/RON during the last five years caused monetary indicators such as central bank interest rate and CPI. But the *H1* hypothesis was neither confirmed nor rejected as Romania set up stabilized exchange regime, and the leu exchange rate remains stable as a result of the official action of the central bank. The effect of any variables on the GDP growth rate was not discovered and the hypothesis *H2* was rejected in the case of Romania.

As for Ukraine, the hypothesis *H1* was entirely confirmed because all main monetary variables affect the exchange rate of hryvnia against the US dollar. The exchange rate depreciation is caused by the increase of central bank interest rate, broad money and positive FX Interventions. As for GDP, a negative effect is caused by increasing in public debt and FX Interventions (buy); positive effect –

interest rate and FX Interventions (sell). It allows confirming hypothesis **H2** and concluding that monetary policy instruments can correct a Ukraine's output.

The results of impulse functions give an opportunity to conclude that the foreign exchange market of Romania works effectively but throughout the mechanism of traditional monetary policy tools despite macroeconomic instability and uncertainty. The Ukrainian foreign exchange market is efficient too and tends to be highly volatile after macro and monetary shocks, but after some period rebounds, generally, via monetary tools (hypothesis **H3** for both countries is confirmed).

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ANNEX A
Table A1. Summary statistics (Romania)

Variable	Observation	Mean	Std. Dev.	Min	Max
Macroeconomic variables					
GDP Growth Rate, %	74	1.1108	3.0992	-12.3	5.6
Public debt growth rate, %	74	1.1112	2.1172	-4.15	7.51
Monetary variables					
Exchange rate, USD/RON	74	4.0881	0.1599	3.7675	4.4469
The central bank interest rate, %	74	2.0101	0.3847	1.25	2.5
CPI, %	74	1.76	2.3838	-3.46	5.41
Broad money (M3) growth rate, %	74	0.8772	1.1928	-1.34	6.11
Unconventional monetary variables					
FX exchange rate (floating)	74	0.6621	0.4762	0	1
FX exchange rate (stabilized)	74	0.3378	0.4762	0	1
Interbank operations, RON billion	74	13.203	6.3670	2.13	35.25

Table A2. Summary statistics (Ukraine)

Variable	Observation	Mean	Std. Dev.	Min	Max
Macroeconomic variables					
GDP Growth Rate, %	74	-0.4837	5.7564	-16	4.6
Public debt growth rate, %	74	0.4108	2.9881	-15.66	11.88
Monetary variables					
Exchange rate, USD/UAH	74	25.7296	2.2094	15.8127	28.325
The central bank interest rate, %	74	15.8851	6.0344	6	30
CPI, %	74	16.3283	15.9316	1.7	60.9
Broad money (M3), UAH billion	74	0.9406	3.3731	-9.79	21.35
Unconventional monetary variables					
FX Interventions (buy), USD billion	74	0.3162	0.4161	0	3
FX Interventions (sell), USD billion	74	-0.1364	0.3151	-2.5	0

ANNEX B
Table B1. Results of Dickey-Fuller test for all indicators of the VAR-model (Romania)

No.	Indicator	t-statistics	Stationarity specification			
			p-value	Suppress constant	Trend	Drift
Macroeconomic variables						
1	GDP Growth Rate	-3.534	0.001	+	+	+
2	Public debt growth rate	-8.664	0.000	+	+	+
Monetary variables						
3	USD/RON	0.192	0.849	-	-	+
3.1	Lag (1)	0.074	0.054	-	-	+
3.2	Lag (2)	-0.212	0.046	+	-	+
4	Central bank interest rate	-1.497	0.139	-	-	-
4.2	Lag (2)	-0.896	0.010	+	-	-
5	CPI	-0.592	0.556	-	-	-
5.1	Lag (1)	-0.622	0.044	+	-	-
6	Broad money (M3)	-6.037	0.000	+	+	+

No.	Indicator	t-statistics	Stationarity specification			
			p-value	Suppress constant	Trend	Drift
Unconventional monetary variables						
7	FX exchange rate (floating)	...	...	...	...	...
8	FX exchange rate (stabilized)	...	...	...	...	...
9	Interbank operation	-1.468	0.146	-	+	+
9.1	Lag (1)	-1.125	0.073	-	+	+
9.3	Lag (3)	-0.839	0.040	+	+	+

Table B2. Results of Dickey-Fuller test for all indicators of the VAR-model (Ukraine)

No.	Indicator	t-statistics	Stationarity specification			
			p-value	Suppress constant	Trend	Drift
Macroeconomic variables						
1	GDP Growth Rate	-2.916	0.005	+	-	+
2	Public debt growth rate	-9.976	0.000	+	+	+
Monetary variables						
3	USD/UAH	0.700	0.486	-	+	+
3.1	Lag (1)	0.493	0.307	-	-	+
3.2	Lag (2)	0.605	0.453	-	-	+
3.3	Lag (3)	0.987	0.019	+	-	+
4	Central bank interest rate	-0.747	0.458	-	-	-
4.1	Lag (1)	-1.318	0.000	+	-	-
5	CPI	-1.208	0.231	-	-	-
5.1	Lag (1)	-1.954	0.000	+	-	+
6	Broad money (M3)	-10.578	0.000	+	+	+
Unconventional monetary variables						
7	FX Interventions (buy)	-4.781	0.000	+	+	+
8	FX Interventions (sell)	-7.392	0.000	+	+	+
<i>Critical value (-2.611 – 1%; -1.950 – 5%; -1.610 – 10%)</i>						

ANNEX C (Romania)

Table C1 Results of the Vector autoregression VAR(1) model (Romania)

Regressors	Regressant	Coef.	Std. Err.	Z	P>|z|	R-sq	RMSE
USD/RON							
GDP Growth Rate		0.0012	0.0025	0.48	0.632	0.8591	0.0633
Public debt growth rate		0.0041	0.0040	1.03	0.303		
Central bank interest rate		0.0942	0.0272	3.46	0.001		
CPI		-0.0110	0.0048	-2.29	0.022		
Broad money (M3)		0.0019	0.0073	0.26	0.795		
FX exchange rate (floating)		-0.0275	0.0254	-1.08	0.279		

EUROPEAN ADMINISTRATIVE AREA – INTEGRATION AND RESILIENCE DYNAMICS

Regressors \ Regressant	Coef.	Std. Err.	Z	P>|z|	R-sq	RMSE
Interbank operations	0.0013	0.0014	0.95	0.342		
GDP Growth Rate						
USD/RON	-2.0588	2.5772	-0.80	0.424	0.5074	2.3228
Public debt growth rate	0.0004	0.1489	0.00	0.997		
Central bank interest rate	-2.6157	0.9997	-2.62	0.009		
CPI	0.1141	0.1775	0.64	0.520		
Broad money (M3)	-0.3933	0.2689	-1.46	0.144		
FX exchange rate (floating)	-0.1182	0.9345	-0.13	0.899		
Interbank operations	0.0733	0.0530	1.38	0.167		
Public debt growth rate						
USD/ RON	1.6029	2.1722	0.74	0.461	0.1414	1.9578
GDP Growth Rate	0.0361	0.0783	0.46	0.645		
Central bank interest rate	-0.6542	0.8426	-0.78	0.438		
CPI	0.0413	0.1496	0.28	0.782		
Broad money (M3)	-0.3061	0.2266	-1.35	0.177		
FX exchange rate (floating)	-0.7520	0.7876	-0.95	0.340		
Interbank operations	0.0159	0.0447	0.36	0.721		
Central bank interest rate						
USD/ RON	-0.1566	0.1073	-1.46	0.144	0.9407	0.0989
GDP Growth Rate	-0.0018	0.0038	-0.49	0.627		
Public debt growth rate	-0.0184	0.0062	-2.97	0.003		
CPI	0.0106	0.0073	1.44	0.149		
Broad money (M3)	0.0213	0.0119	1.91	0.057		
FX exchange rate (floating)	0.0241	0.0389	0.62	0.534		
Interbank operations	-0.0004	0.0022	-0.21	0.834		
CPI						
USD/ RON	-1.2963	0.6979	-1.86	0.063	0.9433	0.0967
GDP Growth Rate	-0.0171	0.0251	-0.68	0.495		
Public debt growth rate	-0.0062	0.0403	-0.16	0.876		
Central bank interest rate	0.1073	0.2707	0.40	0.692		
Broad money (M3)	0.1441	0.0728	1.98	0.048		
FX exchange rate (floating)	-0.2630	0.2530	-1.04	0.299		
Interbank operations	-0.0025	0.0143	-0.18	0.860		
Broad money (M3)						
USD/ RON	1.7597	1.3164	1.34	0.181	0.1037	1.1864
GDP Growth Rate	0.0790	0.0474	1.67	0.096		
Public debt growth rate	0.0098	0.0760	0.13	0.897		
Central bank interest rate	-0.8481	0.5106	-1.66	0.097		
CPI	0.0278	0.0906	0.31	0.759		
FX exchange rate (floating)	0.2055	0.4773	0.43	0.667		
Interbank operations	0.0384	0.0271	1.42	0.157		
FX exchange rate (floating)						
USD/ RON	-0.1113	0.1313	-0.85	0.397	0.9454	0.1183
GDP Growth Rate	-0.0029	0.0047	-0.63	0.527		
Public debt growth rate	0.0094	0.0075	1.24	0.214		
Central bank interest rate	-0.0408	0.0509	-0.80	0.423		
CPI	-0.0002	0.0090	-0.03	0.974		

Regressant	Coef.	Std. Err.	Z	P>|z|	R-sq	RMSE
Broad money (M3)	-0.0039	0.0137	-0.29	0.773		
Interbank operations	-0.0027	0.0027	-1.03	0.302		
Interbank operations						
USD/ RON	-8.1580	5.0158	-1.63	0.104	0.5448	4.5206
GDP Growth Rate	-0.3121	0.1808	-1.73	0.084		
Public debt growth rate	-0.5544	0.2898	-1.91	0.056		
Central bank interest rate	2.9966	1.9457	1.54	0.124		
CPI	0.3826	0.3454	1.11	0.268		
Broad money (M3)	0.0294	0.5233	0.06	0.955		
FX exchange rate (floating)	-5.5971	1.8187	-3.08	0.002		

Table C2. Granger causality test results VAR(1) model for Romania

Regressant	Regressors	Prob > chi2	Conclusion
USD/RON	GDP Growth Rate	0.632	not the cause
	Public debt growth rate	0.303	not the cause
	Central bank interest rate	0.001	the cause
	CPI	0.022	the cause
	Broad money (M3)	0.795	not the cause
	FX exchange rate (floating)	0.279	not the cause
	Interbank operations	0.342	not the cause
GDP Growth Rate	USD/ RON	0.424	not the cause
	Public debt growth rate	0.997	not the cause
	Central bank interest rate	0.009	the cause
	CPI	0.520	not the cause
	Broad money (M3)	0.144	not the cause
	FX exchange rate (floating)	0.899	not the cause
Public debt growth rate	Interbank operations	0.167	not the cause
	USD/RON	0.461	not the cause
	GDP Growth Rate	0.645	not the cause
	Central bank interest rate	0.438	not the cause
	CPI	0.782	not the cause
	Broad money (M3)	0.177	not the cause
Central bank interest rate	FX exchange rate (floating)	0.340	not the cause
	Interbank operations	0.721	not the cause
	USD/ RON	0.144	not the cause
	GDP Growth Rate	0.627	not the cause
	Public debt growth rate	0.003	the cause
	CPI	0.149	not the cause
	Broad money (M3)	0.057	not the cause
CPI	FX exchange rate (floating)	0.534	not the cause
	Interbank operations	0.834	not the cause
	USD/ RON	0.063	not the cause
	GDP Growth Rate	0.495	not the cause
Public debt growth rate	Central bank interest rate	0.876	not the cause
	Interbank operations	0.692	not the cause
	USD/ RON	0.063	not the cause

Regressant	Regressors	Prob > chi2	Conclusion
	Broad money (M3)	0.048	the cause
	FX exchange rate (floating)	0.299	not the cause
	Interbank operations	0.860	not the cause
Broad money (M3)	USD/ RON	0.181	not the cause
	GDP Growth Rate	0.096	not the cause
	Public debt growth rate	0.897	not the cause
	Central bank interest rate	0.097	not the cause
	CPI	0.759	not the cause
	FX exchange rate (floating)	0.667	not the cause
	Interbank operations	0.157	not the cause
FX exchange rate (floating)	USD/ RON	0.397	not the cause
	GDP Growth Rate	0.527	not the cause
	Public debt growth rate	0.214	not the cause
	Central bank interest rate	0.423	not the cause
	CPI	0.974	not the cause
	Broad money (M3)	0.773	not the cause
	Interbank operations	0.302	not the cause
Interbank operations	USD/ RON	0.104	not the cause
	GDP Growth Rate	0.084	not the cause
	Public debt growth rate	0.056	not the cause
	Central bank interest rate	0.124	not the cause
	CPI	0.268	not the cause
	FX exchange rate (floating)	0.002	the cause
	Broad money (M3)	0.955	is not the cause

ANNEX C (Ukraine)

Table C3. Results of the Vector autoregression VAR(3) model (Ukraine)

Regressant Regressors	Coef.	Std. Err.	Z	P>|z|	R-sq	RMSE
USD/UAH						
GDP Growth Rate	-0.0141	0.0400	-0.35	0.723	0.9303	0.6125
Public debt growth rate	-0.0345	0.0407	-0.85	0.396		
Central bank interest rate	0.2837	0.0873	3.25	0.001		
CPI	-0.0433	0.0310	-1.40	0.163		
Broad money (M3)	0.1125	0.0397	2.83	0.005		
FX Interventions (buy)	0.5149	0.2286	2.25	0.024		
FX Interventions (sell)	0.3659	0.3404	1.08	0.282		
GDP Growth Rate						
USD/UAH	-0.1787	0.1801	-0.99	0.321	0.9712	1.0207
Public debt growth rate	-0.1375	0.0678	-2.03	0.043		
Central bank interest rate	0.3081	0.1455	2.12	0.034		
CPI	-0.0470	0.0517	-0.91	0.363		
Broad money (M3)	0.0208	0.0662	-0.32	0.753		
FX Interventions (buy)	-0.8177	0.3810	-2.15	0.032		
FX Interventions (sell)	4.9372	0.5672	8.70	0.000		
Public debt growth rate						

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Regressors	Regressant	Coef.	Std. Err.	Z	P> z 	R-sq	RMSE
USD/UAH		0.2407	0.3264	0.74	0.461	0.3914	1.8498
GDP Growth Rate		-0.1192	0.1208	-0.99	0.324		
Central bank interest rate		-0.1296	0.2637	-0.49	0.623		
CPI		-0.1605	0.0937	-1.71	0.087		
Broad money (M3)		-0.0347	0.1200	-0.29	0.772		
FX Interventions (buy)		-1.8784	0.6906	-2.72	0.007		
FX Interventions (sell)		-0.9298	1.0280	-0.90	0.366		
Central bank interest rate							
USD/UAH		0.0317	0.1415	0.22	0.823	0.9879	0.8022
GDP Growth Rate		0.1466	0.0523	2.80	0.005		
Public debt growth rate		-0.0060	0.0533	-0.11	0.909		
CPI		-0.0560	0.0406	-1.38	0.168		
Broad money (M3)		0.0489	0.0520	0.94	0.347		
FX Interventions (buy)		-0.1336	0.2995	-0.45	0.655		
FX Interventions (sell)		1.6641	0.4458	3.73	0.000		
CPI							
USD/UAH		-0.0321	0.3224	-0.10	0.921	0.9910	1.8272
GDP Growth Rate		-0.0330	0.1193	-0.28	0.782		
Public debt growth rate		0.3348	0.1214	2.76	0.006		
Central bank interest rate		0.2086	0.2605	0.80	0.423		
Broad money (M3)		0.0137	0.1185	0.12	0.908		
FX Interventions (buy)		-0.9881	0.6821	-1.45	0.147		
FX Interventions (sell)		-1.1134	1.0154	-1.10	0.273		
Broad money (M3)							
USD/UAH		0.5531	0.2707	2.04	0.041	0.6253	1.5339
GDP Growth Rate		-0.0129	0.1001	-0.13	0.897		
Public debt growth rate		-0.2283	0.1019	-2.24	0.025		
Central bank interest rate		0.1738	0.2187	0.80	0.427		
CPI		-0.0328	0.0777	-0.42	0.673		
FX Interventions (buy)		-0.7130	0.5727	-1.25	0.213		
FX Interventions (sell)		0.9489	0.8524	1.11	0.266		
FX Interventions (buy)							
USD/UAH		0.0784	0.0726	1.08	0.280	0.3721	0.4116
GDP Growth Rate		0.0416	0.0268	1.55	0.122		
Public debt growth rate		-0.0306	0.0273	-1.12	0.262		
Central bank interest rate		0.0158	0.0586	0.27	0.788		
CPI		-0.0022	0.0208	-0.11	0.915		
Broad money (M3)		-0.0311	0.0267	-1.17	0.244		
FX Interventions (sell)		-0.1085	0.2287	-0.47	0.635		
FX Interventions (sell)							
USD/UAH		0.0530	0.0340	1.56	0.119	0.7446	0.1930
GDP Growth Rate		-0.0092	0.0126	-0.74	0.462		
Public debt growth rate		0.0146	0.0128	1.15	0.252		
Central bank interest rate		-0.0614	0.0275	-2.23	0.026		
CPI		0.0041	0.0097	0.43	0.670		
Broad money (M3)		-0.0405	0.0125	-3.24	0.001		
FX Interventions (buy)		-0.5860	0.0720	-8.13	0.000		

Table C4. Granger causality test results VAR(3) model for Ukraine

Regressant	Regressors	Prob > chi2	Conclusion
USD/UAH	GDP Growth Rate	0.299	not the cause
	Public debt growth rate	0.039	the cause
	Central bank interest rate	0.003	the cause
	CPI	0.309	not the cause
	Broad money (M3)	0.000	the cause
	FX Interventions (buy)	0.000	the cause
	FX Interventions (sell)	0.158	not the cause
GDP Growth Rate	USD/UAH	0.000	the cause
	Public debt growth rate	0.004	the cause
	Central bank interest rate	0.044	the cause
	CPI	0.017	the cause
	Broad money (M3)	0.924	not the cause
	FX Interventions (buy)	0.034	the cause
	FX Interventions (sell)	0.000	the cause
Public debt growth rate	USD/UAH	0.897	not the cause
	GDP Growth Rate	0.489	not the cause
	Central bank interest rate	0.970	not the cause
	CPI	0.187	not the cause
	Broad money (M3)	0.103	not the cause
	FX Interventions (buy)	0.021	the cause
	FX Interventions (sell)	0.502	not the cause
Central bank interest rate	USD/UAH	0.013	the cause
	GDP Growth Rate	0.006	the cause
	Public debt growth rate	0.010	the cause
	CPI	0.009	the cause
	Broad money (M3)	0.085	not the cause
	FX Interventions (buy)	0.377	not the cause
	FX Interventions (sell)	0.002	the cause
CPI	USD/UAH	0.175	not the cause
	GDP Growth Rate	0.565	not the cause
	Public debt growth rate	0.000	the cause
	Central bank interest rate	0.859	not the cause
	Broad money (M3)	0.207	not the cause
	FX Interventions (buy)	0.263	not the cause
	FX Interventions (sell)	0.359	not the cause
Broad money (M3)	USD/UAH	0.051	not the cause
	GDP Growth Rate	0.545	not the cause
	Public debt growth rate	0.000	the cause
	Central bank interest rate	0.000	the cause
	CPI	0.161	not the cause
	FX Interventions (buy)	0.000	the cause
	FX Interventions (sell)	0.599	not the cause
FX Interventions (buy)	USD/UAH	0.069	not the cause
	GDP Growth Rate	0.469	not the cause
	Public debt growth rate	0.259	not the cause
	Central bank interest rate	0.905	not the cause

Regressant	Regressors	Prob > chi2	Conclusion
	CPI	0.344	not the cause
	Broad money (M3)	0.082	not the cause
	FX Interventions (sell)	0.591	not the cause
FX Interventions (sell)	USD/UAH	0.050	the cause
	GDP Growth Rate	0.036	the cause
	Public debt growth rate	0.088	not the cause
	Central bank interest rate	0.031	the cause
	CPI	0.918	not the cause
	Broad money (M3)	0.001	the cause
	FX Interventions (buy)	0.000	the cause

ALIGNING HR PRACTICES TO REACH DESIRED HR OUTCOMES. A CASE STUDY APPROACH

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Abstract

Many studies were conducted to unlock the 'black box' of HRM. Some were oriented on identifying the bundle of HRM practices suitable for certain organizational goals, others on external or internal fit and others on characteristics of a powerful HRM system. At the same time, especially within last two years HR professionals were expected to prove their value, by contributing to organizational performance. Most of the literature uses quantitative methods to find the proper answers. This paper aims at analysing how organisations work on aligning the HR practices that enables them to reach the desired HR outcomes, as well as at investigating the issues of internal HR system 'fit'. Using a case study approach and a mix-method, sequential design this study was conducted on two Romanian organizations headquartered in North-East region of the country. The qualitative section seeks to find out if the alignment process is a strategic, deliberate one or if it is mainly conducted by external factors. It also aims at identifying the HR system typologies and HR practices used by the two companies. Quantitative results show that HR practices and HR outcomes alignment could be a real challenge if a strategic approach is not considered by the HR professionals.

Keywords: *HR system; internal fit; HR outcomes; case study.*

JEL Classification: M120, M500, M520, M530, M540

1. INTRODUCTION

In challenging work-related environment, as we are currently living, human resource (HR) professionals are expected to act as strategic business partners to achieve the business goals (Sondhi and Nirmal, 2013). Organisations seek more intensively to gain sustainable competitive advantages through identifying critical resources (Barney and Wright, 1998). In this context, managerial board starts to consider them employees a strategic asset, not only in them statements, but in them planned actions too. However, without a strategically view on the way employees are managed and taken care of the expected outcome will not appear.

In the last almost four decades, strategic human resource management (SHRM) field developed intensively and tried to unlock the 'black box' of HRM, concept that was first introduced by Becker and Gerhart (1996). Despite the abundant literature in the field, there is still a lot of work to be done (Banks and Kepes, 2015; Armstrong and Brown, 2019) for the organisations to gain the

expected results. Aligning HR practices/interventions with the strategy of the organisation, designing HR practices that are focusing on the business operations and are implemented professionally may be ‘the ingredients’ for organisational effectiveness (Nel and Little, 2006). The first ‘ingredient’, HR practices/systems alignment was intensively debated, as it stands at the core of SHRM research. Most of the studies followed the framework designed by Delery (1998) and Kepes and Delery (2007) focusing on internal fit and the four types of HR alignment: within-HRM system vertical fit, inter-HRM activity area fit, intra-HRM activity area fit, between-HRM system fit (Kepes and Delery, 2007). Great research conducted on the topic was either literature review based, seeking to synthesis the field evolutions and future research to be done (e.g., Kehoe, 2021) or quantitative research conducted at unit-level or firm-level of analysis (e.g., Christina *et al.*, 2017; Toh, Morgeson and Campion, 2008; Liao and Chuang, 2004) without trying to underline the principles behind or to better operationalise the fit (Paauwe *et al.*, 2013).

Using a case study approach, this paper will focus on three types (out of four) of internal alignment of Kepes and Delery (2007) framework, exploring the HR practices alignment within two Romanian owned companies and them HR outcomes. The main research question that the paper seek to answer is: are the HR practices internally aligned to support each other (having positive synergetic effect) to achieve the outcomes wanted in terms of desired employees’ attitudes (organisational commitment) and behaviour (organisational citizenship behaviour)? To answer this question, both in-depth interviews with HR managers and questionnaires addressed to 108 employees were used. Results shows that HR system – HR outcomes might be a challenge, HR managers having a different perspective than those of the employees. Two of the HR system internal fit were addressed through this paper. The paper contributes to a better understanding on the SHRM field and internal fit, and underline on the importance of the context in order to explain why some relations are proven and others are not. In the end some limitations and future research are presented.

2. LITERATURE REVIEW

2.1. Defining SHRM and HRM systems

When first appeared, SHRM field was intended to be a link between strategic management and human resource management (HRM) (e.g., Ciulu, Aruștei and Apetrei, 2017). Approximately 30 years of research later the field is still a work in progress, trying to prove the way in which HR function is helping management to achieve organisational performance (Armstrong and Brown, 2019; Banks and Kepes, 2015), still searching to answer questions like ‘what?’ (e.g., what bundle of HR practices will increase organisational performance?), ‘why?’ (e.g., why some links between HR practices and performance occur, while others don’t?),

‘how’ (e.g., how do the links between HR practices and organisational performance could be explained), or ‘to whom’ (e.g., to whom will the organisation address certain practice?) (Boxall and Purcell, 2011).

In a more operational approach SHRM is seen as the sum of its HR systems. HR systems concept emerged after the research in the field underlined that not individual HR practices will determine the expected organisational performance (Farndale *et al.*, 2010), but a bundle of distinctive, interrelated HR practices (Lado and Wilson, 1994) that work together to create a synergetic effect (Aruştei, 2015). To better operationalize the concept, some studies focused on identifying the components of an HR system. The most common components are HR philosophy, HR policies, HR practices, HR processes (Becker and Gerhart, 1996; Kepes and Delery, 2007), as well as HR programs and HR climate (Arthur and Boyles, 2007) or HR procedures and HR indicators and HR instruments (Aruştei, 2015).

The most studied component of an HRM system was ‘HR practices’ element, researchers trying to find the most suitable combination – usually based on AMO theory (A-ability, M-motivation, O-opportunity) - that can predict best the HR outcomes. However, there are many difficulties in classifying the practices in these three categories, as one could be suitable for at least two of them.

Simultaneously a great amount of research was focused on identifying HR system typologies, taken into consideration its objective (Lepak *et al.*, 2006), or ‘the resource-based view’ theory (Lepak and Snell, 2007) or the principles and goals that stands behind (Boxall and Purcell, 2011). For the present study the Lepak *et al.* (2006) typology will be considered, where six system types were identified: high performance work system, high involvement, high-commitment system, HR control system, HR system for occupational safety and HR system for customer service.

Another perspective focusing on HR system underlines the ‘strength’ characteristic referring to the way in which the system is perceived by the employees. Three main features should be satisfied in order for the HR system to be powerful: HR distinctiveness, HR consistency and consensus (Bowen and Ostroff, 2004).

2.2. SHRM and the challenge of ‘fit’

As SHRM is seen as a set of strategic choices related to organisation of work and the use of labour (Boxall and Purcell, 2011) so that the organisation will fulfil its goals, a lot of research was focusing on the issue of ‘fit’ (Paauwe *et al.*, 2013). Starting with the Harvard ‘map of the HRM territory’ developed by Beer *et al.* (1984), many external and internal factors were considered to influence the strategic choices in HRM. This idea brought into attention two main types of fit (Paauwe *et al.*, 2013): vertical fit in HRM (or strategic fit) that refers mainly to aligning HR system with business strategy and horizontal fit in HRM (or internal

fit) which refers to HR practices alignment in order to create a system that would help organisation to reach its goals (Delery, 1998).

However, other typologies have emerged which took into consideration the external factors of organisation, also. For example, Wood (1999) proposed four types. Beside strategic fit and internal fit they proposed also:

- *organizational fit*, which refers to aligning HR system with other systems from organisation like, production system or technological system (the balance scorecard map and the value chain being some of the instruments in this regard);
- *environmental fit* which refers to HR system alignment considering external institutional environment.

Furthermore, the issue of internal fit was analysed in depth by Kepes and Delery (2007) and four types of internal fit, among which three of them will be the focus of this paper too, have emerged. The first three refer to a single HRM system, while the fourth one refers to alignment of various HRM systems within the organisation which address to different categories of jobs. The four types of internal fit are:

A. *within-HR system vertical fit* refers to alignment between different HRM activities placed on diverse levels of abstraction (e.g., HRM policies, practices, and processes), but within the same HR area. As a result of this alignment a positive synergistic effect may occur and could be higher than adding effect. On the other side, if misalignment is happening a negative synergetic effect may appear (Banks and Kepes, 2015). Misalignment could emerge from differences between the first three elements of the causal HRM-performance chain (Purcell and Hutchinson, 2007), meaning between intended practices, implemented practices and employees' perception on those practices. In this regard all the internal contextual factors need to be taken into consideration.

B. *inter-HRM activity area fit*, a horizontal, internal fit, refers to alignment between HRM activities from different areas (Kepes and Delery, 2007), resulting a bundle, integrated HR practices that support each other to achieve the desired HRM outcomes. Studies conducted in this area used cluster analyses (e.g., Ostroff and Bowen, 2000) or factor analyses (Zacharatos, Barling, and Iverson, 2005) in order to prove the consistency of HRM activities and them impact on organisational performance. However, some studies underlined the fact that a certain joint of HR activities may determine some organisational outcomes, like incremental innovation, but won't be conducive for radical one (Andreeva *et al.*, 2017).

C. *intra-HRM activity area fit*, the second horizontal internal fit refers to alignment between HRM activities within a certain HRM area. Sometimes having more HRM activities in the same area might not bring more efficiency, based on margin utility principles, due to redundancy and higher costs creating a substitutable effect (Delery, 1998).

D. *HRM systems alignment* refers to consistency between different HRM systems implemented for distinct workforce groups from the same organisation. Even though most of the HR practices will be different, some of HRM activities may be common, especially if they do not determine higher costs (Banks and Kepes, 2015).

When SHRM demonstrates internal fit in all these areas along with organisational and environmental fit achieving organisational performance doesn't seem a chimera anymore. However, misalignment could cost organisation having negative synergetic effect, 'deadly combinations' for organisation (Delery, 1998).

A more recent and dynamic perspective on the fit issue was addressed by Donnelly and Hughes (2022) when analysing the way in which different subsystems (strategy, culture, capabilities and composition) interact in an HR ecosystem.

2.3. HR outcomes

All the abounded literature in the field of SHRM could be easily connected to the one on measuring and proving the HRM – performance link. Conducting a rigorous literature review Paauwe, Wright and Guest (2013) concluded that results of different studies were contradictory, some supporting the link, while others considered it rather weakly. However, the certainty is that to prove the HR practices impact on organisational performance, finding closer HR outcomes at individual (e.g., organisational commitment, engagement, absenteeism) and group level (e.g., organisational citizenship behaviours, customer-oriented behaviours) is recommended (Purcell and Hutchinson, 2007).

3. RESEARCH DESIGN

In order to explore the way in which HR practices are aligned to generate the desired HR outcomes a case study approach was used, on two large Romanian companies from service industry. The companies chosen to have more than 25 years' experience on the market, the plants are spread nationally, and have more than 100 employees, criteria chosen in order for the HR practices to be formalised. To keep the anonymity companies will be called *Company A* and *Company B*.

A mix method research design was used, having two in-depth interviews with them HR managers (almost three hours of interviews) and a survey conducted among the employees. The research was sequential, first qualitative, seeking to identify the way in which the HR managers think of HR practices - HR outcomes alignment, the type of the HR system used in the companies and to identify which HR practices found in the literature – considering AMO theory perspective – are implemented by both companies.

The second step of the research was quantitative, the survey being addressed to employees to find out them satisfaction on the HR practices implemented, and also the HR outcomes desired by the companies: organisational commitment (15-

items scale proposed by Mowday, Steers and Porter, 1979) and organisational citizenship behaviours (13-items scale proposed by Podsakoff *et al.*, 1990).

The hypothesis tested were where referring to two of the internal fit situations, inter-HRM activity area fit and intra-HRM activity area fit were achieved.

H1. The HR system (having aligned HR practices) is a higher predictor of OC and OCB than each type of HR practices (ability, motivation, opportunity).

H2. Different types of HR practices (the existence of inter-HRM activity area fit) create a synergetic effect on OC and OCB.

The sample was formed by 108 valid questionnaires, 52 from *Company A* and 56 from *Company B*. Respondents from *Company A* were from sales division, having different roles in small departments like marketing, direct sales, most of them being man, being more than 35 years old, having a university degree. Employees from *Company B* were from technical department which function as a support for them customers, most of them being man, between 25-45 years old and up to 5 years' experience within the company. The reason we addressed just a certain part of the company was that different HR systems are implemented from different groups of employees and the current paper is focusing on the first three types on internal fit and not the inter-HR systems fit.

4. MAIN RESULTS AND DISCUSSIONS

Based on the content analyses, the in-depth interviews revealed that the HR system which *Company A* wants to implement is based more on human oriented principles, looking at them employees as assets and not just resources.

E.g., "We always look at them needs and try to feel how are they (meaning employees) feeling at work. I know them. I know when they are stressed and when they are happy or relaxed."

The types of the HR system to which the *Company A* is oriented is both high performance and high-commitment work practices, driven more by the business strategy, then the external environment. In this case the competition on the market is not high as they have a competitive advantage through the products, they sale.

Considering the *Ability enhancing practices*, the most used ones are those related to exchange of experience and hard-skills training for knowing the product, however the budget allocated to development depending on the prioritise and revenue. Regarding *Motivation enhancing practices*, beside pay-for-performance practice, the organisation is involved in developing a lot of non-monetary practices, making sure that they have a pleasant place to work (e.g., free lunch meals for employees, flexible working hours, socialization events). For the *Opportunity HR practices* we identified that the company have some issues in addressing it, as them departments are undersized and the employees struggle with too many responsibilities, however they try to compensate and offer them more autonomy.

In terms of *HR outcomes*, the company is concerned for the employees to be loyal, dedicated to the company and to their job, having organisational commitment, but also a client orientation behaviour and sharing the same values that management is having, meaning quality oriented, honesty, respect, tolerance.

A hypothesis resulted from the interview might say that *H3. there is a high consistency between motivation HR practices and HR outcomes, while the alignment between Ability HR practices and Opportunity HR practices, on one hand and HR outcomes on the other hand will not appear.*

The qualitative findings for *Company B* revealed that the HR system is oriented more to cost efficiency and to customer service and less to high-performance and high-commitment work practices, even though they were also considered. The evolution of the HR system is also consistently influenced by the business strategy, but also by market competition and employees demands, as they fight on the same labour market the growing number of multinational companies do.

Considering *Ability HR practices*, *Company B* is focusing on selective recruitment and selection process especially on the strategic job positions. Extensive trainings on hard skills are offered for managers and also security measures (the department this paper is focusing on is technical one). Employee development is often done based on the principle learning by doing. Regarding the *Motivation enhancing practices*, a lot of emphasis is put on reward practices, performance appraisals and remuneration based on objective metrics. Less emphasis is put on loyalty and organisational commitment, even though when employees have complaints or specific demands, they have an answer to each of them. This could prove a good communication practice and trust of the employees.

For *Opportunity HR practices*, the interview revealed that the job design is very well done, very clear tasks and very well allocated. Even though employees are not involved in decision making process, they have autonomy in solving the tasks gain through their expertise.

In terms of *HR outcomes*, they value customer orientation behavior and ‘right’ attitude (e.g., involvement, polite, tolerance, helping).

Thus, the hypothesis that could be arisen from the interview is:

H4. HR system within the technical department of Company B in terms of Motivation and Ability is not consistent with the employees’ organisational commitment and organisational citizenship behaviour, while Opportunity practices are determinant for these HR outcomes.

The quantitative research investigated the link between HR system, respectively types of HR practices (ability -, motivation-, opportunity- oriented) and organisational commitment (OC) and organisational citizenship behaviour (OCB), as HR outcomes. Furthermore, the paper investigated finding possible synergetic effects of different types of practices on the same HR outcomes. The 13 HR practices chosen were based on the literature and on the interviews conducted and were formulated more general to be the same for both companies.

(e.g., How satisfied are you by the way in which your company is preoccupied by maintaining a pleasant place to work?)

Table 1. Components of the HR system

HR practices (HR system, Cronbach alpha = 0.873)	Factor loading		
	1	2	3
Opportunity HR practices (0.825)			
HRP12_ Clear and honest communication of new procedures, rules, or other information of interest.	.798		
HRP9 Reward – work results correlation (pay-for-performance)	.790		
HRP11_ Decision autonomy considering the way I solve the job tasks	.728	.279	
HRP10 The way the tasks are allocated	.720	.319	
HRP7 Public recognition when delivering excellent services	.601		.463
Motivation HR practices (0.684)			
HRP6_ The company continuous preoccupation to maintain a pleasant place to work.		.802	
HRP1 Induction offered when I entered the company		.801	
Ability HR practices (0.671)			
HRP3_ Development opportunities offered through work tasks received			.808
HRP2 Job training offered me in the last year			.786

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

*Factor loadings smaller than 0.25 were suppressed

Source: made by the author, SPSS analyses

First, reliability and factor analyses were conducted to test if the scale for HR practices could be seen as a HR system and the way in which the practices are loading into the three factors: ability, motivation, and opportunity enhancement practices. Factorial analysis (with Varimax rotation) had resulted (after eliminating three practices which did not have high levels of loading) in the three factors expected (KMO = 0.767, sig.<0.001; total variance explained 67.32%), however with HR practices loading to different categories than firstly designed. The factor analysis results, together with Cronbach alpha values are shown in Table 1, indicating values (>0.6) that suggest good values for the internal consistency (Robbinson, Shaver and Wrightsman, 1991). A reliability test was conducted for organisational commitment, OC ($\alpha = 0.853$) and organisational citizenship behaviour, OCB ($\alpha = 0.919$) scales and results were conclusive.

Furthermore, regression analyses were conducted in order to find if HR practices sets, and/or HR system could predict HR outcomes in terms of OC and OCB. The analysis was conducted on each company as some statistically significant differences between means for HR practices satisfaction, and levels of

OC and OCB were identified (see Table 2 for details). In *Company A* were registered higher levels of satisfaction considering ability (M=3.88) and opportunities (M=4.31) enhancement practices, as well as higher levels of OC (M=4.23), while in *Company B* higher levels were registered for motivation enhancement practices (M=4.08) and OCB (M=3.8).

Table 2. Independent Samples Test results

HR practices	Company	N	Mean	Difference of means	Independent Samples Test		
					t/F*	df.	sig.
A_ability_HRpractices	CompanyA	52	3.8750	0.1568	977	105	0.331
	CompanyB	55	3.7182				
M_motivation_HRpractices	CompanyA	52	3.8173	-0.2645	-1.984	105	0.05
	CompanyB	55	4.0818				
O_opportunity_HRpractices	CompanyA	52	4.3077	0.5779	5.198	106	0.000
	CompanyB	56	3.7298				
OC	CompanyA	48	4.2264	0.5402	6.086	102	0.000
	CompanyB	56	3.6862				
OCB	CompanyA	48	3.5023	-0.2999	9.262*		0.003
	CompanyB	56	3.8022				
HR_system	CompanyA	52	4.0503	0.2912	2.697	106	0.008
	CompanyB	56	3.7591				

Source: made by the author, SPSS analyses

The dependent variables were considered one at the time OC and OCB, and the independent variables were HR system, and the three factors loaded from the factor analyses. Table 3 and Table 4 centralised the results of the regression analyses conducted.

The results of the regression analysis, where the dependent variable is OC (Table 3) show that for *Company A*, ability, motivation, and opportunity HR practices considered separately, don't have an influence on OC, as the F test is not statistically significant (sig. >0.05). However, when combining ability and motivation HR practices, respectively ability and opportunity HR practices statistically significant results are achieved, the influence being rather weak (R values between .359 and .399, <.5). This can support the idea that for *Company A* ability HR practices and motivation HR practices, respectively ability and opportunity HR practice are supporting each other, and they create a synergetic effect on OC. On the same time the three types of HR practices might not be considered an integrated HR system, as this variable did not influence the expected HR outcome, OC. Thus, it can be concluded that there is a misalignment between HR practices/HR system and HR outcome expected, even though some consistency between some HR practices occurred (inter HRM activity area fit). The intra-HRM activity area fit was also not proven.

Table 3. Regression analysis results having OC as dependent variable

Independent variables	Company A (N=52)				Company B (N=56)			
	R	R ²	F	Sig.	R	R ²	F	Sig.
Ability Practices	.280	.078	3.917	.054	.477	.227	15.59	.000*
Motivation Practices	.109	.012	.551	.462	.353	.125	7.561	.008*
Opportunity Practices	.257	.066	3.242	.078	.544	.295	22.65	.000*
HR system	.111	.012	0.574	.452	.475	.226	15.74	.000*
Ability & Motivation Practices	.359	.129	3.322	.045**	.504	.254	8.68	.001*
Ability & Opportunity Practices	.399	.159	4.254	.020**	.593	.352	14.09	.000*
Motivation & Opportunity Practices	.257	.066	1.591	.215	.567	.321	12.29	.000*

Notes: *sig < 0.01; ** sig < 0.05; OC = dependent variable

Source: made by the author, SPSS analyses

On the other hand, for *Company B* results may be considered more satisfactory (sig. <.01), as each set of HR practices has an influence on OC (R values between .353 and .544), and furthermore, different association of practices have even higher values, showing moderately good correlation between the bundles of HR practices and OC. (R values >.5), the highest being registered for ability-opportunity pair (R = .593). It can be concluded that there is a good alignment between HR practices and OC, as well as between different bundles of HR practices and OC. The HR system is influencing OC, but the value is not the highest one, so it raises the question if some HR practices are redundant or having a substitutable effect. Both inter-HRM activity area fit and intra-HRM activity area fit were achieved.

Table 4. Regression analysis results considering OCB as dependent variable

Independent variables	Company A (N=52)				Company B (N=56)			
	R	R ²	F	Sig.	R	R ²	F	Sig.
Ability Practices	.025	.001	.028	.868	.495	.245	17.201	.000*
Motivation Practices	.078	.006	.284	.597	.441	.195	12.827	.001*
Opportunity Practices	.231	.053	2.582	.115	.629	.395	35.316	.000*

Independent variables	<i>Company A (N=52)</i>				<i>Company B (N=56)</i>			
	R	R ²	F	Sig.	R	R ²	F	Sig.
HR system	.111	.012	.579	.451	.633	.401	36.165	.000*
Ability & Motivation Practices	.097	.009	.212	.810	.553	.305	11.217	.000*
Ability & Opportunity Practices	.231	.053	1.263	.293	.646	.417	18.604	.000*
Motivation & Opportunity Practices	.291	.085	2.080	.137	.664	.441	20.499	.000*

Notes: *sig < 0.01; OCB = dependent variable

Source: made by the author, SPSS analyses

Same type of analysis was conducted for OCB, as HR outcome. Studying Table 4 some conclusion could arise. For *Company A*, no type of HR practices, or bundle of HR practices was proven to be aligned with HR outcome. One explanation might be the fact that also the mean value obtained for OCB was rather low (M=3.50, out of 5). At the opposite side the *Company B* seem to have a more aligned perspective, each type of HR practices having an influence on OCB (R between .441 and .629), the HR system having a better influence than the isolated HR practices this time (R=.633), and different bundles of HR practices proving a moderately good correlation with OCB (the highest being motivation and opportunity HR practices, R=0.664). In this case both inter-HRM activity area fit and intra-HRM activity area fit were achieved.

Thus, the first hypothesis was not proven on the data gathered, while the second hypothesis was partially proven if we consider the Company B sample. However, the results from qualitative research and quantitative one are contradictory. The hypothesis identified through the interviews were partially validated for *Company A*, as there was no alignment found between ability and motivation HR practices and HR outcomes (OC and OCB). However, a consistency was found when dealing with the practices as bundles. That means that the perception on HR practices of HR managers substantially differ from those of the employees.

5. CONCLUSIONS

Studies in SHRM field are among the most challenging ones due to them different levels of analysis and the possible connections that are being created within the ‘black box’ of HRM. Research on the HR system internal fit had arisen to solve some of these issues. After decades of research, academics come at the conclusion that designing a suitable, coherent, aligned HR system may be the key for achieving HR outcomes desired and furthermore organisational performance.

Furthermore, making sure that the intended HR system is perceived as it meant to be is the next step managers need to take into consideration. The current paper showed that the two HR managers focused on a certain type of HR practices, most of the time motivation one, while the ability and opportunity are not on the top of them list. They are designed and approached when there are special requirements from them employees or the market competition requires them. On the other hand, the survey conducted among the employees revealed some different results, that opportunity HR practices are influencing more the HR outcomes in terms of organisational commitment and organisational citizenship behaviour. Also, consistent with the literature in the field, a bundle of practices has a higher influence on HR outcomes than the use of a single one. Results were different considering the company. This may be to the fact that for *Company A*, were more misalignments were identified, the respondents were employees from more departments so they may have different HR systems which may be improperly aligned. Another reason may be the context in which the HR practices are implemented, by context meaning for example the stress levels, the trust in HR management, the organisational climate, etc. These factors could influence the employees' perception on the HR system. However, some inter and intra HRM activity area fit were proven.

Future studies should continue to address the problem of internal fit trying to focus on the other two types that were not address by this paper. A better selection of the HR practices analysed should be considered also along with a higher number of respondents.

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BEHAVIOUR OF RESILIENT ENTREPRENEURS DURING CRISIS

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Abstract

Resilience is a major factor behind entrepreneurial success; it is an essential quality for entrepreneurs because it helps them get through difficult times or failures. Entrepreneurial resilience is the ability to overcome entrepreneurial challenges, survive, and even succeed in business in times of crisis.

In order to investigate behaviour of resilient entrepreneurs during crisis, as well as the actions taken by entrepreneurs to manage crises, we opted for the inductive and deductive analysis of multidisciplinary studies, the research being focused on entrepreneurial resilience. The results of the analysis could provide solutions, ideas for entrepreneurs to be more resilient, more proactive, to learn from their experiences and collaborate effectively in the economic and social spheres.

Keywords: *resilience; entrepreneurship; actions; behaviour; crisis.*

JEL Classification: M13, M21, M51

1. INTRODUCTION

Business environment has become more complex and highly unpredictable, calling for permanent adaptation and change of strategy, attitude, behaviour, entrepreneurial skills. Entrepreneurs often face unexpected events that could threaten the survival of a business, such as financial crises, technological innovations or new competitors in the field (Duchek, 2018). Entrepreneur's ability to adapt to change is in theoretical terms called resilience.

Resilience is the ability to respond to challenges and adapt to new conditions. Moreover, most resilient entrepreneurs are able to exploit these challenges as opportunities and identify any organisation's main weak points and implement remedial measures. Resilience has acquired a major connotation in the context of post-COVID-19 crisis and has been debated and analysed today on a large scale by both theorists and practitioners as to bring effective, efficient and viable solutions and overcome quickly the economic downfall. As it has been pointed

out (Markman and Baron, 2003; Ayala and Manzano, 2010), resilience could be a key factor for any company's success.

Using an inductive-deductive method, we have analysed in this study the factors influencing and developing entrepreneurial resilience in order to identify best solutions and actions that enterprises could engage into during this crisis.

2. THEORETICAL BACKGROUND

The concept of resilience was introduced for the first time by Holling in 1973, it provides a framework describing the stability of an ecosystem and its response to different imbalances and perturbances. (Ives and Carpenter, 2007). According to Holling, resilience is a multidimensional and multidisciplinary concept referring to different fields, such as physics of materials or psychological behavior that had generated diverse theoretical approaches and research methods.

In essence, the concept of resilience is related to the capacity of a system to get back to a state of stability after a state of perturbing instability (Cumming *et al.*, 2005). The term „resilience” is used to indicate how well the systems can support some threats and dangers, and how quickly they can return to an initial state after having suffered different imbalances. In turn, the concept of entrepreneurial resilience appeared from three literature sources: the first source was the contribution of economists who had studied the role of entrepreneurs in economy development; the second source came from psychological research that had looked into the features and typical traits distinguishing entrepreneurs from other socio-professional categories; the last source emerged from social and behavioural research that had insisted on the importance of environmental influence on entrepreneurial attitude (Hedner, Abouzeedan and Klofsten, 2011).

Resilience is usually triggered by a crisis, defined as a set of less likely events but with a high impact endangering the normal pace of life and requiring an immediate reaction. In most severe cases, these adversities are called „disasters”, and namely, unexpected events with a traumatic potential during a specific period of time and caused by people, natural disasters, or other technological factors. The examples of such events include hurricanes, floods, earthquakes, industrial accidents and terrorist attacks (Van Der Vegt *et al.*, 2015).

In front of such societal threats, organisations have to find the most efficient recovery solutions. These solutions differ from one society to another. In fact, society and organisation-wise, resilience means finding the most successful practices for recovery in a short amount of time; it does not guarantee an easy solution to all problems that could appear, instead, it makes organisations and people adapt positively to a new and changed environment (Masten, 2001).

For entrepreneurs, their resilience capacity enables them to concentrate on their aspirations, irrespective of the nature of adversities on the market (Ayala and Manzano, 2014). Therefore, entrepreneurs have high resilience abilities and are able to act at a time of adversity and have a higher inclination towards taking

actions compared to non-resilient entrepreneurs, who get discouraged by challenges and dangerous environments (Gorgievski and Stephan, 2016).

Resilient entrepreneurs are those who act when there is a business opportunity or a threat. So, they have a higher renewal capacity through innovation and are able to adapt to different environmental changes (Reinmoeller and Baardwijk, 2005), with a higher self-esteem, feeling that they are in control, not being afraid of failure. If they fail, they manage to emerge even stronger than before.

In this sense, several authors agree that resilience is a key factor for entrepreneurial success (Ayala and Manzano, 2014; Fisher, Maritz and Lobo, 2016), while others put forward that entrepreneurial success and performance are functions of resilience (Markman and Baron, 2003).

Resilience is an essential quality for entrepreneurs as it helps them cope with difficult times and work failures, making them become stronger than before. According to Van Praag (2003), an entrepreneur determines the survival and success of its company as „an entrepreneur makes the difference by setting the conditions, the limitations and the main features, and ultimately, and by its capacity to create value for the founded company”. Entrepreneurial resilience, the ability to overcome entrepreneurial challenges and remaining in entrepreneurship in front of adverse situations and unexpected results rely on the decisions made by an entrepreneur. It allows an entrepreneur stay optimistic in front of challenging market conditions and unpredictable difficulties (Ayala and Manzano, 2014).

Such crises as the one caused by the COVID-19 epidemic made entrepreneurs come across challenges and threats. The scale of its impact made entrepreneurs call for the study of factors influencing entrepreneurial resilience. Resilience provides a useful framework for studying the way in which a system recovers after a suffered impact (Kitsos and Bishop, 2018).

Understanding the notion of resilience is essential as it allows an organisation to operate efficiently during a crisis. (Williams *et al.*, 2017). This is the reason why we should identify the factors allowing entrepreneurs and SME's owners develop entrepreneurial resilience in order to understand better how crises should be managed and their negative impact be diminished at organisational level.

3. METHODOLOGY

The study aims to identify the factors influencing and developing entrepreneurial resilience during periods of crises. We have used a qualitative research methodology, namely, a research technique called content analysis. For this purpose, we have selected 26 articles from two databases, Scopus and Science Direct. The articles were selected using the key words related to this topic: „entrepreneurship”, „resilience”, “crisis” and „crisis management”. We have selected for our study only the empirical studies closely related to our research

question, with the aim of finding out the experiences of entrepreneurs facing a crisis.

4. RESULTS

After conducting a content analysis of twenty-six articles investigating the development of entrepreneurial resilience capacity, we have identified a set of factors influencing entrepreneurial resilience during a crisis. For instance, Pallarès-Blanch (2015) conducted deep interviews with 30 social entrepreneurs in a rural community in Spain which discovered the elements of social resilience of the interviewed subjects. Williams and Vorley (2015) applied an interview grid to 26 entrepreneurs in England, asking questions about the managerial practices that had influenced their business positively. Duarte Alonso and Bressan (2015) applied a questionnaire to 273 owners of small wineries in Italy, and identified their main demographic features and the challenges that had affected their business and the actions they had taken to cope with the challenges.

The studies indicate the following factors that affect the entrepreneurial resilience capacity:

✓ Attitudes towards crisis: the studies suggest that the attitudes were oriented towards diversity, learning, taking measures/initiatives maintaining client loyalty and optimism and proactive behaviour. These attitudes are necessary so that companies could react positively during a crisis. Those following a model oriented towards entrepreneurship, learning and resilience will be able to cope with disaster uncertainty (Sawalha, 2020). Entrepreneurs mentioned by the studies searched for new marketing strategies on local markets, gave discounts, cut the workforce, adjusted salaries, accepted lower income, and even looked for other sources of income as crises appeared. It occurred in the case of Indonesian tourism entrepreneurs and that of small business managers in London (Doern, 2016; Dahles and Susilowati, 2015). Other attitudes adopted by entrepreneurs included proactive behaviour for getting quickly back to normal conditions, inventiveness and optimism. They viewed a positive attitude as being important due to the fact that a recovery after a mental damage may be more difficult to achieve than a material loss (Doern, 2016; Abdul Rani *et al.*, 2019). Also, the analysed studies suggested business remodelling and learning to do things differently, creation of opportunities for entrepreneurs and support for those with less resources. Renewal and reorganisation ability were seen as essential due to the fact that besides adaptation, transformation was also needed (Larsson *et al.*, 2016; Apostolopoulos, Newbery and Gkartzios, 2018). The initial market of clients is important as loyal consumers play a key role in continuing the sale of products.

✓ Business features: business needs an organisational environment stimulating innovation. In case of small companies, adaptability and flexibility become opportunities for coping with challenges, even in uncertainty caused by COVID-19, where it is expected for entrepreneurs to adapt their business models

to new reality (Kuckertz *et al.*, 2020). Most resilient companies were those who simplified their business strategies and focused on core competences, designing new strategies and policies for attracting clients (Sabatino, 2016). Entreprises with low costs for labour force could be more competitive (Apostolopoulos, Newbery and Gkartzios, 2018)). Knowledge-intensive companies strengthened their resilience in the regions where they operated (Williams, Vorley and Ketikidis, 2013; Masik and Rzyski, 2014). Family companies used strategies for managing resources and made use of their experience to be better prepared for the future (Langevang and Namatovu, 2019).

✓ Entrepreneur features: studies show that a resistant entrepreneur is emotionally attached to its company and possesses such personal traits as flexibility, motivation, perseverance, self-efficacy and integrity. Previous experiences strengthened the way in which they responded to new challenges due to prior learning. On the other hand, the shut-down of companies and loss of jobs due to crises or disasters made way for entrepreneurs who saw opportunities in chaos and were able to adapt quickly to new conditions by offering products and services adapted to retaining clients. Entrepreneur's prior experience is another element helping entrepreneurs cope with new situations, based on lessons they had learned during previous crises (Branicki, Sullivan-Taylor and Livschitz, 2018). This was also noted in case of migrant entrepreneurs who had to develop new strategies to adapt to a new way of life (Lintner, 2019).

✓ Institutional relations: the studies indicate the fact that the roles played by different actors in supporting entrepreneurship should be taken into consideration as the connections of entrepreneurs with such institutions as universities, research centres and other entrepreneurial ecosystem actors could help generate strategies for innovative solutions. These recommendations match the results of other studies suggesting that such institutions as universities should quickly mobilise resources for reaching high-impact results and promoting the search of community-coined solutions (Bacq *et al.*, 2020). Regarding the government, there were positive cases, such as state's interventions with innovative programs contributing to regional development in Germany. The initiative generated the appearance of new companies resulted from the development of a consortium comprising universities, SMEs and other institutions.

✓ Human social capital: training innovative, flexible and adaptable personnel and support networks are resources allowing companies to overcome crises. The consolidation of networks, in which entrepreneurs develop, leads to the acquisition of important information for organisations (Ratten, 2020). As for social capital, the most resilient companies showed the importance of social ties; these were based on a strong network of relations built over the years and on social support provided by employees (Branicki, Sullivan-Taylor and Livschitz, 2018; Martinelli, Tagliazucchi and Marchi, 2018; Asgary, Ozdemir and Özyürek, 2020).

✓ Strategic management: a crisis requires a quick intervention of decision-making, adjusting strategies to newly appeared situations. We should consider the development of new models that would approach proactively risk and uncertainty factors, implement new technologies and adopt a global vision for cooperation of industries, governments and companies (Liu, Ming Lee and Lee, 2020).

5. CONCLUSIONS

The results show that the resilience of entrepreneurs influences the entrepreneurial success and explains the reason why some entrepreneurs failed in front of challenges, while others continued to cope with uncertainties and imbalances generated by economic and financial crises, and the pandemic. We found that people lacking the resilience capacity are less able to engage in needed entrepreneurial activities and behaviours, preferring to respond to uncertainty with prudence and fear, while such features as flexibility in creating strategies, adaptability and innovation enable entrepreneurs to cope with crises and grow their resilience. Other factors influencing entrepreneurial resilience explain how resilient organisations and entrepreneurs manage to find effective, efficient and viable solutions for coping with financial and economic crises, as well as pandemics.

On the other hand, the assumption made on the resilient behavior does not guarantee an easy solution to all problems that might appear in business, but rather makes organisations and individuals adopt a positive adaptation attitude to a new and changed environment. Resilience produces proactive, innovative and capable companies for active national and international cooperation.

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ENTREPRENEURSHIP VERSUS EU LABOUR MARKET. CURRENT SITUATION AND PROSPECTS

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Abstract

In any economic dynamic, starting new businesses is vital because it generates new jobs, increases income and added value through new ideas, technologies and products needed in society. New businesses accelerate change at the structural level and pursue the evolution of resources to produce goods and services adapted to the market (GEM, 2022). In this context, the key factors which interconnect entrepreneurship, and the labour market are public institutions and the profile of the company. Based on this nexus, the salary and social insurance policies are established, restrictive agreements are applied, aspects regarding work safety are established, all these modelling the attractiveness of the entrepreneurial environment. Consequently, employers' practices regarding salaries, investment in training, opportunities for advancement and others outline the trajectory of employee's careers (Burton, Fairlie and Siegel, 2019). Entrepreneurship and labour market intersect in many ways through the human capital involved and the profile policies which affect entrepreneurial performance. The correlation between political factors and entrepreneurship can lead to increased employment and reduced unemployment (Parker, 2009). In addition, the current crises caused by the COVID-19 pandemic and the war in Ukraine are affecting the economic environment, implicitly entrepreneurship, in the EU Member States. Therefore, through this paper we want to identify the problems underlying the development of entrepreneurship interconnected with the labour market in the EU, and to outline the prospects of entrepreneurship-labour market construct.

Keywords: *entrepreneurship; labour market; COVID-19 pandemic; current situation and prospects in the EU.*

JEL Classification: L26, F16, J46, R23

1. INTRODUCTION

The new job, as an expression, is assigned to the idea of self-employment and entrepreneurship catalogued as forms of measurement for the subsistence economy. Traditional work is categorized as contractual, salaried work (Pirciog *et al.*, 2022).

Globalization, technological changes and the liberalization of the labour market have led to important economic, structural and social changes. Entrepreneurship is a component of these changes and it is seen as a generator of jobs, respectively of economic growth because it is a source of innovation, competitiveness and a source of opportunities for integration into the labour market (Akhter, Karim and Islam, 2022).

Entrepreneurship promotes innovation and generates new jobs. The development of entrepreneurship, especially among young people, can influence employment because it encourages the absorption of young people in new firms. Young entrepreneurs are receptive to economic trends and opportunities. New businesses can increase competition by providing access to a greater number of products that can generate consumer gains (Blanchflower and Oswald, 1998).

The European Union (EU) strategy for young people promotes youth entrepreneurship and employment by promoting the encouragement of entrepreneurship. In this sense, there are concerns regarding employment among young people, investments are made in the skills sought by employers, there are concerns regarding the development of aspects related to career counselling and guidance, and there are promoted EU opportunities for training and work abroad. Youth entrepreneurship is among the top priorities on the EU's political agenda and it aims to boost innovation, combat social exclusion and unemployment (European Union, 2022).

To avoid increasing the prospects of a future full of insecurity and distrust in the institutions of the EU member states, it is necessary to invest in education and the labour market. Promoting entrepreneurship can generate answers to the challenges regarding the future of society, entrepreneurship can change the attitude of EU citizens towards careers, initiatives and opportunities of society, which can improve the overall situation of the labour market at the European level. Education, training and the labour market are attributes that offer opportunities for citizens to participate successfully as active citizens in an increasingly complex world (Andersen *et al.*, 2017).

The COVID-19 pandemic left a lot of people out of work, so they looked for solutions to return to work. Individuals who wanted to return to work were also open to self-employment. Governments have constantly sought solutions for the integration of inactive people into the labour market, and the creation of a new business was an alternative supported by the EU and by the Organisation for Economic Co-operation and Development (OECD) to help people avoid losing self-esteem, skills and professional networks (OECD iLibrary, 2022).

Entrepreneurship is a key generator of jobs. Entrepreneurship shapes the short-term sustainable form of the labour market. Today's market challenge is represented by the sustainability of the labour market channelled into entrepreneurial activities (Pirciog *et al.*, 2022).

2. METHODOLOGY

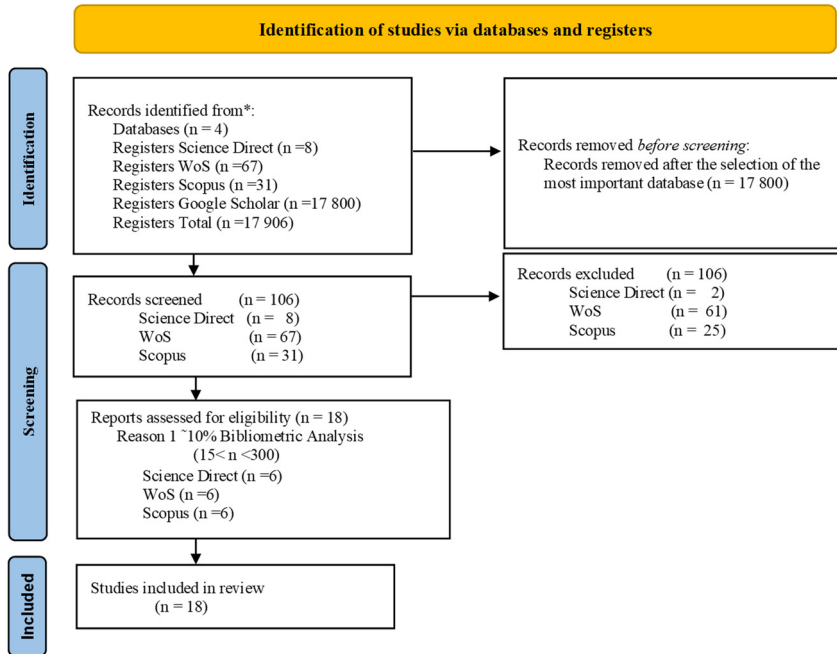
To analyse the current situation and perspectives in the context of entrepreneurship and the labour market in the EU, a systematic review of the specialized literature on this topic is necessary. The review according to Compagnucci and Spigarelli (2020, p.2) involves several stages, such as the following: creating a database; evaluating the quality of the studies identified in these databases; summarizing the results obtained from the analysis of these studies. Also, the study will present a descriptive analysis of the field, after which the two main topics of interest will be analysed from a thematic point of view: entrepreneurship and the labour market.

The following qualitative selection criteria corresponding to our research were identified: entrepreneurship, the labour market in the EU, current affairs and perspectives. In Table 1 we can see that there are few studies investigating the connection between entrepreneurship and the labour market in the EU, which justifies the efforts for specific research as a future direction of action. The articles for the present study were collected from Science Direct, Scopus, Web of Science (WoS), Google Scholar databases widely accepted in the scientific research environment in the chosen field (Menon *et al.*, 2021, p.2). According to Martín-Martín *et al.* (2021, p. 871) Google Scholar is "the most comprehensive source" and "reported the highest number of citations across all disciplines" (2021, p.874), is freely available but little used in bibliometric studies (Singh *et al.*, 2021, p. 5114), the elimination of articles from this database being the first step in the selection for the eligibility of the studied materials (Figure 1).

Table 1. Number of articles resulting from the query of scientific databases on topics of interest in the study "Entrepreneurship versus the labour market in the EU. Actuality and perspectives"

Topics of interest / Number of articles found	Science Direct	Scopus	WoS	Google Scholar
Entrepreneurship versus the labor market in the EU. Actuality and perspectives	8	0	0	17 800
Entrepreneurship & the labor market in the EU.	-	31	67	-
Total	8	31	67	17 800

Source: databases queried on the 8th of May, 2022

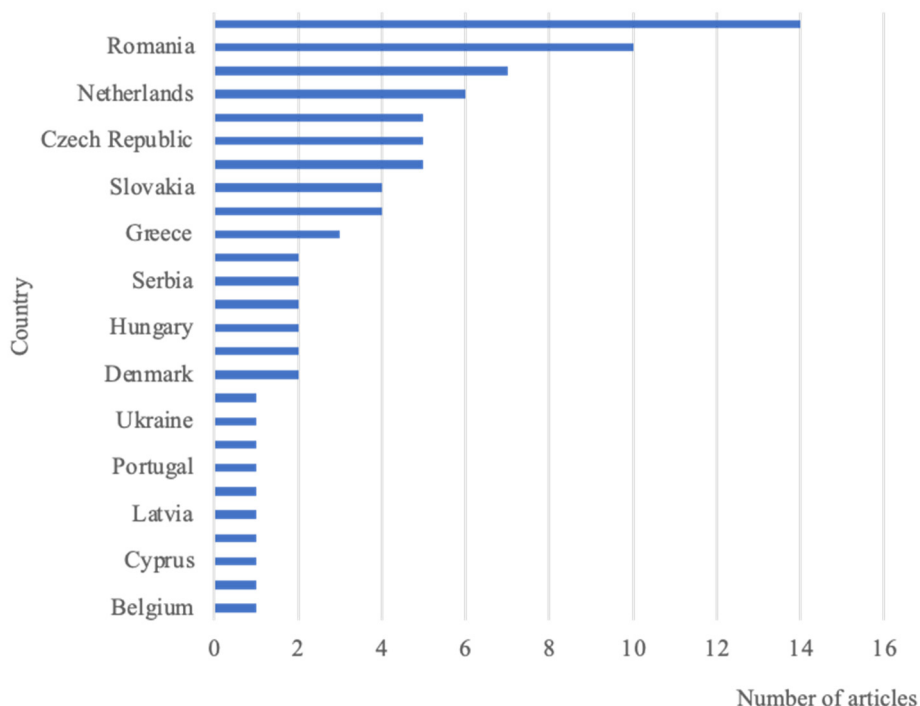


Source: (Page *et al.*, 2021)

Figure 1. PRISMA diagram

Systematic literature review and meta-analysis includes selection of databases according to the PRISMA protocol widely used in business and marketing (Hosany, Sthapit, and Björk, 2022, p.3). Meta-analysis provides more precise estimates than those derived from individual studies and involves "the use of statistical techniques to combine and summarize the results of multiple studies". This method may or may not be included in a systematic review (Shamseer *et al.*, 2015, p.3).

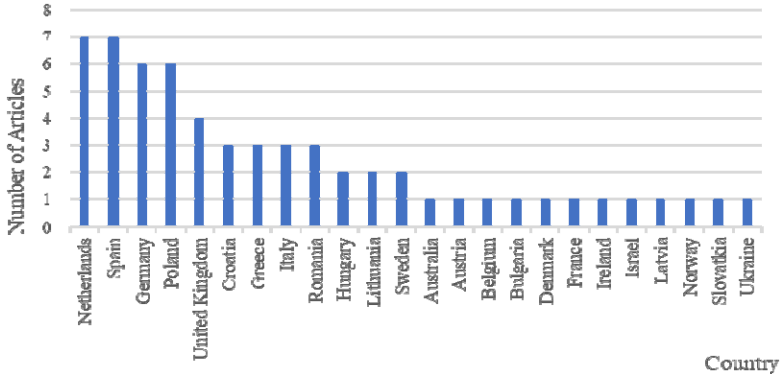
Figure 2 shows the top of the interest given to the topic studied in the scientific database Web of Science. We observe an important academic concern in Romania regarding entrepreneurship and the labour market, ranking second after Spain and ahead of Germany, Italy, England and the USA. The most present authors in WoS according to the number of articles dedicated to the topic studied are: Tosun J. (5), Congregado E. (3), Bilan Y. (2), Dvoulety O. (2), Millan J. M. (2), Mishchuk H. (2), Nilsson G. H.(2), Ohlander M. (2), Palmgren P. J. (2), Roman C. (2), Shore J. (2), Stenfors T. (2), Sturesson L. (2), Ulceluse M. (2), Aarstad J. (1), Abrardi L. (1), Albiol-Sanchez J. (1).



Source: authors' interpretation of data obtained by querying the WoS database on the 8th of May, 2022

Figure 2. The top number of articles published with the topic of interest *Entrepreneurship and the Labour Market in the EU* in the period 1999-2022

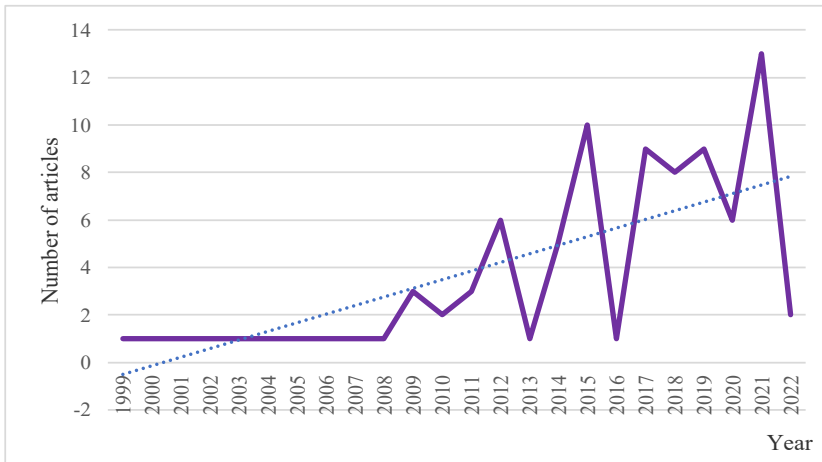
Figure 3 shows the top of the interest given to the topic studied in the Scopus scientific database. We also observe in this database the dedicated interest of the Romanian academic environment in terms of entrepreneurship and the labour market, ranking it in the top 10 European countries after Spain, Greece and Italy and before France and Austria. The most present authors in the Scopus database according to the number of articles dedicated to the topic studied are: Congregado, E. (3), Millán, J. M. (2), Román, C. (2), Aarstad, J. (1), Adamoniene, R. (1), Astromskiene, A. (1), Avny, A. (1), Bijman, J. (1), Bikse, V. (1), Broniszewska, A. (1).



Source: authors' interpretation of data obtained from the Scopus database query on the 8th of May, 2022

Figure 3. Top of the number of articles published with the topic of interest *Entrepreneurship and the Labor Market in the EU* in the period 1999-2022

The increasing evolution of the articles published in the Web of Science database in the last decade regarding the connection between entrepreneurship and the labour market in the EU can be seen in Figure 4.



Source: authors' interpretation of data obtained from WoS database query on the 8th of May, 2022

Figure 4. Evolution of the number of articles published with the topic of interest *Entrepreneurship and the Labor Market in the EU* in the period 1999-2022

Next, the two main topics of interest will be analysed, based on research extracted from the scientific literature: entrepreneurship and the labour market in the EU.

2.1 Entrepreneurship in EU

The active policy on the labour market aims to stimulate the creation of jobs by promoting the establishment of new companies. Decision makers see entrepreneurship as the key to economic growth, innovation and job creation. The conclusions of the study carried out by Congregado, Golpe and Carmona (2012, p. 135) consider that "access to self-employment by the unemployed with a low level of skills, high wages or excessive labour protection legislation (e.g., long-term contracts or dismissal costs) can become negative elements for the entrepreneurial ability to contribute to the job creation process. Entrepreneurship measures need to be precise if the main objective is to contribute to job creation".

Self-employment is an alternative channel of labour market integration in response to strict employment regulations and temporary employment contracts. Distinguishing immigrant and native workers in a global labour market allows highlighting how entrepreneurship is viewed by the two labour force categories (Ulceluse and Kahanec, 2018).

Bankruptcy regulations are usually focused on the effects on society, the economy, financial markets, entrepreneurship, and labour supply (Walter and Krenchel, 2010, p.1). The authors conducted research in 25 EU and US countries which validates the results, and which allowed to classify these countries according to leniency granted in the bankruptcy system, index scores by region, origin of the law and age of the regime. Thus, they concluded that the systems show high heterogeneity and cannot be grouped by region or jurisdiction, but they identified a strong association between leniency and the age of the legislation, while bankruptcy policies in the EU are usually creditor friendly.

An educated workforce in the United States and the EU drives economic growth and competitiveness. Thus, the EU has set four objectives for lifelong learning education and training systems, one of which is the development of creativity and innovation through entrepreneurship (Mara, 2018, p.371). The author also identified the most important challenges that information and vocational training centres face in this direction: legal limitations of the public administration, bureaucratic procedures, budget cuts, staff shortage, low level of education of the population, individual mentality and company and reduced collaboration with businesses.

Yamamura and Lassalle (2022, p.1) analysed the conditions that enable "migrant entrepreneurs to engage in transnational activities" in empirical research with 36 Polish entrepreneurs on the EU labour market who attracted opportunities in the context of transnationalism. The authors clarify the entrepreneurial context on political, social (social networks) and economic dimensions and they organize

the institutional elements and structures according to the macro, meso and micro levels, with an emphasis on the role of the meso level. Transnational activities (sourcing, business collaboration with transnational partners or access to foreign customers) are opportunities for all potential migrant entrepreneurs, but some focused on local activities. The different entrepreneurial approaches can be explained through this intermediate, meso level. In terms of social integration at the local level, entrepreneurs gained access to information, supply, labour and market. However, social engagement with locals and serving the local market has not contributed to the growth of migrant entrepreneurs, who remain mostly embedded in their home community, which is their target, niche market. Formal institutional support at the meso level (grants and advice for business start-up and development) is poorly represented and not accessed because migrant entrepreneurs consider it useless because it is not designed for the needs of migrants but for those of local entrepreneurs. The government's entrepreneurial support policies are tailored to encourage the development of an entrepreneurial mindset, but migrant entrepreneurs want technical assistance for bookkeeping, taxes, and access to start-up capital. In conclusion, there is a perceived mismatch between political institutional support and the needs of migrant entrepreneurs. They draw resources into their community networks and focus on social integration (the social dimension). Those migrant entrepreneurs with the business-relevant connections identify niches and markets (the economic dimension) and they are therefore more likely to develop their businesses by interacting with their transnational social networks. The macro-level transnational context has significant influences on their activities, such as free mobility and access to the labour market enabled by EU policies. Migrant entrepreneurs emphasize the lack of specific institutional support at the meso level and focus on specific elements from the social and economic domains, such as direct connection to the migrant community, networks as intermediaries (social domain) and financing institutions from industry-specific networks in the channels relevant (economic field). Thus, future directions of action for decision-makers that could contribute to the development of migrant transnational entrepreneurship are suggested.

2.2 The labour market in the EU

Chenic (Cretu), Angelescu and Gheorghita (2012, p. 4560) have analysed flexibility and security in the labour market, as "a strategy that aims to reconcile employers' need for a flexible workforce with workers' need for security, in order to benefit both parties in an employment relationship". The authors focused on the types of flexible contracts within the four components of labour market policy to consider: flexible contracts, lifelong learning strategies, effective active labour market policies and modern social security systems. The results of the study confirm the need for the quality of the human factor and its activation on the labour market.

The study conducted by Korpysa and Łopatka (2020, p. 3434) regarding the relationship between the entrepreneurial behaviour of employees and the restructuring process of a company supports the hypothesis that entrepreneurial behaviour contributes to the support and consolidation of businesses, thus ensuring safe and stable jobs. Attributes such as creativity, willingness to take risks, perseverance and responsibility are key factors in the adaptation of firms to the market and enable the acceptance of changes.

The adaptation of the labour market in an increasingly dynamic environment also implies adaptation to layoffs in the affected sectors of activity and redistribution to jobs in other sectors. According to Malle (2013, p. 96) EU countries face this phenomenon differently depending on the innovation capacity of each one of them, being advantaged by countries with advanced market economies where entrepreneurship ensures the redistribution of labour. Changing the retirement age contributes to maintaining access to skilled labour in some areas, but it is also an obstacle to the diversification of the labour market.

Entrepreneurship plays a significant role in job creation. The study conducted by Olaru (2014, p. 388) on the market of the Republic of Moldova identifies small and medium-sized companies as a source of jobs for the poorly qualified workforce, especially young people and women with a low contribution to the creation of the country's gross domestic product (GDP) because "firms mostly generate turnover instead of added value".

Ulceluse (2020, p. 495) studied the phenomenon of *overeducation* with reference to migration and the native population in 30 countries and concluded that both migrants and natives could become entrepreneurs when they become overeducated for the job where they perform, in which case overeducation has an influence on the decision to become independent. The study shows that there are significant cross-national differences in this effect: while in some countries there is a negative relationship between self-employment and overeducation for both immigrants and natives, other countries show a different effect for each group. These differences indicate the existence of different policies on the labour market and a specific institutional profile through which incentives and opportunities are proposed for entrepreneurs.

2.3 Actuality and perspectives on entrepreneurship and the labour market in the EU

According to Maua and Ulyukaevb (2015, p. 6) a systemic crisis is cyclical and structural, being generated by technological changes and causing changes at the institutional level. Systemic crisis means recession with consequences in increasing unemployment in various sectors of the economy and it is different according to the country and region. In the current conditions, specialists estimate that a systemic crisis lasts about 10 years, it is turbulent, and it is difficult to identify the economic processes that the labour market faces during this time

frame. Examples of systemic crises were in the 1930s and 1970s, with the economic recovery period in the past being much faster.

The economic crisis generated by the current context of the Covid-19 pandemic has some consequences, such as: economic decline and high levels of unemployment rates in the EU. The study conducted by Gavriluță, Grecu and Chiriac (2022, p. 1) shows a positive linear correlation between young people with primary and secondary education, women, other vulnerable groups, and low employment rates in the EU-28. Also, the study shows that a high level of education (tertiary) is positively correlated with an increased level of employment.

Millán *et al.* (2014, p. 612) found that quality human capital obtained through education is one of the strongest drivers of entrepreneurial performance. The level of education of consumers can shape the demand function for the entrepreneur's output, while the level of education of employees can affect the productivity of the entrepreneur and therefore shape his supply function. The performance of an entrepreneur is positively affected by the education level of the employees, but also by the education level of the population. Research applied to a group of labour market participants in EU-15 countries over the period 1994–2001 suggests that entrepreneurship and higher education policies need to be considered together.

“The sustainability of entrepreneurial activities is determined by several factors. Smart management remains among the most important conditions for success in developing a financially sound business enterprise. The ability to foresee and react to changes in the external environment remains one of the most important functions of management” (Tvaronavičienė, 2018, p. 222).

“Increasing employment has long been considered a key strategy in the fight against poverty and social exclusion, and action is needed to create both more and better jobs in EU countries” (Herman, 2014, p. 427).

In the EU, young people were among the groups most affected, with youth unemployment rising to 50% in some Member States, particularly in rural areas, where labour market supply relative to demand was particularly divergent. An EU strategy is to promote intra- and international mobility of young adults to gain access to employment opportunities. Starting from these premises, Weiss, Ferrante and Soler-Porta (2021, p. 1) have analysed the overall willingness of young adults to move and the extent to which it varies depending on where they live (rural vs. urban, country of origin or to another country) on a sample of 18–35-year-olds years from 11 European countries. The results show that the relationship between rural area and willingness to move is positive, and rural youth are more willing to move within the country, but less willing to move to another country. Therefore, future labour market success policies must match the work values of individuals, that is, they must take into account the perspectives of young adults regarding the (un)willingness to be mobile. Crises of various types in recent decades generate major challenges for labour market policy, which faces a new peak in youth unemployment.

Corrales-Herrero and Rodriguez-Prado (2021, p. 1077) argues that young people are most affected by crises. The authors propose "a synthetic index that combines the indicators proposed by experts in the dimensions of education and training, employment and entrepreneurship and social inclusion". The results show that in a context of convergence of policy instruments between countries during the crisis has generated an improvement in education performance, while divergences between countries in terms of youth labour market prospects and social inclusion have increased. Differences between north-central Europe and southern and eastern Europe have been observed with reference to institutional configurations in the fields of education and training, active labour market policies, employment protection and welfare legislation, macroeconomic trends in labour demand for youth and fiscal resources.

Klaesson and Öner (2021, p. 985) have analysed the probability that an immigrant would be employed or become an entrepreneur based on criteria such as residential segregation and ethnic concentration at the level of the neighbourhood, the municipality, and at the level of the local labour market. The groups of forced and attracted immigrants are divided into 3 categories: the first 15 EU member states (referred to as EU-15) and the Nordic countries, the second category refers to the Balkan countries and the third category describes the countries of the Middle East. Results are mixed for immigrant groups for both employment and entrepreneurship, while residential segregation has a more evenly distributed outcome where its relationship to either labour market outcome is almost always negative or insignificant.

Fritsch, Sorgner and Wyrwich (2019, p. 877) examines the role of different types of institutions that facilitate entrepreneurship, labour market regulations, the quality of government, and the perception of corruption on individual well-being from the perspective of entrepreneurs and wage workers examines the role of different types of institutions that facilitate entrepreneurship, labour market regulations, the quality of government, and the perception of corruption on individual well-being from the perspective of entrepreneurs and wage workers. The study's findings indicate that labour market institutions do not play an important role for well-being, and the results suggest that fostering an entrepreneurial society in Europe is a well-being-enhancing strategy that benefits both the self-employed and the employed.

"In the context of the global financial crisis, fiscal devaluation was analysed as a change in taxation from work to consumption, and was considered a tool for restoring competitiveness, especially in the peripheral countries of the euro zone. Analysis conducted by Cizkiewicz et al. (2020, p. 59) for the EU 27 in the period 1995–2014, led to the finding that fiscal devaluation works where economic activity is strongly reduced and in sectors more exposed to external competition. Fiscal devaluation increases export value added, improves net exports, accelerates GDP and employment growth, and slows labour cost growth. These effects are

non-linear, being stronger in the euro area and weaker in countries with coordinated or centralized wage bargaining processes or where unemployment benefits are more generous. The magnitude of these effects is moderated by tight regulatory barriers, i.e., they are weaker in countries with higher barriers to entrepreneurship, trade and investment”.

3. CONCLUSIONS

The Covid-19 pandemic through the restrictions created by the governments affected the economic activities which determined a major negative impact in the laughter of the employees, then difficulties were created regarding the support of the business activities. To support all those affected by Covid-19, the governments introduced support measures, the unemployed were encouraged to carry out individual activities (self-employed), avoiding the express specification that this would be an anti-pandemic measure (OECD, 2020).

When issues related to the labour market are discussed, the reference is made particularly to young people because they are the ones who are looking for a job, and the competent institutions show an increased interest in the absorption of inactive people in the labour market. It is important to understand that the young generation depends on the knowledge acquired through education and training, the experience gained both in the labour market and outside it (ILO, 2022). In Europe, young people are the key to the future because they have a great potential for economic development through innovation on the labour market. Today's young people have native digital skills, are very close to digital technologies and are interested in the opportunities offered by new technologies (Andersen *et al.*, 2017).

Entrepreneurship in the labour market plays a dual role. Firstly, it represents a form of activity in an economy and secondly, it is seen as an agent that can decide how human and financial capitals are used. Therefore, entrepreneurship is a form of alternative activity on the labour market, and the most common forms are self-employed or entrepreneur with several employed subordinates (Gawel, 2010).

According to European Public Employment Services (2022), the European labour market was affected by the Covid-19 pandemic, which led to a dramatic decrease from the moment the pandemic began, then gradually, the situation took an upward trend until June 2021, and because of the outbreak of the war in Ukraine, implicitly of the energy crisis, employment matters have worsened.

The global labour outlook is uncertain, employment is expected to slow, and rising energy and commodity prices will cause a cost-of-living crisis. Governments, firms, and workers will need to initiate discussions on wages because a fair match is needed to maintain purchasing power for low-paid workers by implementing a policy that allows workers to negotiate wages (OCDE, 2022). During these crises, a crucial role is played by entrepreneurs, because they occupy

an important role in the economy by generating innovations, by being open to the new, the ability to adapt, aspects that can support the overcoming of crises through the work alternatives that they tend to create (Pattinson and Cunningham, 2022, p.71).

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HOW EFFECTIVE IS THE EU POLICY ON COMBATING THE VIOLENCE AGAINST WOMEN? KEY FACTS AND FURTHER DEVELOPMENTS

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Abstract

The policy on combating the violence against women is one of the major issues on the European Commission agenda that has as main objectives to put under the EU law the violence against women and domestic violence crime, also cybercrime, sexual harassment and exploitation and money laundering.

Our study follows to explore the evolution of European decisions on combating the violence against women revealing the regulation in force, the analysis of the main statistical data provided by the Eurostat, by the European Institute for Gender Equality, The World Health Organisation that reveal the concrete actions for formulate and implement the public policy in EU. The analysis proposes further developments as the policy can be more active and effective in EU member states taking into consideration that the regulation provided and enforced at EU level constitutes a strong support.

Keywords: *gender equality; European policy; discrimination; violence.*

JEL Classification: H83, K38

1. INTRODUCTION

Gender equality is one of the fundamental values of the European Union, first stipulated in the Treaty of Rome in 1957. Recent years have seen encouraging developments in gender equality at EU level, but these developments are largely quite fragile, and risk being reversed unless measures are taken to strengthen the framework for preventing gender discrimination. The European Parliament has taken numerous actions to help reduce the phenomenon. According to the Report on the costs of gender-based violence in the European Union compiled by the European Institute of Gender Equality (EIGE) in 2021, it is estimated that gender-based violence and intimate partner violence in the EU would cost €366 billion per year, of which €289 billion, or 79%, is for violence against women, with

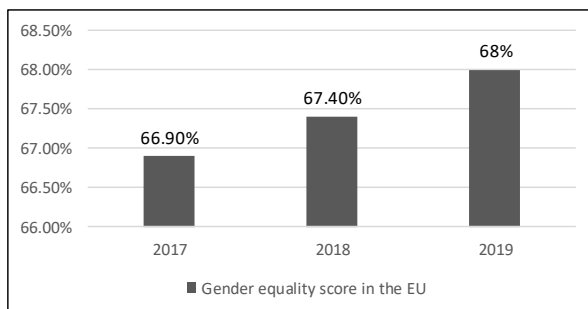
intimate partner violence accounting for €179 billion (of which 87% is directed against women) (EIGE, 2021b; European Commission, 2022c).

According to the statistics presented in the Strategy for Gender Equality (2020-2025), at EU level, 33% of women are victims of physical and/or sexual violence, 22% of women are victims of intimate partner violence and 55% of women are sexually harassed. The Strategy is the framework that sets out the policy objectives and key actions for the period 2020-2025 and according to it, the EU is a world leader in gender equality, 14 of the 20 countries with the most outstanding gender equality results are EU Member States (European Commission, 2020). In order to achieve the goal of gender equality, it is necessary to include a gender perspective at all stages of policy development and strategic planning at EU level and the Strategy facilitates the path towards achieving the goal.

2. PUBLIC POLICIES ON GENDER EQUALITY AT EU LEVEL

The European Institute for Gender Equality has developed a tool to measure progress on gender equality in the Union and to support policy makers in developing the most effective gender equality measures (EIGE). In order to get a clearer picture of gender equality developments at EU level, we will review a series of data on gender equality, using the Gender Equality Index and the Eurostat database. The main areas on which the Index is based are work, money, knowledge, time, power, health and violence, and the years we will refer to are 2017, 2018 and 2019. The EU Gender Equality Score is measured on a scale from 0 to 100, where 100 is the maximum.

According to Figure 1, for the year 2017, for gender equality the index registers a score of 66.9% (EIGE, 2020a) followed by an increase of 0.5%, for the year 2018, having a score of 67.4% (EIGE, 2020b), and in 2019 the index reaches a value of 68%, marking an increase of 0.6% compared to 2018, and 1.1% compared to 2017 (Figure 1).



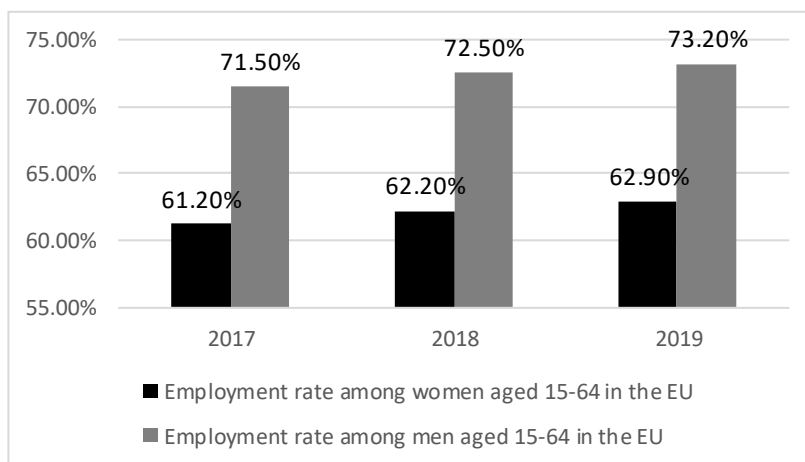
Source: own processing based on European Institute for Gender Equality (2020a)

Figure 1. Gender equality score in the EU

The labour domain measures the extent to which women and men can enjoy equal access to good jobs and working conditions (EIGE, 2020a). The domain is divided into two sub-domains, the first being participation which combines the indicator of full-time employment rates and working life. The second sub-domain is composed of gender segregation and quality of work and is composed of three indicators: persons engaged in education, health and social work, ability to take time off work to deal with personal or family problems and career prospects index (EIGE, 2020a).

For the year 2017, the labour domain at the EU level had a score of 72%, with an employment rate of 67% among women and 79% among men (EIGE, 2020a). However, according to the report published in 2021, the labour domain has made slow progress since 2010. In terms of progress in the female labour force, in the sub-domain of participation, the increase for 2019 was 0.4%, compared to 2018, which had an increase of 0.5%, and in the sub-domain of segregation and quality of work, there is much less progress (EIGE, 2021a).

According to the data published by Eurostat, the employment rate among women aged 15-64 for the year 2017 records a percentage of 61.2%, 2018 marks an increase of 1% having a percentage of 62.2%, and for 2019 a value of 62.9% is recorded. As for the employment rate among men, the year 2017 recorded a rate of 71.5%, in 2018 it increases to 72.5%, and in 2019 it reaches 73.2% (Eurostat, 2022). The differences between the employment rate among women and men can be seen in Figure 2.



Source: own processing based on Eurostat (2022)

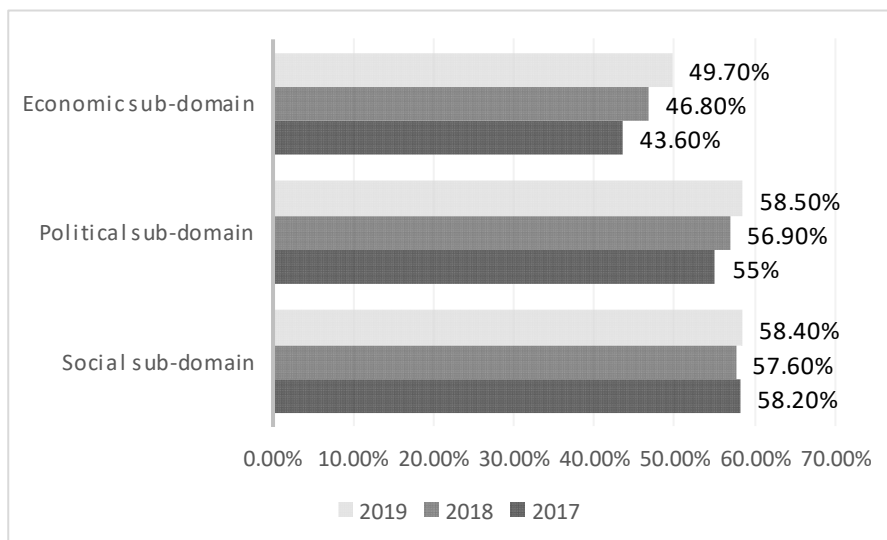
Figure 2. Employment rate in the European Union

The power domain presents data on gender equality in leadership positions in the political, economic and social spheres and is divided into three sub-domains: political power which examines the representation of women and men in parliaments or governments; the economic decision-making sub-domain which measures the share of women and men on the boards of the largest companies; the social power sub-domain which measures the share of women and men in decision-making in research funding organizations, the media and sport. (EIGE, 2020a) The year 2017 records for the power domain a percentage of 51.9%. The percentage of women present in decision-making in the social domain was 58.2%, which is also the highest percentage among the three sub-domains, followed by the political sub-domain which records a percentage of 55% for women present in political decision-making positions and the economic sub-domain which has the lowest percentage, only 43.6%, but marks the highest increase of 18.6%, compared to 2005, when the percentage was 25%. (EIGE, 2020a). The year 2018 records a score by power domain of 53.5%, with an increase of 1.6% compared to the previous year. Broken down by subdomains, the economic one registers an increase of 3.2% compared to the previous year, reaching 46.8%, the political one by 1.9%, reaching 56.9%, and the social one decreased compared to 2017 by 0.6%, reaching 57.6% (EIGE, 2020b). Compared to 2018, the power domain increased by 1.9%, with a total of 55.4%. The economic sub-domain marks compared to 2018 an increase of 2.9% (with a total of 49.7%), the political sub-domain registers an increase of 1.7% (58.5%) and the social sub-domain an increase of 0.8% compared to 2018 (58.4%) but compared to 2017 they are only 0.2% (Figure 3) (EIGE, 2021a).

While for the other areas, a higher score means that the EU is one step closer to achieving the targets, for the area of violence, the desirable score is a lower score, where on a scale of 1 to 100, 1 represents a situation where violence does not exist and 100 represents a critical situation where violence has become a common phenomenon (EIGE, 2021a). Gender-based violence can take many forms, the most common being physical violence, sexual violence, psychological violence, economic violence, domestic violence, genital mutilation and human trafficking. As data is not available for some forms of violence, the Gender Equality Index focuses on three types of violence: femicide, genital mutilation and trafficking.

The World Health Organisation defines femicide as the killing of women because they are women, with most cases of femicide committed by partners or ex-partners or even family members (WHO, 2012). Genital mutilation refers to procedures of partial or total removal of female private parts for non-medical reasons (WHO, 2008). At the Union level there is currently no recent data indicating the estimated extent of violence against women. The latest data was presented in the report compiled by the European Union Agency for Fundamental Rights (FRA) in 2014, with data dating back to 2012, with the next data collection

taking place in the period 2020-2022. According to the report compiled by the FRA, the EU had a percentage of 27.2% (FRA, 2014).



Source: own processing, European Institute for Gender Equality (2020b)

Figure 3. Evolution of the power domain by sub-domains (2017-2019)

According to data collected by Eurostat, at the Member State level for which data were available, 2018 records several more than 600 women intentionally killed by an intimate partner or family member. The most recent FRA survey, from 2021, indicates that 8% of women in the EU 27 have experienced physical violence in the last 5 years and 5% of women have experienced physical violence in the last 12 months (FRA, 2021; EIGE, 2021a). In terms of violence against women in vulnerable groups, such as those with disabilities, the 2014 FRA survey shows that 34% of women have experienced intimate partner violence, compared to 19% of women without disabilities (EIGE, 2021a) Cyber violence directed at women aged 16-29 years has an EU-wide share of 25% (EIGE, 2020a; EIGE, 2021a).

The measures that have been taken so far to support the fight for gender equality are found in the form of legal rules that take the form of the following documents: EU Victims Directive (2012/29/EU) which sets minimum standards on the rights, protection and support of victims of crime in the EU making specific reference to victims of gender-based violence, victims of sexual violence and victims of violence in close relationships; Directive 2011/99/EU on the European Protection Order which aims to protect a person and allows a competent authority in another Member State to continue to grant protection to that person on the

territory of the other Member State; Directive 2010/41/EC on the application of the principle of equal treatment between men and women engaged in an activity, including agriculture, in a self-employed capacity, and the protection of self-employed women during pregnancy and motherhood, repealing Council Directive 86/613/EEC; Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (ANES, 2022).

September 2015 is a key moment when leaders from several countries gathered at the United Nations General Assembly and signed up for the 2030 Agenda for Sustainable Development (UN, 2015). The Agenda contains a set of 17 Sustainable Development Goals (SDGs), one of them, SDG 5 being Gender Equality, which seeks to eliminate all forms of discrimination against all girls and women in public and private spheres, trafficking and sexual exploitation, practices of forced marriage or genital mutilation, ensuring equal opportunities for leadership at all levels of decision-making, etc. (UN, 2015). The Sustainable Development Goals Progress Report 2021 indicates that the COVID-19 pandemic has negatively affected gender progress in recent years globally, such that during the lockdown period, violence against women has intensified and the number of child marriages is expected to rise again from a 10% decline (UN, 2021).

In the December 2017 Report on Women, Gender Equality and Climate Justice, the European Parliament acknowledges that gender equality is a prerequisite for sustainable development and effective climate change management, with women being an important agent of change by formulating and implementing effective strategies to mitigate the effects (European Parliament, 2017). The highest number of women who are affected by climate change is usually found in areas with low socio-economic status. The risks to which they are exposed are related to the distance they travel for water supply, as during droughts they must travel a much longer distance, thus being exposed to a much higher workload and risk of losing their education. When temperatures are extremely high or in the event of floods, because they are usually the caregivers, they risk contracting diseases, making them more vulnerable (European Parliament, 2017).

The year 2018 brought to the stage in the fight for gender equality a European Parliament Resolution on preventing and combating bullying and sexual harassment in the workplace, in public spaces and in the political life in the EU. Parliament calls on the Member States, among other things, to devise active policies to prevent and combat violence against women, sexual harassment and moral harassment to which some women are subjected in the workplace, and on the Commission to submit a proposal to reduce or even stop sexual harassment in the workplace, in public places and politics, and to update the definition of sexual harassment, or of a different nature. (European Parliament, 2018; European Commission, 2022c).

To achieve a work-life balance, the EU has adopted Directive 2019/1158 of the European Parliament and the Council on work-life balance for parents and carers and repealed Council Directive 2010/18/EU, which sets minimum requirements to ensure equality between women and men concerning labour market opportunities (European Parliament, 2019). Another provision of this directive is the possibility for fathers to take ten days of paternity leave and reinforces the right to 4 months of paid parental leave, 2 of which are non-transferable between parents (Gago, 2019).

At the global level, the most representative instrument to combat violence against women is the Council of Europe Convention on preventing and combating violence against women and domestic violence (Istanbul Convention) adopted by the Council of Europe in 2011, it is the first legally binding regional instrument that comprehensively addresses different forms of violence against women, such as psychological violence, stalking, physical violence, sexual violence and sexual harassment (FRA, 2014). The year 2021 brings some developments in terms of EU accession to the Council of Europe Convention on preventing and combating violence against women and domestic violence. In October 2021, the Court of Justice of the European Union issued its long-awaited opinion clarifying the modalities of EU accession to the Istanbul Convention and its legal basis. The Court confirmed that the EU has competence to accede to the Convention under Articles 82(2) and 84 of the Treaty on the Functioning of the European Union on victims' rights and crime prevention. As regards the accession process, the Court clarified that there is no legal requirement of unanimity in the Council for accession to an international convention, even if this convention is only partly covered by Union competencies. At the EU level, all 27 Member States have signed the Convention, but only 21 of them have ratified it, except for six, according with European Women's Lobby (EWL): Czech Republic, Hungary, Bulgaria, Latvia, Lithuania and Slovakia (EWL, 2020).

The Convention is based on four main pillars: prevention, protection, prosecution and coordinated policies. Under the fourth pillar, coordinated policies, countries ratifying the Convention were required to take the following measures: ensure effective cooperation mechanisms between the judiciary, prosecutors, law enforcement agencies, and local and regional authorities; including civil society and NGOs as partners alongside state bodies in the implementation of the Convention; create or designate a state body to oversee the coordination, implementation and evaluation of the Convention; implementing victim-centered laws to combat and prevent violence against women; alerting members of society that violence against women and domestic violence will not be tolerated; funding partners involved in the implementation of the Convention; introducing comprehensive laws and gender-sensitive policies; researching and collecting data on the prevalence of all forms of violence against women (Council of Europe, 2011). Insofar as the Union's accession process to the Istanbul

Convention cannot be finalized, the European Commission proposes a directive to support the Member States in the fight against gender-based and domestic violence through measures that complement or facilitate the implementation of the Convention. This proposal for a Directive is the first to explicitly address this form of violence against women. The criminalization of rape is defined based on lack of consent, female genital mutilation and cyber violence (non-consensual sharing of intimate images; cyberstalking for harassment; cyber harassment; cyber incitement to violence or hatred). These rules would strengthen victims' access to justice and encourage the Member States to implement a one-stop-shop mechanism, which would mean that all support and protection services should be in one place. It also provides specific support for groups with specific needs or groups at risk, including women fleeing armed conflict (European Commission, 2022a).

The Digital Services Act (DSA), which was adopted by the European Parliament, also falls under the category of measures to support the fight against gender discrimination at the EU level and aims, among other things, to protect fundamental rights online, including by addressing the risks of gender-based cyber-violence, acting on the principle that what is illegal offline should be considered illegal online. This legislative act complements the proposal for a Directive on violence against women and domestic violence and follows the European Parliament resolution of 14 December 2021 with recommendations to the Commission on combating gender-based violence: cyber violence. However, according to the above-mentioned Parliament resolution, the legislative acts that the European Union adopts do not provide for the necessary mechanisms to combat gender-based violence and call on the Member States and the Commission to formulate and implement the necessary measures to combat gender-based violence (European Parliament, 2021).

To end violence against women, the first step to be taken, according to the OECD, would be to build a governance framework through which a comprehensive and sustainable national strategy can be developed that clearly outlines the government's vision for addressing violence against women. To ensure that the whole government framework is effective and lives up to its name, the implementation of strategies and associated laws, policies and programmes must meaningfully involve the full range of public institutions. Traditionally, long-standing cultural, institutional and communication barriers between public institutions have prevented this. As a result, approaches to violence against women have been marked by uncoordinated responses across ministries and levels of government, often generating secondary victimization as victims and survivors navigate legal, social and justice processes. Recognizing that ending cycles of violence requires coordination between all relevant public institutions and services, governments would benefit from promoting a culture of information sharing and cross-sector collaboration. That includes the creation of vertical and

horizontal collaborative mechanisms and developing integrated services and multi-agency partnerships (OECD, 2020).

The European Commission has committed itself under the current mandate to integrate a gender perspective at all stages of EU policy design to ensure that the full potential of both women and girls and men and boys is realised (European Commission, 2020). To this end, the Commission has detailed in its report on gender equality at the EU level for 2021, a series of actions in line with the above commitment to mainstream gender in all EU policies, noting that this has delivered results in 2021. The EIGE is currently carrying out research on gender issues concerning the European Green Pact and the resulting data will be used to mainstream gender in the *Fit for 55* packages.

In the context of an increasing emphasis at the EU level on the digital transition and beyond, it is imperative to include the gender dimension and to emphasize the presence of women in the digital field, by encouraging them to pursue studies in the field of information or communication technology (ICT) or fields such as science, technology, engineering or mathematics (STEM) (Bonewit and Shreeves, 2015). In the area of Artificial Intelligence, the European Commission presented in April 2021 a proposal for a regulation laying down harmonized rules on artificial intelligence, its design ensuring consistency with the Charter of Fundamental Rights of the European Union and with data protection, consumer, non-discrimination and gender equality legislation (European Commission, 2021a).

Higher education has not been left out by the European Commission in terms of gender equality either. In this regard, the Commission launched in January 2022 two documents, namely the European Strategy for Universities and a proposal for a Council Recommendation on building bridges for effective cooperation in higher education. The two documents include measures to facilitate gender mainstreaming at the university level, encourage female participation in STEM fields, promote gender balance in management structures and introduce gender mainstreaming in their curricula (European Commission, 2022b). According to the European Strategy for Universities, there are significant gender balance gaps in certain fields of study as well as in decision-making positions, in the latter category women hold just over 24% of such positions at the EU 27 level (European Commission, 2022b).

A study carried out by the European Commission's Justice and Consumer Affairs Department found that women in the EU who experience gender-based violence are unable to get justice, due to a lack of adequate legislation or inadequate implementation. According to the report, criminalization alone is not sufficient to address gender-based violence, which requires a much more comprehensive approach, and as regards victim protection measures, in addition to the possibility of criminalization, it also recommends the possibility of medium and long-term protection orders (European Commission, 2021b).

As there is no "magic recipe" or universally valid set of policies that will guarantee success in eradicating violence against women, the Organisation for Economic Co-operation and Development points to several good practices that governments could follow:

1. develop policies and programmes at all levels and branches of government, at different levels of intervention (individual, interpersonal, community and societal) throughout all stages of the cycles of abuse;

2. establish clear monitoring, oversight and review mechanisms to ensure that the whole-of-government frameworks for ending violence against women are properly implemented and achieve their objectives;

3. involve key societal, non-governmental and stakeholder actors in the development and implementation of strategies, policies, laws and programmes. A very important aspect of this is the involvement of survivors of violence (OECD, 2020).

3. CONCLUSIONS

In conclusion, at the European Union level the last decade, but rather the last few years, have been prolific in terms of policy development on gender equality, especially on the phenomenon of violence against women. Studies show that a much stronger framework is still needed to see the positive effects of the measures taken, both at the Member State and EU level. Although the last few years have seen significant progress on gender equality, this is at risk of being reversed due to the COVID-19 pandemic, which requires a much more active and effective involvement through policies and actions tailored to each Member State, as the regulations adopted in the EU in recent years can be strong support for the Member States, as long as they are adopted and adapted according to their needs.

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OBSERVATIONS ON ESTABLISHING CAUSATION IN CRIMINAL LAW

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Abstract

In the present communication, we feel the need to present some observations on the causal link (relation) in criminal law, because the essential problem of the causal link is not, however, to know what the degree of contribution of each factor of the isolated antecedence is to the production of the result, this being a subsequent problem, of dosing the liability but, first of all, which of the factors can be considered as a phenomenon cause of the result, entailing a criminal liability, and which remains beyond the causal consideration. The assessment of antecedent factors, not in terms of the intensity of their contribution, but in terms of their status as causal phenomena, is the key issue of causation. Moreover, among other things, we point out that the legal sciences study human conduct, as an object of legal regulation and as an object of control when it deviates from the conduct that is due and necessary according to what is regulated. Conduct always generates consequences and therefore has a causal value, regardless of whether it takes the form of action or inaction.

Keywords: *causation; cause; effect; objective and subjective side; criminal law.*

JEL Classification: K14

1. INTRODUCTION

A notorious dispute in our criminal doctrine (Von Liszt, 1911, p. 189; Tanoviceanu, 1924, p. 371; Dongoroz, 1939, p. 221; Antoniu, 1968, pp. 9-23; Guiu, 2001, p. 17; Ifrim and Antoniu, 2014, pp. 525-538; Hotca, 2020, p. 198) is that of establishing causation in terms of the effect of the crime (the cause) (Antoniou, 1998, p. 9), i.e., criminal liability. The first attempts at scientific research into the problem of causality in criminal law date back to the Middle Ages. In the present communication, we present an example of this problem from our judicial practice. For example, defendant V., in a dispute with the victim (aged 80), who was walking on crutches because of a previous fracture in her leg, pushed her and she lost her balance, fell, fractured her collarbone and died a few days later. In this situation, we note that the judicial body, by order, terminates the criminal proceedings, closing the file (case), because there is no causal link between the defendant's act and the death of the victim, the immediate cause of death being an acute circulatory insufficiency, related to pneumonia caused to the

victim by her immobilization in bed, in a certain position, caused, in turn, by the plaster cast put on the fractured shoulder (Antoniou, 1968, pp. 214-217). At other times, establishing the causal phenomenon and the causal link is quite simple. The contributing antecedent to the harmful or dangerous consequences is simple, consisting of a single factor which is also the causal phenomenon. For example, A, wishing to kill B, fires a shot at him and kills him. The phenomenal effect is easily apparent in all its particularities which are relevant to criminal law: it is not a natural death but a murder (Article 188 of the Criminal Code), and the causal phenomenon is also indisputable namely A's act. When, however, the antecedent contributing to the outcome is complex, as we have seen above, and there are several factors involved, the determination of the causal value of each of them requires a scientific procedure, as part of a determination process, leading to accurate results.

Analyzing the above solution, we specify that we are not referring to the fact that the judicial body has removed all criminal liability, even for the slightest injury to the victim's bodily integrity and health, as provided for in Article 194 of the Criminal Code. From this, we deduce that the causal link still raises numerous problems of interpretation and as such, we will only raise the more complex issue of the causal link between the suspect's conduct and the victim's death. An examination of judicial practice on how some of the issues of causation are resolved is therefore of particular interest.

2. ESTABLISHING CAUSATION IN CRIMINAL LAW

In this respect it should be stressed that the difficulty frequently encountered in establishing causation in criminal law arises when we do not have an exact criterion for identifying the causal phenomenon and when, in the search for this criterion, starting from the objective nature of the causal relationship, it is erroneously considered that the terms of this relationship can also only be objective phenomena (Mitrache and Mitrache, 2019, p. 171). We note that this ignores the requirement that a phenomenon, to be a causal phenomenon, which can be subject to criminal law, must be a legal fact which generates concrete criminal legal relations (Dongoroz, 1939, pp. 23-24) (of conflict or contradiction), i.e., a crime (Antoniou, 1994, p. 30; Ifrim, 2021, p. 119).

Hence the action or inaction generating the dangerous consequences of the phenomenon effect must be an act of human conduct presenting the complex structure, objective and subjective, of an act incriminated by law as a crime (Antoniou *et al.*, 2015, vol. I, pp. 14-147). In the absence of these characteristics, the phenomenon cannot be taken into account for the establishment of a causal dependence that is of interest to the field of research and criminal consequences. This ignores the fact that the objective nature of the causal relationship does not mean that it is only proper to objective phenomena, and also the specific characteristics of the phenomenon concerned in criminal law, which explains the

various difficulties depending on the specific features of the research procedures and criteria used.

The causal link is an objective category, but it is wrong to consider that it can only be established between objective categories, that its terms, cause and effect, must be exclusively objective phenomena (Hotca, 2020, p. 196). The 'cause' category, therefore, refers to the factors that modify the environment, while the 'effect' category refers to the changes brought about in that environment by the cause phenomenon. It follows that the causal link exists independently of how and whether people manage to make it happen.

The objective nature of the causal link does not, therefore, derive from the exclusively objective nature of the phenomena between which it is established, but from the fact that it exists, as a relationship between existing phenomena, independently of people's consciousness, i.e., independently of whether or not they succeed in representing it, of the exact way in which they represent it and, therefore, of their will.

Starting from the idea that the causal relation belongs to objective reality, some authors (Duvac *et al.*, 2019, p. 342) go beyond the exact meaning of this thesis and, as has been pointed out, attribute this objective character of the causal relation to the objective character of the phenomena between which it is established, understanding by these other phenomena than those of consciousness, psychic, which belong to the subjective life of man. Suffice it to quote the view that "the causal connection exists objectively, outside human consciousness, between phenomena belonging to the external world, phenomena of nature and social life (Mantovani, 1992, p. 115).

3. CAUSAL RELATIONSHIP- DIFFERENT POINTS OF VIEW

This statement begins the treatment of the problem of the causal relationship, and the content of this treatment becomes increasingly clear as the exposition progresses, in the sense that only objective phenomena are taken into account in the investigation of causal determination, or, when the phenomena have a complex objective and subjective structure, only their objective side is taken into account.

Moreover, some authors (Trainin, 1959, p. 170) who rightly oppose the above-mentioned point of view on the criterion for establishing the causal link in criminal law go no further in their conclusions than to point out that, in the sphere of criminal law, only human acts are to be considered as causal phenomena (Antoniou, 1968, pp. 154-155) without, however, analyzing these acts in their indissoluble unity, objective and subjective, as criminal law science knows them (Dongoroz, 1939, p. 229).

This position, as regards the specific nature of the terms of the causal link in criminal law, leads to the artificial splitting of the causal phenomenon by considering only its objective side and causes the known difficulties in establishing the causal link, although this phenomenon is a complex category, as

we have shown, with two inseparable sides, the objective side and the subjective side.

Thus, what constitutes a cause about a certain phenomenon has been an effect on another, and, in general, is linked, by a whole network of threads, in terms of determination and conditioning, to an infinite number of other phenomena, each of which in turn has the quality of effect and cause; so that, to establish the causal connection of a given phenomenon, only that part of the system of universal interaction which starts from the consideration of that particular phenomenon as an effect phenomenon must be isolated as a contributory antecedent, and the component phenomena of that antecedent must be considered only in their capacity as contributory factors with causal value in the production of the effect phenomenon, although they are themselves effect phenomena of other cause phenomena. In the legal literature, the expression "antecedent, causal" is used to describe this set of phenomena. In our view, we call the set of phenomena that precede the result and contributed to its production "contributory antecedence", since it is not yet certain whether all the phenomena that make up this antecedence have causal value, some of which may remain mere conditions for the production of the result. We have called each of the phenomena making up the antecedent a 'contributing factor', because it can be a causal phenomenon or a mere condition, depending on whether or not there is a causal link between that factor and the outcome. This is the relativity of the categories 'cause' and 'effect', by considering them in a certain correlation (Dongoroz, 1939, p. 229).

The two relative aspects of the categories 'cause' and 'effect' are closely linked since the antecedent contributing to the production of a given effect will include as component factors only those phenomena which, by their characteristics, are specific to the particularities of the phenomenon effect, and which are reflected in those particularities. For example, A assures B that the gun he holds in his hand is not loaded and urges him to frighten C by making him shoot at B without checking the gun, he shoots at C, the gun discharges and C is thus killed. C's death becomes, in turn, a causal phenomenon for many other families, property, housing, workplace and so on consequences. But we will only consider C's death as an effect phenomenon. If we go on to establish the contributory antecedent to the production of this effect, and if we stop at the actions of A and B, these two actions will be considered only as contributory factors in C's death, without being interested in them as effect phenomena of other contributory factors. If, however, it is established that the acts of A and B could have been committed because D, the owner of the gun, left it loaded, without supervision, at the place where B was killed, even though he knew that A, B and C were also there, D's act of leaving the gun loaded, without supervision, at that place will be of interest to us not as a contributory factor in the acts of A and B but, like the other two acts, as a contributory factor in C's death. So far, the phenomena 'cause' and 'effect' have been considered relatively only in terms of a certain correlation between them.

However, to establish the causal link, we will have to consider each factor contributing to C's death, as well as the effect of this phenomenon, in the light of the attributes, characteristics and peculiarities of the phenomena which are the subject of criminal law (Antoniou, 1968, p. 141). C's death will be considered in the light of the particular nature of the social danger it poses to the social relations which ensure the person's life, social relations which are protected by criminal law (Antoniou *et al.*, 2015, vol. III, p. 32). From this point of view, the quality of the victim may be of interest, as well as what special relationships concerning the life of the person, in terms of quality, the position of the victim or the perpetrator, may have special criminal protection.

Contributory factors will then be examined in the light of these particularities of the socially dangerous consequences provoked as well as in the light of the characteristics of the phenomena that are the subject of criminal law research, i.e., that a legal fact must be present to be the generator of criminal legal relations. In these circumstances, each act of A, B and C will be examined and their causal value will be assessed whether or not, in addition to the objective aspects described above, they also present the subjective condition of having been committed with one of the forms of guilt provided for by law (Antoniou *et al.*, 2015, vol. I, p. 166), i.e. whether or not they each present the characteristic features of the legal fact giving rise to criminal liability.

As can be seen from the above considerations, on the one hand, and, on the other hand, by examining the causal link in chemistry or physics, geology or biology, medicine or law, and law in its various branches, we shall consider the phenomenon as well as its effects in the light of the elements, properties, characteristics, attributes which interest the respective science, because the causal link interests each of these sciences (Hotca, 2020, p. 197), exclusively or, in any case, primarily, in the light of the respective field of research.

4. THE PHENOMENON OF CAUSE. THE PHENOMENON OF EFFECT

Then, by analyzing the causal link in the chain of psychic phenomena, we shall consider the phenomenon of cause and the phenomenon of effect in their essence as subjective phenomena and in the light of all their characteristics as such phenomena. And although we are in the realm of the subjective life of the individual, and the causal connection is an objective category, this causal connection does not cease to exist, as such, between these phenomena, because it exists independently of whether and how we manage to foresee it. The criminal law recognizes the state of provocation as having mitigating effects on criminal liability (Daneş, 1984, pp. 24-36). The justification for this regulation lies in the fact that the perpetrator's resolution to react to the victim's acts is determined by the mental disturbance caused by the victim's acts (Article 75 of the Criminal Code - mitigating circumstances). The two phenomena between which this causal link

is established are purely subjective: the mental disturbance to which the perpetrator has been brought, and the criminal resolution, determined by this disturbance, to retaliate by committing a crime. The mitigating effect is justified by the fact that, without the disturbance caused, the offender would not have committed the offence and would have behaved by the rules of law and social life. If, however, it is established that the criminal decision was not caused by a mental disturbance caused to the offender by the acts of the victim, that, to be able to invoke a possible ground for mitigating liability, he used those acts merely as an opportunity, or perhaps even sought such an opportunity to commit the offence, and that there is, therefore, no causal connection between the decision to commit the offence and a disturbance caused by the acts of the victim, the mitigating effects provided for by the criminal law do not apply either.

So here is an example of two mental, subjective phenomena between which a causal link is established. And this causal connection is objective, as in any other causal dependence, regardless of the nature of the phenomena between which it is established, in that it exists, as a relationship between two existing phenomena, independently of whether and how we manage to present it.

It is also axiomatic that psychic phenomena, of consciousness, are determined by the existence of causal dependence between them with the same objective character as between all phenomena, although some authors (Antoniou, 1968, p. 200) study them as subjective phenomena of each person, of each individual because to deny the existence of causal links between subjective phenomena and between any other phenomena, for their subjective, or complex, objective and subjective character, is to deny the very scientific value, the ability to reveal and establish the legalities, of the given field of research. If therefore, the causal connection is examined in each field of activity according to how the phenomena in question are of interest to that field of research and in all their complexity, there can be no exception to this rule in law, in all its branches.

In support of this point of view, we also point out that if A kills B with a shot, then the cause of death for the doctor will be the destruction of the heart tissue, for the pathologist, the way the bullet was fired and the trajectory followed, and for the criminal lawyer the cause of death can only be A's act - with our clarification - Antoniou only stops at the characteristic of being an act of man- in both its aspects because if it lacks the subjective side to be a crime, it disappears from the criminal orbit. Thus, the same causal link, examined in the light of the various scientific interests, is considered by each science only in the light of the elements that interest that science.

5. THE CAUSAL PHENOMENON IN DIFFERENT SCIENCES

It should be noted that this differentiated consideration of the causal phenomenon concerns not only the science of law about other sciences but also the branches of law themselves. The phenomenon in question must be considered

in terms of those attributes of the phenomenon which make it generate legal relationships specific to the respective branch of law. Thus, while in criminal law the phenomenon of cause is presented as an act of human conduct, with a complex objective and subjective structure, the latter sometimes taking the form of intent, sometimes the form of guilt, in some cases all forms of guilt (Article 16 of the Criminal Code), in others guilt leading to the phenomenon being removed from the criminal sphere, the subjective aspect being always necessary for civil law, according to which liability can sometimes be incurred without fault, the phenomenon can also be considered only in its objective aspect (Eliescu, 1972, p. 131). It follows that the objective nature of the causal link does not exclude it from the chain of mental phenomena, still, less does it make it incompatible with causal phenomena with a complex structure which, in addition to the objective side belonging to external reality, also has a subjective side consisting of the perpetrator's subjective position about his act and its consequences: to establish the connection between certain phenomena, only the artificial isolation of phenomena must be used, but fully, i.e. both by delimiting the contributing antecedent, subject to research, to the contributing factors which present a certain correlation with the phenomenon observed in terms of its particularities, and by retaining as the causative phenomena those contributing factors which present the features and characteristics of interest to the given field of research. On the other hand, to establish the causal link in criminal law, it is necessary to isolate, from the contributing antecedent to the production of the socially dangerous consequences observed, as causal factors, only those contributing factors which meet the essential characteristics of the legal fact generating criminal legal relations (Mitrache and Mitrache, 2019, p. 172), i.e.: they constitute acts of human conduct and present the objective and subjective side of an act incriminated by law as a crime.

This is the exact criterion that sums up the characteristics necessary to identify and select, from the contributory antecedent, the factors with causal value in criminal law, i.e., the phenomenon of cause in criminal law, and thus to establish causal dependence in criminal law in its entirety. Essentially, the causal phenomenon must be a human act, criminalized by law as an offence, considered in both its indissociable objective and subjective aspects and not only in its objective aspect. We emphasize that the two sides cannot be separated from each other and from the phenomenon they characterize, just as, although they can be characterized separately, the sides of a geometric figure cannot be separated from each other without becoming mere lines and the figure itself disappearing.

6. CAUSAL RELATIONSHIP BETWEEN THEORY AND PRACTICE

We return, for verification with practice, to the case first mentioned. The acute circulatory insufficiency which caused the death of the victim cannot be of interest to us as a causal phenomenon under criminal law; neither can the causal

dependence between pneumonia contracted by the victim and the acute circulatory insufficiency which caused his death be of interest to us from this point of view; nor can the simple position of immobilization of the victim after the plaster cast, which caused pneumonia with all the other consequences, up to and including death. All these causal determinations may be of interest to medical science. We begin to be interested, from a criminal point of view, in the placing of the shoulder in a plaster cast, which is a human activity, namely whether the operation could not have been carried out in such a way as not to cause the victim to be immobilized on his back, or whether it could not have been accompanied by such measures to prevent pneumonia as a result of the immobilization.

Depending on the specifics of each field of research, this first phenomenon of plastering and the measures taken about the patient's position to prevent pneumonia with all its consequences as a possible causative phenomenon provides us with a basis for establishing the causal link in the field of criminal law; we are faced with an act of human conduct which may also include the objective and subjective aspects of a crime.

As we have shown, if this factor is removed, from an objective and subjective point of view, as a generating phenomenon of a concrete criminal legal relationship, it also remains a mere condition and we must go further up the line of the antecedent contributing to the production of the considered result. The fact that the fracture of the clavicle was caused by the victim falling in a certain position or on a certain hard body, nor that the fracture was easily caused by the decalcified state of the bone system of a person over 80 years of age, nor that such persons easily lose their balance, especially as the victim had previously suffered a fracture of the leg and was walking on crutches, cannot be of interest to the criminal investigation as a causal phenomenon. All of these, not being human acts, are also simple conditions. Here, however, we are interested in the field of criminal investigation, as a causal phenomenon, the fact that the victim fell as a result of the act of V, who pushed her. Therefore, the artificial isolation of phenomena, to establish the causal link in criminal law, must lead us to eliminate all contributing factors that do not belong to human activities and to select only human acts. And that is not yet enough. Of these facts, only those which have the complex structure, in objective and subjective terms, of a crime, i.e., an act of human conduct, in the form of an action or inaction, provided for and sanctioned by law and committed with guilt, can remain, as already stated. Could V have foreseen, or did he not foresee, that by pushing a woman over 80 years of age, walking on crutches, barely recovered from a broken leg, she might fall and never get up again? The answer to this question, which also answers the question of whether Mr. A's act, as an act of human conduct, has all the characteristics of a criminal offence, including the subjective ones, does not resolve the problem of establishing, from a criminal law point of view, the phenomenon which caused the victim's death and therefore the causal link in the case in question. Since

criminal liability can be incurred only in the context of a necessary causality (Antoniou, 1968, p. 154; Antolisei, 1995, p. 127) (*condition sine qua non*), it follows, therefore, that to foresee the result would change the nature of causality, transforming the causal link from fortuitous to necessary... In short, if there is a fault, the causal connection acquires a fortuitous character ..." (Guiu, 2001, p. 132).

For all the above reasons, we believe that legal science (Dongoroz, 1939, pp. 222-223) does not need its procedures or original main or additional criteria to investigate the causal link between the phenomena that form the object of its study. It is sufficient to use the procedures used in all other fields of science and primarily in the study of social phenomena. In the field of law, we note that this is the process of 'artificially isolating phenomena' when dealing with the problem of causality, and that, in fact, all the authors we have referred to use it, but only unilaterally. All of them show that to establish the phenomenon or phenomena which are the cause of a given result, and therefore the causal link between this result and the phenomena which generated it, it is necessary to detach from the system of universal interaction, to which each phenomenon is linked by an infinite number of threads, only the group, the fragment of phenomena about which it is possible to question the causal dependence of the result that has occurred, i.e. it is necessary to separate the group of phenomena that contributed to the production of this result, to investigate which of the component phenomena of this group are to be retained as the causal phenomena of the given result, and which are not.

The same authors, although critical of each other on various aspects of the problem are unanimous in expressing or accepting the thesis that, since the causal link is an objective category, it is established only between categories of an objective order, so that consideration of the subjective side of the causal phenomenon, as the term of this relationship, would be incompatible with the investigation of the causal link. They express or accept this thesis, although as we have seen the accuracy of the contrary point of view manifests itself, however, in the analyses they make.

In other words, although the subjective side of the causal phenomenon is a characteristic, an indispensable and irreplaceable element of this phenomenon, as a term of the causal link that interests legal science, the authors mentioned trying to solve the problem of this relationship by eliminating the subjective side of the causal phenomenon from its elements, or at least avoiding dealing with it. And it all starts, as we have shown, with confusion. It is true that the causal connection is objective, but not because it is established only between objective phenomena. We have seen the groundlessness of this view more or less expressly stated by the cited authors of the causal relation (link). Ignoring the subjective side of the cause phenomenon in the causal link research results in stopping halfway, and hence in wandering based on additional ineffective criteria. Why do these authors stop at the halfway point and say that the causal phenomenon must be only human

conduct and do not say that this conduct must also have, depending on the branch of law concerned, the other characteristics of the phenomena that are the subject of research and regulation? To be compelled to resort, in the end, without result, to various additional categories and criteria?

7. CONCLUSIONS

Concretely, limiting ourselves to some observations on the causal link in criminal law, it has been stated that the causal phenomena and the causal link can be established in the following way (Dongoroz, 1939, p. 222): as a preliminary operation, it is necessary to completely identify the phenomenon affect the socially dangerous result in all its particularities as harmful and dangerous aspects for the social relations protected by criminal law, and only in these particularities, any oversight may have as a consequence the omission of a criminal aspect, any overshoot may include consequences without relevance under the material criminal law. This operation also guides us from the outset as regards the factors that could have contributed to the given result.

At the same time, by using the artificial isolation of phenomena, in terms of the correlation between the phenomenon from which we start as an effect phenomenon and taking into account its specific features, we separate the universal interaction system from the contributing antecedents to the production of the phenomenon, focusing only on those factors which are specific to the features of the given socially dangerous consequences and are reflected in these features. Then, using the process of artificial isolation of phenomena under the second aspect, we will identify and retain, from the contributing antecedent to the production of the harmful or dangerous result, the factor or factors that have the essential characteristics of a legal fact generating material criminal legal relations, of criminal liability, namely the act or acts of human conduct that meet the characteristics of a fact incriminated by law as a crime, including subjective characteristics. We will identify and remove those contributory factors which do not constitute acts of human conduct as well as those contributory factors which, although constituting such acts, do not have the characteristics of a criminal offence, including subjective ones, and are therefore of no interest to criminal law. All the latter factors remain, from the point of view of criminal law, mere conditions for the production of the result. It is also necessary to emphasize that, from a criminal law point of view, only the contributory factors with the above-mentioned characteristics have a causal value, and from this point of view they alone are the causes of the socially dangerous consequences established, and only between them and these consequences is a causal link established which is of interest to a criminal investigation. This is why the procedure presented here seems to us to meet these requirements, without requiring recourse to additional criteria and categories which are as varied as they are ineffective.

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RESILIENCE IN ADMINISTRATIVE REFORMS IN ROMANIA – THE RESILIENCE AND RECOVERY PLAN

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Abstract

Academics, decision-makers, and practitioners are increasingly preoccupied with the fact that the world's degree of volatility, uncertainty, complexity, and ambiguity has reached unprecedented levels. Thus, resilience has become the objective of many scholars and practitioners. As a result, we have several theoretical concepts that we can use to analyze whether some specific governance system has the potential to be resilient. The purpose of the paper is to analyze Romania's Recovery and Resilience Plan and draw conclusions regarding the public administration reforms' potential to foster resilience. The argumentation will be based on the analysis of these reforms against the theoretical concepts of complex adaptive systems resilience and, particularly, polycentric governance systems. The limit of the analysis is that it only provides a partial picture of the potential for resilience of Romania's administrative system because it does not take into consideration the entire institutional architecture of the administrative system, but only the reforms that are included in the Recovery and Resilience Plan.

Keywords: *resilience; polycentricity; public administration.*

JEL Classification: H1

1. INTRODUCTION

Academics, decision-makers, and practitioners are increasingly preoccupied with the fact that the world's degree of volatility, uncertainty, complexity, and ambiguity has reached unprecedented levels. In this context, our capacity to design effective policies that manage specific risks has decreased. This challenge generated a change regarding the way we approach public problems, and especially high-risk situations. Largely stated, the focus of our actions switched from specific objectives to a more inclusive optic – resilience.

This theoretical concept has been given a variety of understandings, but practical efforts that target resilience are even more diverse, depending on the type of risk that is considered. But, apart from these approaches that are concerned with specific risks, there is an increasingly consistent body of literature that accepts the fact that human knowledge is limited, and we lack the capacity to anticipate some of the biggest threats that lie ahead. Because of this epistemological problem, the question is not how we can become resilient to a specific risk that is anticipated to some extent, but what do we need to be resilient given the fact that our

prediction capacity is limited. The answer is that we should look at the institutional arrangements, governance structures, and functioning rules that we use to identify and implement solutions to our problems. Although from different angles, many scholars have explored the issue of the characteristics that systems should have to be resilient, and we have several theoretical concepts that we can use to analyze whether some specific governance system has the potential to be resilient. One such concept is polycentricity, but other developments can also be employed.

From this theoretical stance, I will analyze Romania's Recovery and Resilience Plan. The focus of the analysis will be on the administrative reforms that are stated in this plan. The purpose of the research is to explore the potential of these reforms to generate resilience. The argumentation will be based on the analysis of these reforms against the theoretical concepts I mentioned above.

The limit of the analysis is that it only provides a partial picture of the potential for resilience of Romania's administrative system because it does not take into consideration the entire institutional architecture of the administrative system, but only the reforms that are included in the Recovery and Resilience Plan. Also, the analysis does not take into consideration the implementation process of the plan, because it is in its early stages.

2. THEORETICAL APPROACHES

At this point, where the implementation of the Recovery and Resilience Plan is in its early stages, the only way one can generate a conclusion about the potential for resilience fostered by the plan is to analyze it against the theoretical literature that we have on the subject. In this section of the paper, I will briefly present the main developments that are useful for such an endeavor. First, I will look at how resilient systems are generally described in the literature and, second, I will focus on a specific institutionalist concept that I consider particularly relevant for the field of public administration – polycentricity.

2.1. Systems and complex adaptive systems resilience

Originated in psychology (Martin-Breen and Anderies, 2011, p. 34), the term *resilience* was further developed to apply to ecological and social-ecological systems, institutions and governance, urban resilience, social innovation, individual response to disaster and trauma, climate, poor or vulnerable populations, economic. These applications generated a diversity of definitions and conclusions regarding the concept of resilience. Thus, one needs to choose the relevant strand of literature in order to assess the resilience of some object of inquiry. Thus, for the purpose of this paper – the administrative system and the issues it usually deals with, I considered relevant the literature on what Martin-Breen and Anderies (2011) call systems and complex adaptive systems resilience. The common line of argument in these approaches is that resilience is fostered by institutional arrangements, governing structures and functioning rules, and not by specific actions meant to prevent or deal with the consequences of specific risks.

Holling (1973) made a cornerstone contribution on the way we understand and manage complex systems by arguing that resilience is not the same thing as stability and, on the contrary, systems that are flexible enough to tolerate variation are more resilient than those meant to generate stability. A resilient system may have low stability. This approach is very relevant for the way we seek to foster resilience. Our usual responses are meant to control variation, we focus on specific events, numbers, etc. If we follow Holling's line of argument, we should allow variation and look at how the system manages to deal with it. Given the fact that we cannot control variation in a great number of instances, Holling's approach seems very pragmatic. As I mentioned earlier in the paper, the application of the concept of resilience expanded to systems of people and ecosystems. Berkes, Colding and Folke (*apud* Plummer and Armitage, 2006, p. 65) identify three central features of resilience: "(1) the ability of a system to absorb or buffer disturbances and still maintain its core attributes; (2) the ability of a system to self-organize; and (3) the capacity for learning and adaptation in the context of change."

But a description of how a resilient system behaves does not help when one tries to assess in advance, of some stressful event, whether the system has potential for resilience or not. Thus, the question: how do resilient institutional arrangements, governing structures and functioning rules look like? What are the elements that one might observe in a system and conclude that it resembles a resilient one?

According to the literature (Duit *et al.*, 2010; Martin-Breen and Anderies, 2011; Lebel *et al.*, 2021), resilient systems are decentralized and present institutional diversity up to a level that we can observe a degree of redundancy, meaning that several institutions are able to contribute to the same problem-solving processes or to the provision of the same (or substitutes) goods or services. Another important element is that this abundance of institutions is not passive. The diverse entities are able to self-organize and they get involved in public issues. Heterogeneity of values and preferences is seen as a resource and solutions are identified through feedback and negotiation between these different types of institutions that hold different views. Participation is considered to build trust, while deliberation contributes to shared understandings that are a prerequisite of collective action. Also, the relationship with the authorities is an important factor of resilient arrangements: accountable authorities who also pursue social justice enhance the adaptive capacity of vulnerable groups and, by consequence, of the entire society. All these arrangements generate mixes of policy instruments that generally describe processes of policy making that are context-specific and network-based.

Many of the elements I have just mentioned are specific to the literature regarding polycentric governance systems, but I chose to make this introduction

into the literature regarding the resilience of complex systems because not all of it regards polycentric arrangements.

2.2. Polycentricity

In the literature on governance, one might encounter the characteristics previously mentioned under several names: adaptive co-management; adaptive, reflexive, collaborative, network, or multi-level governance; functional overlapping competing jurisdictions, etc. But, according to McGinnis, Baldwin and Thiel (2020, p. 1), the theoretical concept of *polycentric governance* is “the core mode of governance displayed in these many forms”.

Polycentric, multilayered institutions, translate community knowledge into collective action and the result consists of context-specific policies that allow societies to respond more adaptively to pressure (Ostrom, 2010; Lebel *et al.*, 2021).

As with the case of resilient systems in general, I will mention some elements that help us recognize a polycentric system, thus being able to establish some expectations regarding its resilience. According to Stephan, Marshall and McGinnis (*apud* McGinnis, Baldwin and Thiel, 2020, p. 10), the core dimensions of polycentric governance are: multiple decision centers; independence of decision-making for each decision center; overlapping jurisdictions; mutual adjustment among decision centers; low entry and exit costs; an overarching system of rules; emergent patterns of behavior, interactions and outcomes across decision centers; coordination between all elements of the system, either intentional or emergent.

3. THE ANALYSIS

As mentioned in the introduction, the analysis concentrates on administrative reforms, not on the Recovery and Resilience Plan (Ministry of Investment and European Projects, 2021) in general. In order to do that, I focused the analysis on the chapter regarding the digital transformation and the one regarding the good governance (Recovery and Resilience Plan - Part 2, component 7 and 14). Because other policy fields may also impact the administration, part 1, 3 and 4 were also given consideration so as to catch a glimpse of the directions embedded in the other components, such as education, health, tourism, etc.

The literature summarized in paragraph II of this paper is used to draw some conclusions regarding the fostering of the Romanian administrative system’s resilience with the help of the Recovery and Resilience Plan.

3.1. Consistencies with the theoretical concepts

The plan’s focus on green objectives, the environmental mainstreaming, is consistent with the previously mentioned theoretical approaches that regard issues as embedded in socio-ecological systems.

The second focus of the plan is on digitalization. This objective can be seen as a facilitator for data exchange, as infrastructure for communication between institutions and groups in society, as a cost reducing mechanism, etc. In this sense, digitalization fosters institutional diversity in policy formulation because it becomes more accessible for non-state actors and local-level authorities to get involved into public debates and provide feedback for decision-making. This diversification of the institutional environment of the policy making process is strengthened in the plan by addressing the role of local authorities, NGOs and universities in most of the proposed change processes. These elements, together with the accent on social dialogue, and the promotion of new policy formulation instruments, such as the policy Labs, lead to policy innovation, adaptation, and learning. Along this line, the plan also mentions the concept of co-production in relation to innovation at the local level of governance.

Another effect of digitalization, specifically mentioned in the plan, is that it increases the capacity of the public administration to react to sudden changes/events. This fast reaction improves resilience.

Overall, the objective of digitalization is well pursued along the plan, with proper consideration regarding the capacity of the providers, as well as the digital literacy of the general public, NGOs, and the employees.

Debureaucratization, especially in relation with the private sector, access to information and digital infrastructure for operations, also reduces entry and exit costs, thus increasing the same effect mentioned in the case of digitalization.

Although the focus of the analysis is on the chapter regarding the digitalization and the one regarding the administration, there are other reforms that involve changes in the public administration, such as transports, state-owned enterprises, RDI, etc. where one can notice the need for institutional development, better management capacity and improved governance. This seems to suggest a general understanding, consistent with the theoretical literature, that resilience is increased by the institutional infrastructure.

Some of the specific actions need further exploration in order to draw a conclusion regarding their contribution to resilience. At first sight, they seem just daily issues of public administration functioning, not necessarily reforms oriented towards resilience. E.g.: unitary system of remuneration in the public sector, the optimization of the justice infrastructure, recruitment, and promotion system in the public administration. But, on the other hand, they need to be checked against the other 4 pillars of the Recovery and Resilience Facility (smart, sustainable and inclusive growth; social and territorial cohesion; health, and economic, social and institutional resilience; policies for next generation) because they might be consistent with smaller trends in resilience studies, such as the livelihood approach, that take into consideration human, social, natural, physical, and financial capital (Plummer and Armitage, 2006).

3.2. Departures from the theoretical concepts

The term *redundancy*, crucial in resilience thinking, is mentioned in relation to the digital infrastructure, but not in relation to the administrative system. The importance of redundancy for resilience seems to be perceived only in relation to palpable elements of the reforms. More so, even in the case of the digital infrastructure, redundancy regards only the provider, the state.

The objective of digitalization may work in favor of resilience, but also against it, and it may be counterproductive to pursue this objective in itself. The document leaves room for such an interpretation because, for some of the reforms, it does not explain the connection between digitalization and resilience (e.g.: e-procurement system). Another interpretation might be that some of the reforms are meant to increase efficiency, not necessarily resilience. But, in the academic literature, there is an agreement that there is a trade-off between the two objectives. Even if one does not agree with the existence of such a trade-off, I think that the idea according to which resilience does not automatically follow from efficiency can hardly be debated.

Digitalization is not the only reform that seems to be designed with efficiency, rather than resilience, in mind. In the specific objectives of the good governance chapter, the words efficiency and performance are used twice, each. That means 4 out of 7 objectives relate to efficiency. Also, many of the reforms under good governance chapter are built around the concept of efficiency, and the term is used right in the title of the reform.

The plan is conceived around a specific risk (COVID-19), and others of the same nature, but how would it be interpreted in relation to other risks such as blackouts, cyber-attacks, or war? There is relevant literature (Carlson and Doyle, 1999; Perrow, 1999; Taleb, 2010; Taleb, 2012) that demonstrates that such preparedness for specific risks decreases our resilience to unpredicted events. More so, the plan specifies in a great number of instances that the actions are meant to increase predictability and efficiency of decisional processes. Polycentric arrangements, and resilient arrangements in general, are designed with the issue of low predictive capacity in mind and at the cost of efficiency considerations. According to Holling (1973, p. 18), for a system to be resilient, flexibility, not efficiency, is needed above all else.

In Part 1, section 4 (Recovery and Resilience Plan - Ministry of Investment and European Projects, 2021), that details the coherence of the plan, it is explained that, although the plan has 15 chapters, that are integrated into the six pillars of the Resilience and Recovery Facility, there is an evident focus on green transition and that the investments are directed towards green and digital transition, according to the specific country recommendations for 2019 and 2020. Green thinking and, to some extent, digitalization, may increase resilience, but this drawing of all the measures towards these two objectives is not enough for consolidated resilience. If we take a few steps back and look at the plan from a

distance, keeping in mind only those aspects that are considered at a profound level, we may conclude that the plan is meant to increase resilience to COVID-19, or some other pandemic, and to environmental changes with the help of digitalization. This concentration of all the efforts towards the green and digital transition, despite of all the advancements mentioned in III.2, have the potential to leave us unprepared for other major pressures that might occur in our country.

4. CONCLUSIONS

The paper takes theoretical developments regarding resilience as starting point for the assessment of the Romania's Recovery and Resilience Plan potential to foster resilience of the administrative system. I am particularly interested to see whether I can find in the plan that specific approach to resilience that detaches itself from specific risks and focuses on the characteristics of the governance systems as a way to increase resilience.

The findings are twofold. On the one hand, I notice some trends that are consistent with the selected theoretical stance, trends towards policy innovation, stakeholder involvement, lowering the entry and exit costs, and the role of local authorities. On the other hand, there is a confusion between efficiency and resilience; the role of back-ups/redundancies is not enough emphasized; digitalization, even though it comes with risks, is not always a mean to achieve resilience, but an end in itself; and the plan is conceived with specific risks in mind. So far, the plan seems to be a good start, but the reader can notice a certain hierarchy between the objectives of the plan that is confirmed at the end of the introductory part and is consistent with the observation that the plan is built around specific risks. This last concluding observation balances the twofold nature of my findings in favor of the second.

The conclusions of this paper should not be automatically translated to the resilience of the administrative system in Romania because it does not take into consideration the entire institutional architecture of the administrative system, but only the reforms that are included in the Resilience and Recovery Plan. Whatever one might think of the resilience of the Romanian administrative system, this paper only helps to understand the contribution that this plan might have.

Another aspect that needs to be emphasized is that the paper only considers the text of the plan, not its implementation process.

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FISCAL DECENTRALIZATION AND LOCAL GOVERNANCE QUALITY

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Abstract

Officially, European states has been implementing local autonomy and fiscal decentralization policies since 1985, based on European Charter of Local Autonomy. Thus, the local public authorities were asked to assume the status of autonomous authorities, which implies the assumption of the democratic principles, among which we invoke the principles of local autonomy, decentralization and subsidiarity. Local public authorities are considered by central authorities as important partners in the management of competences and in the development of public policies. In this context, the paper aim is to show that local governments under fiscal decentralization operate in an increasingly open and receptive manner by developing increasingly robust governance mechanisms that facilitate the development and improvement of living standards.

Keywords: *fiscal decentralization; local government; governance quality.*

JEL Classification: H1, H71, H72

1. INTRODUCTION

All the states of the European Union, and other states of Europe, in their stage as developing states tried to improve governance with fiscal decentralization. The process of decentralization (administrative and financial) and the implementation of local autonomy was established from a legal and unitary point of view by the European Charter of Local Autonomy adopted in 1985 and which every European state ratified and adopted in national legislation.

Fiscal decentralization determines the awareness of local public authorities that they are responsible for the quality of life of their community. But still, as

Hankla (2009) said the gains from decentralization depend sensitively on how subnational authorities and intergovernmental relations are structured.

Fiscal decentralization is considered that can improve social outcomes via better preference matching (Oates 1972), but also are identified negative aspects (Nakatani, Zhang, and Garcia Valdes, 2022), such as: i) common pool problem - when only government expenditure is decentralized but revenue is not, the common pool problem arises from not-fully internalized cost of local fiscal actions owing to the local government's tendency to overuse common revenue sources (Berry 2008); ii) flypaper effect - when an intergovernmental grant from central government increases local government spending more than the increase in local income (Fisher 1982); and iii) diseconomies of scale.

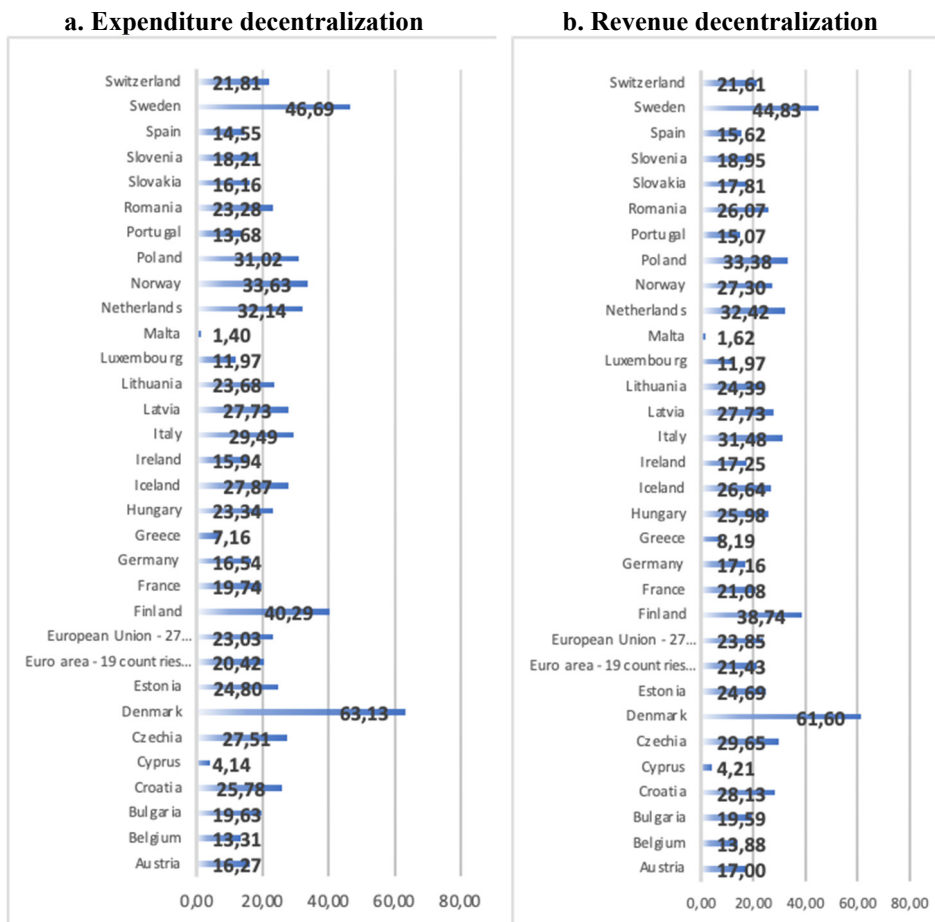
Although the decentralization process can be accompanied by a series of negative aspects, as previously identified by the authors, nevertheless the added value of fiscal decentralization is very high. In this regard, the paper aim is to show that local governments operate in an increasingly open and receptive manner by developing increasingly robust governance mechanisms under fiscal decentralisation that facilitate the development and improvement of living standards.

2. FISCAL DECENTRALIZATION AND LOCAL GOVERNANCE QUALITY OVERVIEW

The process of administrative decentralization is automatically accompanied by a financial decentralization, known in the literature as fiscal decentralization. In recent years, the weight of the local budget in the budgetary system has increased considerably, so that it is evident on the one hand the decentralization of revenues and, on the other hand, the decentralization of expenses.

To present the level of fiscal decentralization, we will reflect through our analysis the degree of decentralization of revenues and expenditures in the states registered by EUROSTAT.

In accordance with Figure 1, where we computed EUROSTAT database (European Commission, 2022) as median of fiscal decentralization over the period 1995-2021, we find that the highest level of revenue and expenditure decentralization is registered in Denmark (over 60%), Sweden, and Finland (over 40%). States with a small territory, such as Cyprus and Malta, register a low level of fiscal decentralization through the indicators of revenue decentralization and expenditure decentralization. From the category of states with a large territory, but a low degree of fiscal decentralization is Greece with approximately 8% over the period 1995-2021. The rest of the European states fall within the [10%-30%] range. The European Union average is around 23% and the Euro area average is around 21%. In the [30%-40%] range are Poland, Norway, the Netherlands, and Italy.



Source: computed by the authors based on EUROSTAT database
(European Commission, 2022)

Figure 1. Fiscal decentralization as median of 1995-2021

What we propose is to identify the quality of the act of governance in relation to the status of fiscal decentralization. In this sense, we can consider Local government index developed by World Bank (2022), which is scaled to range from 0 (lowest score) to 1 (highest score). The lowest score would be reserved for a country that has no elected local governments. A medium score would be accorded a country that has elected local governments but where those governments are subordinate to unelected officials at the local level perhaps appointed by a higher-level body. A high score would be accorded to a country in which local governments are elected and able to operate without restrictions from unelected actors at the local level with the exception of judicial bodies. Naturally,

local governments remain subordinate to the regional and national governments. The indicators included in Local government index are presented in Annex 1.

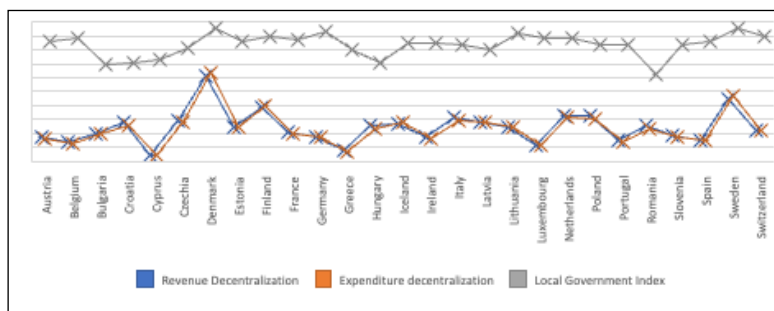


Source: computed by the authors based on World Bank database (World Bank, 2022)

Figure 2. Local Government Index as median of 1975-2019

The local government index is made up of 120 indicators for which the median was calculated in the time interval 1975-2019. The next step was the calculation of the median by country, so that Figure 2 reflects the Local government index by country over the period of time 1975-2019. The highest value of the index is registered in Denmark, Sweden (0.95) followed by Germany (0.93), Finland and Switzerland (0.90).

Figure 3 represents the comparison of the Fiscal Decentralization indicators with the Local government index.



Source: computed by the authors based on World Bank database (World Bank, 2022) and EUROSTAT database (European Commission, 2022)

Figure 3. Local Government Index vs. Fiscal Decentralization

Figure 3 demonstrates that there are significant differences between the states by comparing the two indicators. According to it, it can be observed that the quality of local governance is high where the gap between the local government index and fiscal decentralization is small and the level of the indicators is close to 1 in the interval $[0,1]$, as we find in Denmark, which is the better from the perspective of the efficiency, effectiveness and economy of the local public administration, respectively of the provision of public services and the functionality of public institutions at the local level. The act of local governance and the provision of public services by public institutions at the local level, which determines an increase in living standards simultaneously with an accentuated decentralization process, is also found in Sweden and Finland.

In the case of Romania, although the decentralization process is high, the local government index is quite low, which implies that the local public authorities, local public services and local public institutions require an intense process of efficiency. Citizens' trust in the local public administration and in the public services offered by it requires a sustained effort to increase their quality as a whole and not in isolation (only a few administrative-territorial units). Close to Romania's status is Croatia, which in turn presents an accentuated decentralization process with a relatively low local government index.

There are countries, such as Cyprus and Luxembourg, where the quality of the governance act is high, but the decentralization process is low.

3. CONCLUSIONS

The descriptive analysis carried out confirms the fact that local governments under fiscal decentralization operate in an increasingly open and receptive manner by developing increasingly robust governance mechanisms that facilitate the development and improvement of living standards, as we find in the three Nordic countries, respectively Denmark, Sweden and Finland. These states are

characterized by the strongest decentralization process in Europe and, at the same time, present the highest level of local government index.

These states are recommended to be considered models of good practice for states that require improvements to the local public administration system, such as Romania or Croatia. At the same time, it is the duty of the local decision makers to explain to the citizens the role and place of each fiscal measure so as to meet as wide a support as possible. It is recommended to consult with the citizens on the development of local fiscal policy for a wider accession (Cigu *et al.*, 2022).

The future research directions that we will follow are to extend the analysis outside the European Union level.

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ANNEX 1

The indicators included in the Local Government Index

Absence of corruption (Global States of Democracy)	Executive bribery and corrupt exchanges	Kilocalories per person per day
Access to justice	Executive constraints	Law and order
Access to justice for men	Executive embezzlement and theft	Legislature investigates in practice
Access to justice for women	Executive oversight	Legislature opposition parties
Barriers to parties	Executive respects constitution	Legislature questions officials in practice
Basic welfare	Fair trial	Life expectancy
Bureaucratic quality		

Checks on government Civil liberties Civil society participation Clean Elections Competition Competitiveness of executive recruitment Competitiveness of participation Compliance with High Court Compliance with judiciary Corruption Critical Print / broadcast media CSO participatory environment CSO entry and exit CSO participatory environment CSO repression CSO women s participation Direct Democracy Direct democracy Educational equality Effective parliament Elected executive index Elected Government Election free and fair Election government intimidation Election other voting irregularities Election voter registry Election women in the cabinet Elections multiparty Electoral Electoral participation EMB autonomy EMB capacity Engaged society	Female vs, male mean years of schooling Free Political Parties Freedom from forced labour for men Freedom from forced labour for women Freedom from political killings Freedom from torture Freedom of academic and cultural expression Freedom of assembly and association Freedom of association and assembly Freedom of discussion for men Freedom of discussion for women Freedom of domestic movement for men Freedom of domestic movement for women Freedom of expression Freedom of foreign movement Freedom of movement Freedom of movement and residence Freedom of opinion and expression Freedom of religion Freedom of thought, conscience and religion Fundamental rights Gender equality Harassment of journalists Health equality High Court independence Human rights protection scores Impartial administration Inclusive Suffrage Inclusive suffrage Infant mortality rate	Local Democracy Local government index Lower chamber female legislators Lower court independence Mean years of schooling Media bias Media corrupt Media freedom Media integrity Media self-censorship Multiparty elections Openness of executive recruitment Opposition parties autonomy Party ban Personal integrity and security Power distributed by gender Power distributed by social group Power distributed by socio-economic position Predictable enforcement Print / broadcast media perspectives Print/broadcast censorship effort Public sector corrupt exchanges Public sector theft Religious Tensions / Ethnic Tensions Religious organization repression Representation of disadvantaged social groups Representative government Rigorous and impartial public administration Social class equality in respect for civil liberties
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	<p>Internal conflict Judicial accountability Judicial corruption decision Judicial independence</p>	<p>Social group equality Social group equality in respect for civil liberties Social rights and equality Subnational elections free and fair Transparent laws with predictable enforcement</p>
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Source: World Bank database (World Bank, 2022)

HOW HAS THE COVID-19 PANDEMIC CHANGED THE RECRUITMENT AND SELECTION GAME IN THE IT INDUSTRY? A ROMANIAN PERSPECTIVE

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Abstract

For many years, the IT industry has been quite globalized, as companies started looking for talent outside of their national borders and specialists were willing to relocate in order to get interesting jobs. The restrictions in place during the COVID-19 pandemic took the IT industry to a completely new level of globalization, as it became a full work from home exercise that lasted, depending on the country, from a few months to two years. This brought along both challenges and opportunities for candidates and for companies in the world of IT. From the perspective of developing countries that play an important role in software development, Romania included, there are important effects that generated changes in the preferences of the local workforce and drove salary levels up, close to those in Western Europe. The current exploratory study aims at identifying the perspective of IT recruitment companies in Romania on the changes that occurred on the market since March 2020, when the COVID-19 pandemic started.

Keywords: *COVID; pandemic; recruitment; selection; IT; Romania.*

JEL Classification: M12, L86, F66

1. LITERATURE REVIEW

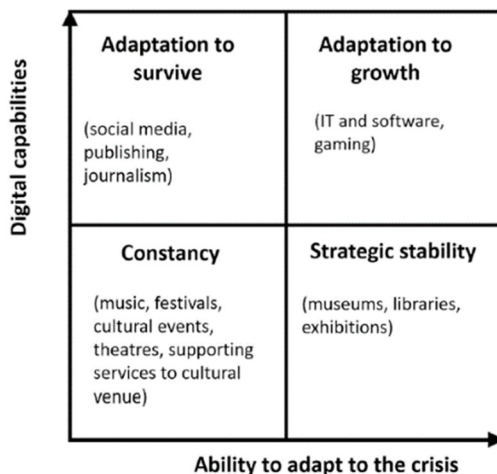
Literature on the topic is scarce and provides a limited view for academics and practitioners. Quite possibly, practitioners have been more aware and interested in the phenomenon since the year 2020 in particular. Academic researchers have slightly touched the topic, but not developed it. Topics such as mental health during the pandemic or challenges for working from home during the pandemic are much more common. Therefore, we have had no choice but to consider the business reports or articles, in which practitioners outlined their opportunities and challenges connected to the topic of recruitment.

On the academic research side, we identified two articles that are somehow connected to the topic. Khlystova, Kalyuzhnova and Belitski (2022) researched the impact of Covid-19 on the creative industries, IT and software included. They performed a literature review which included 17 papers from the IT and software sectors, covering 12 countries. Their findings included the following: 1. the COVID-19 pandemic has considerably facilitated the use of IT technologies, as

organizations adopted IT tools to develop resilience; 2. IT has significantly changed the nature of work, training, hiring, delivering content and education during the pandemic. They also identified research gaps in the literature: more research is needed on customers rather than employees and organisations; how could digital technologies be adopted and diffused by the creative industries during the pandemic?; how will new technologies affect patterns of work in the creative industries?); understanding the long-term business, social and health effects of IT and how it will change the industry in the post- COVID-19 world; what strategies could be used to improve the digital maturity and readiness of the creative industries to the COVID-19 crisis?

Overall, it is considered that the pandemic has had a strong positive impact on the products and services provided by the IT industry and that companies selling digital technologies experienced a surge in demand for their products and services during the COVID-19 pandemic.

Khlystova, Kalyuzhnova and Belitski (2022) also created a response matrix of the creative industries to the COVID-19 pandemic (see Figure 1). Out of all creative industries, IT and software, as well as gaming were the only industries positioned favorably, with high digital capabilities and ability to adapt to the crisis.



Source: (Khlystova, Kalyuzhnova and Belitski, 2022, p. 1203)

Figure 1. Response matrix of the creative industries to the COVID-19 pandemic

Other articles (Vashistha, Goel and Dhiman, 2021) cover the topic of e-recruitment which, as compared to traditional recruitment, automizes the process and uses IT hardware and software to manage the recruitment process of the organization. Electronic recruitment aims at becoming a significant tool and method for employers in general and HR professionals in particular for searching

and identifying appropriate candidates for their open positions, while at the same time reducing costs for targeting a global workforce. This article has two major findings: 1. recruitment processes were significantly impacted by the COVID-19 pandemic; 2. e-recruitment positively influenced employees in the IT industry. The study, performed in India, also included some findings that can probably be considered at international level: 1. the majority of the population agrees that technology cannot replace interaction between human beings; 2. the biggest advantage of e-recruitment is that geographical location never becomes a hurdle for interviews.

A 2021 news article by the European Commission (ELA, 2021) postulates that COVID-19 has fundamentally changed recruitment and that the changes are here to stay. They summarize it as following: online job interviews are the new normal, location is no longer a deciding factor (recruiters target the whole globe), there is a demand shift in the labour market (candidates seek fields and companies that are stable), companies need to impress jobseekers (it's a candidate's market and companies need to 'sell' themselves to be picked by the candidates).

The Society for Human Resource Management (SHRM), with 300000+ members in 165 countries, has also summarized the recruiting trends shaped by the pandemic in 2021 (Maurer, 2021). Over 1,500 talent acquisition professionals from 28 countries identified these trends in a survey conducted by LinkedIn and supplemented by data generated by more than 760 million members on the professional networking site. The trends identified are: 1. virtual hiring is here to stay, as interviews will stay online; 2. companies will emphasize internal hiring as internal mobility is already up 20 percent since the onset of COVID-19, companies expect recruitment budgets to decrease, while learning & development budgets to increase or stay the same. "Increased engagement, lower costs and a shorter hiring process are a few of the benefits of the shift to internal mobility, but the biggest benefit may be improved retention." (Maurer, 2021); 3. recruiters will play a bigger role in diversity, equity and inclusion, as candidates prefer to work for companies that demonstrate commitment to diversity and inclusion; 4. recruiters will expand skill set, adding skills like providing clarity to talent data, reshaping employer branding and adapting the online hiring process.

The Human Resources Executive, a primary media source of global information for strategic issues in HR, took it one step further and, in 2021, projected what recruitment will look like after COVID (Patton, 2021). First and foremost, COVID has accelerated all people processes in organizations, e.g. if online recruitment was something to be avoided as much as possible, it has become the norm and specialists experienced the benefits, not only the drawbacks. Also, they noticed the rise in automation, as COVID has accelerated the creation and adoption of recruiting automation tools by at least several years. Not to forget that creativity is key and that the more creative organizations are with the recruitment process, the more progressive they will appear to job candidates.

“COVID has demanded a new way of thinking, and HR leaders need to demonstrate to job candidates the lengths they’ve gone to pivot for their employees” (Patton, 2021). One key question candidates ask recruiters is ‘What has changed at your organization during COVID’ and companies need to ‘sell’ what they have done, otherwise it’s all theory.

According to UNLEASH, the world’s leading provider of market intelligence on the Future of Work and HR Technology, virtual recruitment will outlive COVID-19 (Nawrat, 2021). The pandemic did not only have negative effects on recruitment and the positive effects stemmed from the successful leveraging of HR technology. Now, to stay ahead in the recruitment game, companies need to focus on automating admin tasks so they can focus on candidate experience, on implementing technology that really focuses on candidate engagement, and also to get used to working with a larger tech stack.

As pictured by Gattaca, an HR service company with almost 40 years of experience on the market, the future of recruiting in a post-COVID world requires a more consultative approach of recruiters towards candidates (Gattaca, 2022). Now, recruiters need to mediate the needs of the company and those of the candidates, while at the same time becoming true experts in their field also by using new technology. The recruitment function becomes more segmented as, with the help of Applicant Tracking Systems (ATS), recruiters may work with hiring managers to define job descriptions and to allocate candidates per location in the best possible manner. Recruiters’ personal branding matters more than before, as they may help candidates with a piece of advice from the field they are specialized in, even if they don’t hire the candidate. The candidate experience is another key element that has dramatically changed. Previously, companies invested in “glossy, well-decorated offices in city centers” while now recruiters need to identify and close gaps in the recruitment process to keep candidates engaged in the process.

From April 2020, Hack Reactor identified in what ways COVID-19 would change the job market for software engineers, at least during the year 2020 (Anas, 2020). Good in demand skills, such as security, would mean a lot of opportunities to get hired and even receive a premium for the skills. As software engineers were accustomed with the online environment, even online tests as part of an application process, the process ran smoother. Also, software engineering roles were much less affected compared to other industries (only 5% of software engineers lost their jobs in US compared to 20% in all fields at national level). Even in 2020, remote work was envision as potentially becoming the new norm.

2. RESEARCH METHODOLOGY

The scope of this exploratory research is to identify the perspective of IT recruitment companies in Romania about the changes that occurred on the market from March 2020 until March 2022. This period covers the start of the Covid-19

pandemic restrictions in Europe and in Romania in particular until the first part of the ‘back to normal’ period, which started in March 2022, when all restrictions were eliminated. To be able to understand the changes, we will compare the market situation with a period of two previous years, from 2017 to 2019.

For this scope, we formulated five objectives, each with one research question:

Objective 1: Identify the factors that shaped IT the recruitment market in Romania before the pandemic.

RQ1: What were the factors that shaped the IT recruitment market in Romania before the pandemic?

Objective 2: Identify the factors that influenced IT recruitment during the Covid-19 pandemic in Romania.

RQ2: What were the factors that influenced IT recruitment during the Covid-19 pandemic in Romania?

Objective 3: Identify the opportunities that candidates and companies have in 2022.

RQ3: What are the opportunities that candidates and companies have in 2022?

Objective 4: Identify the threats that candidates and companies need to address in 2022.

RQ4: What are the threats that candidates and companies need to address in 2022?

Objective 5: Identify the changes that IT recruiters estimate to appear on the market in the years following 2022.

RQ5: What changes do IT recruiters estimate to appear on the market after 2022?

Research sample. In this preliminary exploratory study were included three recruiters with minimum 5 years of experience in IT recruitment, so they can first-hand compare the pre-pandemic period (2017-2019) to the pandemic period (2020-2022). Two of them work for Romanian recruitment companies with over 15 years of experience on the market and each with IT recruitment divisions. These two interviews were conducted in Romanian. The third recruiter works for a recruitment company from Germany with offices in Europe and Asia, recruiting at global level through their IT recruitment division. This interview was conducted in English. Being a preliminary study, gender balance of the sample was not a selection criterion. They are all women, as they positively responded to being targeted and invited to participate in the study.

Research period. The interviews were conducted in March and April 2022 from Iasi, Romania. All interviews were held online on MS Teams or Google Meet.

3. RESEARCH RESULTS

We present here the main research results, grouped per category and in evolution, by comparing the 2017-2019 period to the 2020-2022 period. Answers to the research questions will be outlined as well.

Main challenges in attracting candidates. Between 2017 and 2019, the market was more company-driven than candidate-driven, which implied that companies had more options in terms of candidates than candidates had options in terms of job openings. Visibility on the market (employer branding) was very important and, as 90% of candidates were passive candidates (not interested to switch jobs), it was challenging to attract their attention (through project, technologies, discussions) from the first message. Candidates focused more on project and technologies than money, while the contracts proposed by companies from abroad were offered on SME structures (in Romania called PFA or SRL). Candidates preferred product companies over outsourcing companies (who created software for their customers).

The year 2020 was marked by fear of the unknown and insecurity, by the fact that some companies were impacted by the pandemic situation. In that context, companies that were safe could find good candidates if they were visible enough through their employer brand. Nevertheless, the IT industry was one of the industries that managed to transition the pandemic rather unaffected by moving all their activity to remote work and being able to work remotely ever since, if needed.

In 2021-2022 the salary aspect became essential. Encouraged by the full remote opportunities, many candidates started asking for PFA/SRL contracts, which are more similar to freelancing than to labor contracts. Some companies still don't accept these types of collaborations, as they are probably trying to improve employee engagement and tenure (which can nevertheless be guaranteed by labor contracts). Candidates want to know the budget first in order to evaluate if it is worth continuing with the selection process. Even if the company doesn't provide the maximum level to them, at least they have a perspective and they can focus on more important aspects (project, technologies). See Table 1 for a summary.

Table 1. Main challenges in attracting candidates

2017-2019	2020-2022
Market was company-driven	Market is candidate-driven
Focused more on project and technologies than money	Focused on money first (the salary part is essential). Advisable to clarify the budget first
Preferred product companies over outsourcing companies	Product companies are still preferred, as outsourcing companies are considered less stable
International companies provided contracts on SME structures	Many candidates ask for SME contracts, some companies in Romania still don't accept them
Being allowed to work from home – only some companies provided the opportunity and it was limited to a number of days per month	Being allowed to work from home is a must, even if partially during the week. Not being allowed may become a deal breaker.

Source: own representation

Reasons for changing jobs. Candidate preference and priorities have shifted during the pandemic, therefore we can notice some significant differences (see Table 2). Factors are presented in their perceived order or importance for the candidates. We can easily notice that the first two factors have switched positions, while the others have encountered changes.

Table 2. Reasons for changing jobs

2017-2019	2020-2022
Ambitious project / modern tech stack, which translated into opportunities for development	Income level & form of collaboration (SME contracts, e.g. PFA/SRL are favored)
Salary level	Interesting projects & new tech stack - opportunities to develop professionally
Nice corporate culture	Not so relevant anymore if working remotely
Physical proximity to the employer more important in Germany than in Romania	Flexibility and remote work are very common
Company type was important for Romanian candidates (product companies favored)	Type of company (product companies are favored)

Source: own representation

We noticed two differences for this factor between the recruiters from Romania (2) and the recruiter from Germany (1). In 2017-2019 physical proximity to the office of the employer was a significant factor as employees needed to work from the office. Still, it seemed less important compared to employees in Germany (as the German recruiter pointed out). Some Romanian candidates mentioned it as well during the period, but it was not a deal-breaker, as Romanian employees are not used to commute from one city to another and they used to work in their city of residence. Also, as a general note, employees tended to be more stable during the 2017-2019 period compared to the 2020-2022 period.

As a bridging year, 2020 generated both threats and opportunities as a result of the pandemic situation. The general perception was that, when candidates replied to recruiters, there were high chances they were interested to switch jobs.

Interest for full remote work. In the pre-pandemic world, full remote work was no topic at all. There were companies providing 1-2 days per week of work from home and they were considered good benefits. Some called them ‘emergency days’, which were days when the employee could work, just not from the office as their child was sick or a handyman was coming to fix something. Candidates were open to full remote for different reasons (more flexibility, no more commute time, no strict supervision). On the other hand, they did not know how they would integrate in the team, how they will manage, they were afraid of the unknown.

Very few companies were providing full remote contracts and candidates were tempted, but also quite reluctant to accept them. Companies were reluctant

to go for full remote as they had offices, they were used to working from the office and they wanted to make sure that employees worked. Also, they were concerned about integrating employees in the culture, about team work, about answering questions from colleagues. At junior level full remote work was excluded, at senior level (with ownership and independence) it was considered, but not common. Hiring managers were not open to supervise employees in full remote conditions. Companies with offices in Romania did not provide full remote opportunities. Even freelancers with full remote contracts were required to go to the headquarters twice per month, even if they needed to travel abroad for this purpose.

As the pandemic set in and the IT industry moved to full remote, candidates started asking for more personal time/better work-life integration and working from home/fully remote meant no more time spent in traffic, spending more time with their family and flexibility. Combined with the proven track record of being able to deliver project by working from home, these arguments became extremely important in building the full remote case. Also, the full remote environment provides new opportunities for developing careers. IT specialists now have access to a market with more complex and interesting roles, in which you can make decisions and have impact, not just put them into practice. Competency of the Romanian workforce is increasing. Being forced to work from home in the beginning, candidates invested in developing a home office and they want to work from there. Also, while working from home most consider themselves more productive as they may not be distracted by noise or conversations with colleagues at the office.

In 2022, we may still encounter skeptics when it comes to working from home/remotely, but they account for 10-15% of the workforce. Some feel lonely and need to socialize, they need variety and consider that work and life got mixed up by working from home. Others can focus better from the office.

Time to hire. This is an indicator related to the effectiveness of recruitment and selection practices, which are also highly impacted by the market situation. On average, time to hire is similar in 2022 compared to 2017 or the period in between, ranging from three to six months. The differences are reflected in the power balance on the market, e.g., candidates have more options and they move very quickly. Candidates look for ownership on the project, PFA/SRL contracts and interesting projects. Candidates that apply on an announcement disappear from the market within one week. From the candidate perspective, it is easier to find a new job. Also, candidates are very focused on salary and tech stack. It seems like some would do anything for money, even if they may stay in a high paying company for only 3 months to only solve some of their financial struggle (if they don't have other reasons to stay). From the company perspective, it is more difficult to hire as you lose employees/candidates easier. Companies tend to hold on to their employees and counteroffers are extremely high (sometimes double)

even at junior level as they know that it is very difficult to recruit. Companies that are quick to get the candidate through the selection process can hire quicker.

Preference for international companies compared to Romanian companies. In 2017-2019 what we could see in the market was an order of preference with four layers: 1. International company with direct manager (Project Manager or similar) from abroad (e.g., Germany, UK and so on) and maybe a Romanian Tech Lead. 2. International company with direct manager (Project Manager or similar) from Romania 3. Romanian company with international clients 4. Romanian company with Romanian clients or working with the Romanian government (this was the worst-case scenario). In 2022 international companies continue to be favorites, regardless if they are big or start-ups. Candidates consider that globalization and impact are the future and they also want more interesting jobs, stock options. Strong investors and stock options are an interesting alternative to seniors with 15+ years of experience, who may be willing to quit their job so that they could generate impact in a newly formed company. International clients matter more than the company origin.

Level of English was considered relevant to test as, in a full remote world, fluency in English is a must. If in 2017-2019 recruiters were sometimes identifying candidates whose level of English was not good, in 2022 that is not the case anymore. It is rare to speak with candidates with a poor level of English.

To answer **RQ1** (What were the pre-pandemic trends in IT recruitment in Romania?) we provide the following arguments: market was more company-driven than candidate-driven, projects and technologies were more important than level of salary, international companies offered contracts based on SMEs, work from home was not even a topic, a nice company culture was important. Also, we could identify some trends that continued to be valid throughout the pandemic: candidate level of English is generally good; time to hire stayed, on average, the same at three to six months; candidates preferred product companies versus outsourcing companies.

For providing an answer to **RQ2** (What were the IT recruitment trends during the Covid-19 pandemic in Romania?), we analyzed the data collected for that period. In summary, the market moved to being candidate-driven, salary level became more important than project or technology, both local and international companies must provide SME contracts as candidates ask for them, flexibility is highly important, at least hybrid if not full remote work are widely required, culture is not so relevant anymore while working remotely.

Top three changes identified in the market can be summarized as such: 1. very fast-moving market (move quickly through the recruitment & selection process; target 2-3 times more candidates and organize twice the number of interviews to be able to hire; know very well what you want from a good candidate, then be flexible and creative; don't push working from the office); 2. a lot of opportunities for employees/candidates (candidate-driven market); 3. to

maintain engagement & retention, companies pay attention and respond to their employees' needs, so that they know that their needs can first be explored internally. - move quickly through the recruitment & selection process - target 2-3 times more candidates and organize twice the number of interviews to be able to hire - know very well what you want from a good candidate, then be flexible and creative - don't push working from the office.

The **top three opportunities candidates have now** refer to 1. the high gap between demand (companies) and offer (candidates), which generates huge amount of opportunities and therefore candidates lead the game and feel free to experience an opportunity knowing that, if it doesn't work out, they can find something else at anytime; 2. access to projects/technologies from different areas with high complexity of roles; 3. companies invest more in people and come up with new projects and counter-offers so not to lose them.

A short list of **top three opportunities international companies have now** would be summarized like this: 1. opportunities to recruit worldwide as they are more competitive, have bigger and stronger networks compared to local companies (in terms of candidates, clients and resources); 2. they import ideas from the international environment; 3. they appear to be more flexible, open-minded and more stable compared to local companies.

We wanted to test the **opportunities local companies in Romania have now** and they are the following: opportunities to recruit worldwide, Romania can import ideas from international companies, salary level and tech stack matter more than company origin, quality of interaction with the manager and with the team matter a lot and companies need to continuously adjust to the changing market reality. This paragraph and the previous two reply to **RQ3** (What are the opportunities that candidates and companies have in 2022?).

Even though we now have a candidate-driven market in IT, we wanted to identify also **threats that candidates need to manage**. They would be the following: remote work without meeting their colleagues and with no webcams in calls may result in dissatisfaction; changing jobs too quickly may result in a negative candidate profile (not stable, not trustworthy); salaries will not go up all the time and they will need to adjust to a more stable market; legal changes in Romania for taxes on PFA/SRL as of 2023 and, especially, as of 2024 may result in the industry re-emphasizing labor contracts.

Intuitively, we supposed that there would be **differences in terms of how international companies and Romanian companies perceive threats**, so we wanted to identify them. All respondents considered that threats are generally the same for international and for local (Romanian) companies (with minor differences, as mentioned) and they are summarized in Table 3. Also, Table 3 and the two previous paragraphs summarize the answer to RQ4 (What are the threats that candidates and companies need to address in 2022?).

Last but not least, we wanted to test the recruiters’ perception on the **changes that they estimate to appear on the IT market in the coming years** (for Romania in particular). Their answers covered the following aspects: 1. the market will continue to be candidate-driven and it will become even more difficult to attract candidates; 2. people will tend to work more as freelancers, not just be employees and work from home; 3. employees will continue working from home and be reluctant to come to the office; 4. due to Romanian regulations, some who use PFA/SRL will tend to go back to labor contracts. As a general conclusion, companies should consider opening new locations, adapting to the market even more and staying flexible. This answers **RQ5** (What changes do IT recruiters estimate to appear on the market after 2022?).

Table 3. Reasons for changing jobs

Factor	Details
Regional specificity	<ul style="list-style-type: none"> - the war in Ukraine and the people migration may change the balance in Europe (by bringing lower-paid people on the market), but it is difficult to estimate - mid and seniors in Romania wait to be targeted, whereas in Germany they apply
Quality risks	<ul style="list-style-type: none"> - many projects on the market, new ones coming, therefore quality may be at risk (companies may focus on delivering, but not necessarily quality-based) - some companies recruit in terms of numbers, not quality
Engagement and retention	<ul style="list-style-type: none"> - people tend to leave very quickly if not given what they want <p>Factors more valid for international companies:</p> <ul style="list-style-type: none"> - employees in local offices tend to compare what they get with the headquarters and with other locations - they need to build a global culture while understanding local cultural differences - they need to understand the specificity of each location and adapt the recruitment processes to each market reality

Source: own representation

4. CONCLUSIONS

All sources studied and included this article agree on the changes that the COVID-19 pandemic brought to the IT recruitment market. An already high-tech and globalized industry was very fast brought to a new stage of development. As IT specialists already worked online with customers from other countries or even continents, moving fully to the online setting was just a next step. That brought along a long list of both opportunities and threats for companies and candidates.

Recruiters need to now realign their HR processes to reposition company employer branding according to the new reality. Candidates are very curious about working in full remote conditions and are willing to test opportunities, knowing that in a candidate market they can always find 2-3 more offers quickly in case

they don't like their current employer. Therefore, what would be the short list that recruiters should focus upon to be able to recruit the right candidates? 1. Salary budgets and flexibility regarding form of collaboration (labor contract or SME-based) became extremely important and can make or break salary discussions. 2. Next in line are the interesting projects and the up-to-date technologies that candidates would like to work with. 3. Flexibility and at least hybrid, if not full remote work are mandatory. 4. Outline company stability (especially if they work for a product company), so that candidates know they can rely on the company for the long term, even if they may be tempted to change jobs for the slightest reasons.

According to DataArt, "globally, there is a shortage of programmers and traditional IT outsourcing market are no exception. As of 2020, the global talent shortage totaled 40 million skilled workers worldwide. By 2030, the global talent deficit is predicted to reach 85.2 million" (Miller, 2021). If confirmed, we can suspect that the already extremely competitive IT market will globalize at an even faster pace, favoring big multinational companies and pushing SMEs to differentiate or die. In this context, recruitment will become even more difficult and organizations, HR departments in particular, will need to identify more cost-effective and creative strategies to position themselves favorably in the eyes of the candidates.

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ANNEX 1

Interview guide

The current research is conducted for academic purposes, as the research is an associate professor at the Alexandru Ioan Cuza University of Iasi, the Faculty of Economics and Business Administration. Research results will be published in an academic journal and will be provided to respondents, if they desire to receive them, after being published in the journal.

Please consider the *eliminary filter*: research is targeted at respondents that are currently IT recruiters and who worked on a similar position before and during the pandemic, so they have minimum 5 years of experience in 2022. If you do not comply with this filter, please do not reply as you will unwillingly influence the results in an artificial manner. Thank you for your understanding!

Section A – “pre-pandemic”

Please think about the period 2017-2019

1. What were the main challenges in attracting candidates to fill the open positions? Please list at least 3, if possible starting with the most important one.

2. What did candidates value most?

Please think of top three reasons you perceived they used for changing their job.

To what degree were candidates interested in full remote jobs?

- What encouraged them?

- What made them reluctant?

3. How long did it take to fill a position, on average? (if you calculated)

4. Did candidates prefer to get a job with local or with international companies?

a. What were the reasons for making that choice?

b. Was the level of English an issue in getting a position? If so, what would you estimate to be the percentage of candidates who could not get a job with an international company due to their level of English?

5. Was there any other aspect worth mentioning that was not included in the questions above?

Section B – “during the pandemic”

Please consider the period 2020-2022

1. What have been the main challenges in attracting candidates to fill the open positions? Please list at least 3, if possible starting with the most important one.

2. What do candidates value most?

Please think of top three reasons you perceived they used for changing their job.

Have the candidates been more interested in full remote jobs?

What encouraged them?

What made them reluctant?

3. How long does it take to fill a position, on average? (if you calculate)

4. Do candidates prefer to get a job with local or with international companies?

a. What are the reasons for making that choice?

b. Is the level of English an issue in getting a position? If so, what would you estimate to be the percentage of candidates who could not get a job with an international company due to their level of English?

5. Is there any other aspect worth mentioning that was not included in the questions above?

Section C – comparing sections A and B

Comparative analysis

Please compare the current situation on the IT recruitment market and compare it with the pre-pandemic situation.

1. What are the top three changes you see in the market?

2. Please list what you consider to be the top three opportunities you believe candidates have now.

3. Please list what you consider to be the top three opportunities you believe international companies have now.

4. Please list what you consider to be the top three opportunities you believe local companies in Romania have now.

5. Please list what you consider to be the top three threats you believe candidates need to manage now.

6. Please list what you consider to be the top three threats you believe international companies need to manage now.

7. Please list what you consider to be the top three threats you believe local companies in Romania need to manage now.

8. What changes do you estimate to appear on the IT market in the coming years? Can trends be envisioned for Romania?

9. Would you like to mention anything else?

INTERCONNECTIONS BETWEEN GOOD GOVERNANCE INDICATORS AND WELLBEING IN EUROPEAN CONTEXT

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Abstract

Life satisfaction may be influenced or depends by a lot of factors, alike education level, health, income level, interpersonal relationships, personal and professional success, religion, and the list may continue. It is imperative to emphasize that beyond internal factors, wellbeing can be observed, measured and improved in a national context, as a result of public governance. Broadly speaking, the state governs the directions of development and welfare by setting legislative framework, enacting policies, by its institutions, offering to the society certain economic, social, political, cultural characteristics, etc., context in which people's lives take place.

By this study, we analyse the correlation between good governance indicators and some relevant indicators describing and measuring wellbeing of citizens, with the purpose of emphasizing and prioritizing the role of good governance principles in influencing the wellbeing in societies. Correlation analyses generally cover the period 2000-2020, based on the available data collected from World Bank, Eurostat, Human Development Reports and World Happiness Reports databases. Being useful for public decision makers and other specialist in the field, our results show strong positive and statistically significant interconnections between almost all world governance indicators and GDP per capita, Human Development Index and Happiness Index, validating simple and general principles of governance for conditioning the happiness for dynamic and permanent changing civilizations.

Keywords: *good governance principles; wellbeing; human development; happiness; European countries.*

JEL Classification: H19, I31

1. INTRODUCTION

Wellbeing represents the final purpose of governance. In general, it may be associated with economic growth, economic development, sustainable development, a good health, safety, security, happiness, human development,

success, high standard of living etc. However, we believe that the material transposition of the term may differ depending on the expectations of the society over a certain period in time or even, depending individual expectations of people. In this sense, Veenhoven (2000) made the difference between an “*individual wellbeing*” and a “*social wellbeing*”, highlighting the separated meanings for each of them, namely: “*wellbeing usually refers to the degree to which an individual is well*” and that the wellbeing is when “*the social system is functioning well*” (Veenhoven, 2000, p. 3).

There are many papers studying the relationship between good governance and different indicators measuring facets of wellbeing. Briefly, it is started from the reality that, as a main actor in societies, the welfare state produces and distributes welfare services aiming and to positively influence the wellbeing state of citizens. Fulfilling such objectives and promoting social values, ideally is it rigorously required that the public policies to be conducted under the “umbrella” of the principles of good governance. In general, the results of the empirical and theoretical literature in the field provide positive connections between good governance indicators and wellbeing. Bayar (2016) conducted a research based on the European countries with transitional economies between the years 2002-2013 and his results show that almost all indicators of good governance (of World Bank), except Regulatory Quality, manifest positive and significant influence on economic growth. The greatest impact is exerted by the indicators Control of Corruption and Rule of Law, while the lowest impact is exerted by the indicator Political Stability. In line with this, a theoretical paper in the field (Al-Naser, 2019) emphasized the fact that economic growth is highly influenced by the Control of Corruption, Political Stability, Accountability and Transparency as principles of good governance in many countries. Similar results were obtained by AlShiab, Al-Malkawi and Lahrech (2020) on a research based on 29 countries, highlighting that world governance indicators manifest a positive effect on economic growth, both for developed and developing countries.

On the other hand, we found some studies confirming the important role of good governance for human development. Keser and Gökmen (2018) conducted a study for the period 2002-2012, for a sample of 33 countries of European Union showing that three indicators of good governance, namely, Government Effectiveness, Regulatory Quality and Rule of Law exert a positive and significant influence on human development level. Similarly, Tsegaw (2020) conducted research for 49 African countries, for the period 2000-2018, concluding that the Rule of Law, Regulatory Quality and Political Stability and Absence of Violence have a direct and significant connection with Human Development Index.

A very representative measure of wellbeing is given by indicators of happiness. From this perspective, Helliwell *et al.* (2018) proofed that people are happier with their lives in countries with high quality governance in a study based on 157 countries, during 2005-2012. The research concludes that improving

governance over a long period of time can lead to important changes in quality of life, which is more extensive than what a productive economy means. Another paper (Ott, 2011) shows that good governance produces a higher level of happiness and also reduce the inequality of happiness for citizens. The results of the paper suggests that the relationship between good governance and happiness follow a bell-shaped pattern and that the inequality of the happiness is higher in countries with medium quality of governance. Some authors (Debnath and Shankar, 2014) argue that show that government may increase the happiness of people by analysing their behaviour and expectations, arguing that governors can make budgets and based on people's preferences. And Pradhan (2011) shows that good governance and human development from the past lead to increasing the level of human development from the present in the case of India. In this respect, the author suggests that a better institutional mechanism and good governance may successfully lead to a superior level of growth and human development of the country. Similar results were obtained by: Chung and Im (2021) – they found evidences that government competitiveness manifest a positive and significant effect on happiness; Woo (2018) – he shows that good governance leads to happiness only in the high-income countries; Berggren and Bjørnskov (2020), and Serikbayeva and Abdulla (2021).

The main objective of our paper is to we analyse the correlation between good governance indicators and some relevant indicators, from our view, describing and measuring wellbeing of citizens (GDP per capita, Human Development Index and Happiness Index), with the purpose of emphasizing and prioritizing the role of good governance principles in influencing the wellbeing in societies. Correlation analyses generally cover the period 2000-2020, for the European Member States, being based on the available data collected from World Bank, Eurostat, Human Development Reports and World Happiness Reports databases.

The paper is structured as follow. Section 1 presents the Introduction into the topic, showing and some relevant literature in the field. In Section 2 we briefly documented the concept of good governance and its principles, formulated some potential effects of it on wellbeing and suggested some practical solutions in order to consecrate the good governance and to realize as many the potential positive effects on wellbeing. In Section 3 we performed the correlation analyse between good governance indicators and some wellbeing indicators (GDP per capita, Human Development Index and Happiness Index) for European Member States and in Section 4 are presented the final concluding remarks.

2. THE CONCEPT OF GOOD GOVERNANCE AND ITS CONNECTIONS WITH THE WELLBEING

The term of “governance” is not new, its significance has found a practical transposition since the beginning of civilizations, with the emergence of

communities and state formations and each historical stage has left its own imprint on the meaning of the term. The term of “good governance” has become important in the “context of the revitalization of democracy” (Ali, 2015, p. 1) and at present, the term of “governance” is complex, has many facets and is defined differently in the literature. Being, firstly defined as act of leading, public governance refers the efficient management of public financial resources in order to respond to the expressed public needs of citizens, this giving legitimacy to the existence of the state, in fact.

Furthermore, governance is closely related to development, as final purpose of it, as it is defined by some authors (Landell-Mills and Serageldin, 1991): “the use of political authority and exercise of control over a society and the management of resources for social and economic development”. Also, Ali (2015) emphasizes that good governance refers to the political and institutional processes and outcomes that are considered necessary to achieve the goals of sustainable development. A more complete definition of governance refers to: “the transparent and accountable management of human, natural, economic and financial resources for the purposes of equitable and sustainable development, in the context of a political and institutional environment that upholds human rights, democratic principles and the rule of law” (Cotonou Partnership Agreement Art 9.3 taken from Bundschuh-Rieseneder, 2008), emphasizing the democratic characteristics of governance, without forgetting that, in fact, it can manifest itself only in a democratic context.

Some definitions of governance are rather based on a list of principles or characteristics, with the purpose to better highlight the way in which public decision-making processes should be conducted within the governing act. In this regard, the European Commission attributes the following principles to public governance: openness, participation, accountability, efficiency and coherence (European Commission, 2001). Of course, the list of principles of good governance is the subject of much academic research (Van Doeveren, 2011) and is nuanced differently for most international institutions and organizations, including others such as control of corruption, sustainability and long-term orientation, sound financial management, etc.). However, the most common are the following: accountability, effectiveness and efficiency, openness/transparency, participation, rule of law (Van Doeveren, 2011). Others authors claim for other characteristics or principles of good governance: openness, participation, legitimacy, transparency, effectiveness and efficiency, accountability and availability, predictability, coherence - Bundschuh-Rieseneder (2008); legitimacy and voice, direction, performance, accountability, fairness – Graham, Plumptre and Amos (2003); voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, control of corruption - Kaufmann, Kraay and Mastruzzi (2011);

inclusivity, fairness, transparency, accountability, legitimacy, direction, performance, and capability – Pomeranz and Stedman (2020).

Good governance does not have an unanimously accepted definition, some emphasize the political nature of power, some the aspects of public financial resources management, and others the purposes of the governance act. If we see the term as an act of leadership, then we must emphasize that governance “it’s not about making «correct» decisions, but about the best possible process for making those decisions” (Ali, 2015). The mission of the rulers is to build sound and coherent public policies and strategies, in order to provide quality public goods and services, to guarantee a range of human rights, to empower the economy, to promote environmental protection, and finally to enhance (sustainable) development, to increase the wellbeing of people.

In this respect, we formulated some connection between the principles of good governance of the World Bank and the characteristics of governance for each of it with the potential results in wellbeing (Table 1). As stated previously, the principles of good governance formulated by World Bank (Kaufmann, Kraay and Mastruzzi, 2011) are Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption.

Table 1. Connections between good governance and wellbeing

Dimensions of good governance (World Bank)	Characteristics of good governance	Types of potential effects on wellbeing
Voice and Accountability	- participation; is respected the right to vote of people;	- governance in the interest of society - meeting the expressed needs of communities; - freedom of association and expression; - the reliability of the economic and social relations, resulting in the proliferation of the expected positive results;
Political Stability and Absence of Violence/Terrorism	- political stability; - coherence;	- reduction (exclusion) of cases of politically-motivated violence and terrorism; - secure, predictable economic and social climate;
Government Effectiveness	- quality public goods and services, provided under conditions of political independence;	- promoting competition, thus increasing the performance of the private sector; - the satisfaction of the people for having received quality public

Dimensions of good governance (World Bank)	Characteristics of good governance	Types of potential effects on wellbeing
	<ul style="list-style-type: none"> - the quality formulation and implementation of public policies; - government credibility; 	<ul style="list-style-type: none"> goods and services; the happiness for feeling respected; - promoting growth and attracting social responsibility and commitment;
Regulatory Quality	<ul style="list-style-type: none"> - rigorous, solid, clear and predictable legal framework; - coherent and sustainable public policies; 	<ul style="list-style-type: none"> - private sector development;
Rule of Law	<ul style="list-style-type: none"> - the society has fair and impartial rules; - the credibility and solidity of the institutions (e.g., police and courts); 	<ul style="list-style-type: none"> - the quality of the execution of the contracts and the property rights are respected in particular; - equality before the law; - reduction of crime and violence; - people feel safe; increasing self-esteem and respect for others; - increasing labor productivity, creativity and innovation;
Control of Corruption	<ul style="list-style-type: none"> - honesty of public decision makers; - transparency of policy making; - efficient financial management. 	<ul style="list-style-type: none"> - increased trust of the private company in the state, increase of responsibility and social assumption; - offering quality social goods and services.

Source: the authors

As we formulated in Table 1, we believe that the observance of the principles of good governance create a participatory, coherent, stable, credible, rigorous, solid, clear, transparent and effective, so, a strong frame of governance. In general, the principles of governance are interconnected, so, it is not always possible to distinguish separate benefits in the wellbeing, yet, we tried to draw a non-exhaustive list with the most foreseeable benefits, for each of them.

Many of the principles mediate the provision of quality public services, and the most relevant of these seem to be Government Effectiveness and Control of Corruption. Some principles seem to be directly connected to potential benefits as economic growth and development (e.g., Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption), some of them especially seem to be connected to the observance of some fundamental human rights, as the right to vote, freedom of expression, the right to property and integrity (human dignity), equality before the law, (e.g., Voice and Accountability, Political Stability and

Absence of Violence/Terrorism, Rule of Law). Also, we believe that a good governance may promote the increase of labor productivity, creativity and innovation or even influence the psychological state of people, increasing self-esteem and respect for others (e.g., Rule of Law) and that some of them may help to increase the responsibility and social assumption of people (e.g., Control of Corruption, Government Effectiveness).

By adhering to these principles on a large scale, it is outlined an open leadership style, oriented exclusively towards satisfying the general interests of citizens, validating their right to participate in public decision-making processes, the right to property and integrity in general, enshrining the characteristics of the democratic regime. Along with the numerous theorizations in the field, some practical measures are required to valorize them and to materialize them as such, in order to consecrate and to give authenticity to the term good governance, and last but not least, to realize as many the potential positive effects on wellbeing. From our point of view, it would be useful to create specific control mechanisms for verifying the observance of the governance principles at national and local level and based on this to formulate some improvement recommendations or penalty (Onofrei *et al.*, 2022), if the case (by the authors of the control). Secondly, it is recommended to promote more intensely a series of moral qualities of the rulers, but also their professional integrity through a politically independent media and public opinion in general, by public promotion of the best professionals, respectively, the “penalization” of those of a doubtful moral and professional quality. Finally, a livelier civic spirit of criticism and acceptance/ non-acceptance of good/ bad behaviors and leadership styles it would be beneficial.

3. GOOD GOVERNANCE AND WELLBEING – AN EMPIRICAL ANALYSIS

In this section we analyzed the correlation of good governance indicators (of World Bank) and some indicators measuring aspects of wellbeing of citizens. Firstly, we used the most common measure of wealthy in a country, namely the GDP per capita at national level, with the understanding that only GDP indicator is not enough to measure the level of development of a country, as this does not include and the social and environment dimension of term of wellbeing (Stiglitz, Sen and Fitoussi, 2009). The development or wellbeing represents complex terms (Todaro and Smith, 2011), with multiple facets, including not only aspects related to the level of economic development, but also social, cultural, political, environmental aspects, etc. Moreover, a certain level of development may be perceived as satisfactory by a certain group of people, while the same level of development may be perceived as unsatisfactory by another group of people. In other words, the meaning of development or wellbeing terms, can be as volatile as individuals' expectations and needs may differ. Thus, in reality, the level of wellbeing of a country may have different shades from the official statistics, these

coming both from the reduced possibility to measure all the facets of the development level (with a single indicator), as well as from the different expectations of individuals regarding the fulfilment of their needs or their perceptions of a certain standard of living as satisfactory.

In order to identify the empirical connections between the indicators of good governance and GDP per capita, we performed a covariance analysis between them, for the 27 Member States of the European Union, for a period of 21 years, between 2000 and 2020. The covariance matrix is illustrated in Table 2.

Table 2. Correlation analysis between good governance indicators and GDP per capita for European Member States, for the period 2000-2020

Covariance Analysis: Ordinary

Sample: 2000 2020

Included observations: 539

Balanced sample (listwise missing value deletion)

Correlation Probability	GDP CAP	WGI	VA	PSNV	GE	RL	RQ	CC
GDP CAP	1.000000 ----							
WGI	0.731855 0.0000	1.000000 ----						
VA	0.723022 0.0000	0.948405 0.0000	1.000000 ----					
PSNV	0.426537 0.0000	0.698377 0.0000	0.604806 0.0000	1.000000 ----				
GE	0.685784 0.0000	0.965314 0.0000	0.902780 0.0000	0.606044 0.0000	1.000000 ----			
RL	0.722571 0.0000	0.976680 0.0000	0.928288 0.0000	0.618990 0.0000	0.941330 0.0000	1.000000 ----		
RQ	0.692219 0.0000	0.933631 0.0000	0.878970 0.0000	0.590873 0.0000	0.876908 0.0000	0.905770 0.0000	1.000000 ----	
CC	0.745582 0.0000	0.970208 0.0000	0.917649 0.0000	0.575494 0.0000	0.939438 0.0000	0.947700 0.0000	0.892046 0.0000	1.000000 ----

Source: own computations based on the data from the World Bank and Eurostat databases



Source: own computations based on the data from the World Bank and Eurostat databases

Figures 1-7. Graphical correlation between good governance indicators and GDP/capita in European Member States, for the period 2000-2020

For the most variables of good governance, Voice and Accountability (va), Rule of Law (rl), Control of Corruption (cc), but also for the average of all indicators (wgi), the calculated correlation coefficient is over 0.72, validating a strong positive and significant correlation with the GDP per capita indicator (gdpcap). Also, for the variables Regulatory Quality (rq) and Government Effectiveness (ge), the calculated correlation coefficients denote a statistically positive and significant correlation. We find a weaker correlation between the variables Political Stability No Violence (psnv) and GDP per capita (gdpcap).

For a better illustration, the relationship between good governance indicators and GDP per capita is shown in Figures 1-7. And following the graphical analysis, there is a direct and strong positive link between the average indicators of good governance and GDP per capita, as well as between each of the indicators of good governance and GDP per capita. Only, there is a weak link between the indicator Political Stability No Violence (psnv) and GDP per capita (gdpcap). In the academic literature we found and others confirmations of the contribution of good governance to the economy, namely, Helliwell *et al.* (2018) argue that the quality of governance exerted positive effects on the productivity of the economy for the case of Pakistan. Zubair and Khan (2014) started from the hypothesis that a low political instability, the existence of mechanisms for voice and accountability, control of corruption and the prevalence of the rule of law will contribute to a rapid economic growth; their results showed that political stability has the most significant effects on economic growth.

Another eloquent measure of development is the Human Development Index (HDI), being a three-dimensional composite index: Long and healthy life (Life expectancy at birth), Knowledge (Expected years of schooling and Mean years of schooling) and A decent standard of living (Gini per capita). We also realized a correlation analysis, for the Member States for a period of 14 years, between 2006 and 2019.

We found a positive and statistically significant relationship between some indicators of good governance and Human Development Index. In order of importance of the computed coefficient, they are ranked as follows: Voice and Accountability (va), Control of Corruption (cc), Rule of Law (rl), Government Effectiveness (ge) and Regulatory Quality (rq). Also, a weak correlation is revealed between Political Stability No Violence and HDI (coefficient is 0.3658), but the mean of all good governance indicators still manifests an important connection with the HDI.

Table 3. Correlation analysis between good governance indicators and Human Development Index for European Member States, for the period 2006-2019

Covariance Analysis: Ordinary

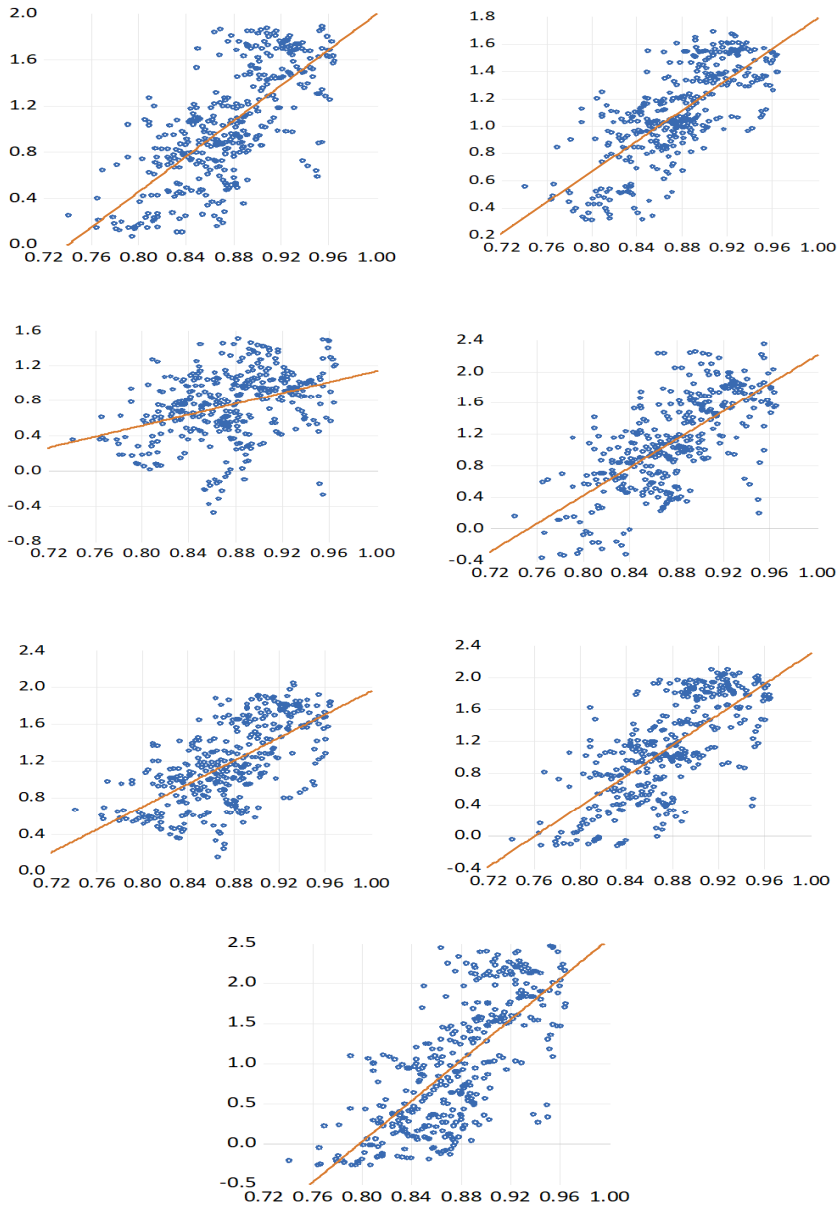
Sample: 2006 2019

Included observations: 378

Correlation Probability	HDI	WGI	VA	PSNV	GE	RL	RQ	CC
HDI	1.000000 ----							
WGI	0.711967 0.0000	1.000000 ----						
VA	0.742469 0.0000	0.952451 0.0000	1.000000 ----					
PSNV	0.365859 0.0000	0.691693 0.0000	0.595430 0.0000	1.000000 ----				
GE	0.689710 0.0000	0.966349 0.0000	0.905925 0.0000	0.617221 0.0000	1.000000 ----			
RL	0.709983 0.0000	0.978060 0.0000	0.934102 0.0000	0.610170 0.0000	0.946011 0.0000	1.000000 ----		
RQ	0.650261 0.0000	0.932279 0.0000	0.884730 0.0000	0.583017 0.0000	0.868330 0.0000	0.906391 0.0000	1.000000 ----	
CC	0.721166 0.0000	0.971198 0.0000	0.926484 0.0000	0.567444 0.0000	0.938252 0.0000	0.950175 0.0000	0.893278 0.0000	1.000000 ----

Source: own computations based on the data from the Human Development Reports and Eurostat databases

Following the graphical analysis in Figures 8-14, there is a direct and strong positive link between the average indicators of good governance and Human Development Index (HDI), as well as between each of the indicators of good governance and HDI. Only, there is a little weak link between the indicator Political Stability No Violence (psnv) and HDI. There are others studies analyzing the relationship between governance indicators and Human Development Index. Keser and Gökmen (2018) conducted a study for 33 European countries between the years 2002-2012, concluding that Government Effectiveness, Regulatory Quality and Rule of Law have the main contribution in increasing the human development level. Similar results were obtained by Tsegaw (2020), highlighting that the Rule of Law, Regulatory Quality, and Political Stability and Absence of Violence have a direct and significant positive effect on Human Development Index, in the case of 49 African countries.



Source: own computations based on the data from the Human Development Reports and Eurostat databases

Figures 8-14. Graphical correlation between good governance indicators and Human Development in European Member States, for the period 2006-2019

In order to offer soundness to the research, we also analyzed the correlation between WGI and Happiness Index, one of the most representative indicators for wellbeing (see Table 4). The data is collected from the World Happiness Report website, since 2005 to 2020, in order to proceed with the correlation analysis for the Member States.

Table 4. Correlation analysis between good governance indicators and Happiness Index for European Member States, for the period 2005-2020

Covariance Analysis: Ordinary

Sample: 2 432

Included observations: 367

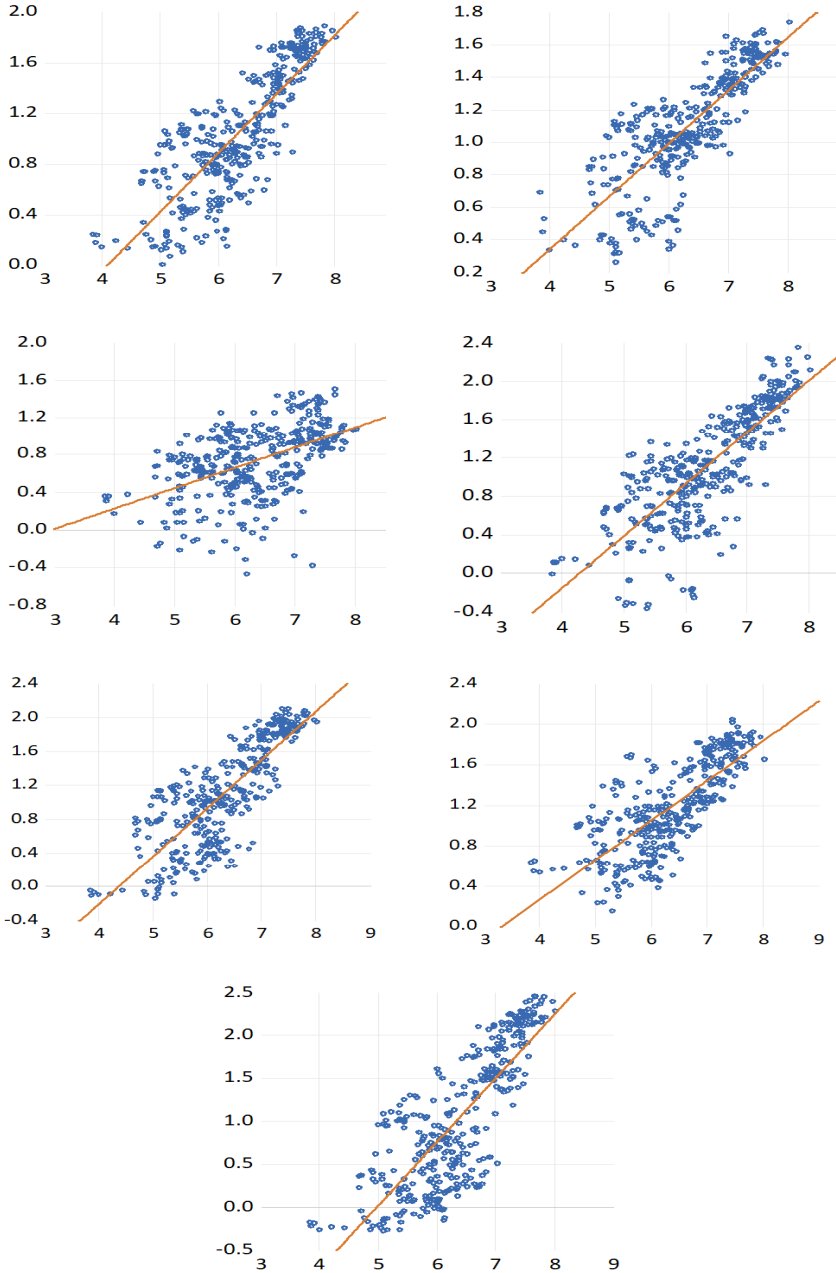
Balanced sample (listwise missing value deletion)

Correlation Probability	HAPP	WGI	VA	PSNV	GE	RL	RQ	CC
HAPP	1.000000 -----							
WGI	0.823380 0.0000	1.000000 -----						
VA	0.816856 0.0000	0.949458 0.0000	1.000000 -----					
PSNV	0.497650 0.0000	0.683748 0.0000	0.583030 0.0000	1.000000 -----				
GE	0.799720 0.0000	0.967041 0.0000	0.908880 0.0000	0.606595 0.0000	1.000000 -----			
RL	0.816052 0.0000	0.979815 0.0000	0.930574 0.0000	0.606353 0.0000	0.949073 0.0000	1.000000 -----		
RQ	0.764770 0.0000	0.935339 0.0000	0.879274 0.0000	0.581306 0.0000	0.873188 0.0000	0.911541 0.0000	1.000000 -----	
CC	0.809396 0.0000	0.971932 0.0000	0.922882 0.0000	0.561628 0.0000	0.938445 0.0000	0.953629 0.0000	0.897496 0.0000	1.000000 -----

Source: own computations based on the data from the World Happiness Report and Eurostat databases

In this case, we found a positive and strong correlation of Happiness Index with the Voice and Accountability, Rule of Law, Control of Corruption, Government Effectiveness and Regulatory Quality. Again, there is a low correlation with Political Stability No Violence, but still strong with the mean of world governance indicators.

The graphical illustrations in Figures 15-21 confirm also the results from the correlation matrix. Happiness represent subject for many research. In this sense, Berggren and Bjørnskov (2020) argue that the institutions (as pylon of good governance) have a great role in life satisfaction, analyzing them separately by various categories they can by. So, political institutions exert positive influence on life satisfaction through democracy, judicial institution by being effective, fair, and inclusive and economic institution by strengthening the role of markets in society. Another research (Chung and Im, 2021) show that happiness may be increased by government competitiveness, quality of democracy and judicial independence.



Source: own computations based on the data from the World Happiness Report and Eurostat databases

Figures 15-21. Graphical correlation between good governance indicators and Happiness Index for European Member States, for the period 2005-2020

As a matter of fact, we should also emphasize that the relationship between good governance and wellbeing of citizens is a bidirectional one. However, as concluding remark, the hierarchy of good governance indicators in relation to wellbeing is quite unitary for almost the three correlation analyses. The first three most important indicators are Voice and Accountability, Rule of Law and Control of Corruption, followed by the Government Effectiveness and Regulatory Quality. For each case the Political Stability No Violence indicator manifest a weak influence to wellbeing, probably because of its meaning (perception of the likelihood of the government being destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism), which in the opinion of the respondents, is rarely to transpose into reality, and therefore, its potential effects on wellbeing cannot be measured as such.

4. CONCLUSIONS

In this study we analysed the correlation between good governance indicators and some indicators of wellbeing, namely GDP per capita, Human Development Index and Happiness Index for the European Member States. First of all, we briefly documented the concept of good governance and its principles and formulated some potential effects of it on wellbeing. In general, the principles of governance are interconnected, so, it is not always possible to distinguish separate benefits in the wellbeing. Many of the principles mediate the provision of quality public services, and the most relevant of these seem to be Government Effectiveness and Control of Corruption. Some principles seem to be directly connected to potential benefits as economic growth and development (e.g., Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption), some of them especially seem to be connected to the observance of some fundamental human rights, as the right to vote, freedom of expression, the right to property and integrity (human dignity), equality before the law, (e.g., Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Rule of Law). Also, we believe that a good governance may promote the increase of labor productivity, creativity and innovation or even influence the psychological state of people, increasing self-esteem and respect for others (e.g., Rule of Law) and that some of them may help to increase the responsibility and social assumption of people (e.g., Control of Corruption, Government Effectiveness).

Concerning the empirical analysis, as expected, our results show positive and significant intercorrelations between wellbeing and the main good governance of World Bank. Also, the results of the analyses are quite unitary and depending on the calculated coefficient the first three most important indicators are Voice and Accountability, Rule of Law and Control of Corruption, followed by the Government Effectiveness and Regulatory Quality. The Political Stability No

Violence indicator has a weak correlation with any of indicators GDP per capita, Human Development Index and Happiness Index.

Finally, we suggested some practical solutions in order to consecrate the good governance for to realize as many the potential positive effects on wellbeing. From our point of view, it would be useful to create specific control mechanisms for verifying the observance of the governance principles at national and local level and based on this to formulate some improvement recommendations or penalty, if the case (by the authors of the control). Secondly, it is recommended to promote more intensely a series of moral qualities of the rulers, but also their professional integrity through a politically independent media and public opinion in general, by public promotion of the best professionals, respectively, the “penalization” of those of a doubtful moral and professional quality, this being, in fact, one of the main reasons that cause the non-fulfilment of the governing political objectives. In other words, a livelier civic spirit of criticism and acceptance/ non-acceptance of good/ bad behaviors and leadership styles it would be beneficial.

The results of our study present an indicative character and may serve as starting point for other depth studies. As limits of our research, we mention the relative short selected timespan and also the small sample size. As well, we appreciate that conducting a panel data analysis that includes and some control variables would allow a more accurate assessment of the (positive) influences of good governance indicators on wellbeing indicators.

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A MANAGERIAL APPROACH ON ORGANISATIONAL CULTURE'S INFLUENCE OVER THE AUTHENTICITY AT WORK

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Abstract

If in previous studies the relationships between job characteristics and results were studied, in the current article we propose to set the focus on the authenticity of involvement in work. The pandemic has generated a rearrangement of personal values, another type of motivation and involvement in work. We aim to investigate the relationship between the organisational culture and the authenticity at work. Then the authenticity at work is analyzed in relationship with the work commitment and job satisfaction.

Design/methodology/approach – We used in this quantitative research the answers of 127 Romanian employees to the survey. The data processing was done with IBM-Amos software. Findings – Results showed that authenticity has a relevant influence on the Job satisfaction. Research limitations/implications – The main limitation of this study is the relatively small number of respondents.

Practical implications – The managers can use the results of the study to understand the importance of organisational culture on the authenticity at work and further implications in job satisfaction.

Keywords: *organisational culture; authenticity at work; job satisfaction; performance.*

JEL Classification: M54, M51, M21

1. INTRODUCTION

Studies show that the authenticity of people at work brings a very high degree of satisfaction. That is, there is a correlation between employee satisfaction for the work done and the freedom to be themselves, because in this way they feel more confident, involved and happy. They have a sense of personal fulfilment at work.

The work environment created on the basis of authenticity has trust, respect, acceptance and cooperation as its main pillars. They are absolutely necessary in individual and team performance, efficiency, dedication and success. Inclusive leadership is what makes authenticity possible in the workplace. It allows the

accumulation of a reliable capital that leads to positive performance indicators and exceptional financial results.

Involvement in work has a visible effect not only on the well-being and safety of employees, but also on the organization. It is reflected in organizational commitment or in the intention to resign, or in performance and satisfaction.

Due to these turbulent changes caused by the Covid 19 pandemic and the current war in Ukraine, the workforce is repositioning itself and reconsidering its values. There are migrations, resignations and unemployment, lack of personnel in some essential fields. Organizations understand more and more that employees represent their most valuable asset. Satisfied and motivated employees are essential in contemporary businesses and lead to a clear delimitation between success and failure.

The organizational diagnosis can be based on the analysis of the level of involvement in the work and helps to determine the training, motivation and retention strategies of the employees.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 About authenticity at workplace

Authenticity can be considered to be an individual's ability to act in accordance with his/her true self (Neff and Harter, 2002; Metin *et al.*, 2016). Contemporary counselling approaches construe authenticity as a core dimension of well-being and healthy functioning (Wood, Froh and Geraghty, 2010). Based on the previous approaches from the literature, in our study we focus on authenticity because it is considered the main element influencing the performance and workplace well-being.

The academic environment as well as organizations need authenticity at the workplace, and this depends on the organizational culture and provides satisfaction at the workplace (Reis, Trullen and Story, 2016).

We have considered, in our model, two types of organizational cultures: the adhocracy one and the hierarchy one. There are four main types of organizational culture (Fiordelisi and Ricci, 2014; Sok, Blomme and Tromp, 2014): adhocracy culture, hierarchy culture, clan culture, competition culture.

2.2 Adhocracy culture and Hierarchy culture

Adhocracy culture promotes a style based on a nature that is innovative, creative, and adaptable (Veisoh, Shiri and Eghbali, 2014). Previous authors (Pathiranage, Jayatilake and Abeysekera, 2020) were interested in making a literature review on organisational culture towards corporate performance and they synthesized that (Engelen *et al.*, 2014) highlighted a significant link between the adhocracy culture and the orientation towards an innovative entrepreneurial approach. According to (Hartnell, Ou and Kinicki, 2011), in a long-term

perspective, there is a positive relationship between adhocracy culture and corporate performance.

According to the previous studies in the literature, it is known that hierarchy culture is strongly based on rules and regulations applicable and suitable for the management of the activities within the organisations (Sok, Blomme and Tromp, 2014).

The pillars of the hierarchy culture are: stability, clear communication and consistency, because the hierarchy culture is mainly focused on efficiency and effectiveness (Fiordelisi and Ricci, 2014).

2.3 Organizational culture – business performance

According to Kotrba *et al.* (2012) and O'Reilly *et al.* (2014) the business performance is strongly influenced by the organizational culture. In the same vein, the organisation's performance enhancement is influenced by the establishment of an effective organizational culture (Fusch and Gillespie, 2013). Also, a strong relationship was discovered by Uddin, Luva and Hossian (2013) between the organizational culture and the business performance.

2.4 Job Satisfaction and Work Commitment

Satisfied and motivated employees are imperative for contemporary business and a key factor that separates successful companies from the alternative (Millar, Chen and Waller, 2017). Job satisfaction is a key element of work motivation, which is a fundamental determinant of one's behaviour in an organization.

Based on the previous study conducted by Čulibrk *et al.* (2018), the article published by Mendoza (2019) stated that work commitment represents a special type of attitude in relationship with work and it is usually considered to be the degree to which one identifies psychologically with one's work and how much importance one places on their work.

Based on the specialized literature, we established the following research hypotheses.

- H1: Hierarchical culture has a significant influence on the Authenticity at work
- H2: Adhocracy culture has a significant influence on the Authenticity at work
- H3: Authenticity at work has a significant influence on Work commitment
- H4: Authenticity at work has a significant influence on Job satisfaction

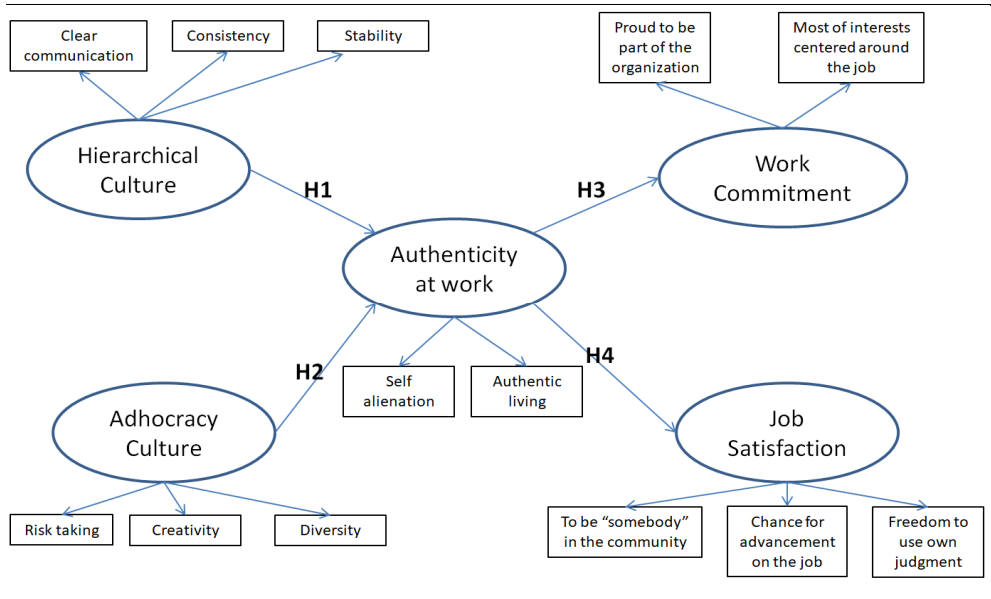
3. INSTRUMENT AND METHODOLOGY

3.1 Instruments

In this article, we relied on a quantitative research, based on a survey, using the questionnaire as an instrument. Initially, we had a sample target of 310 people, but 127 of them were valid. The obtained data were processed using Google Forms, IBM SPSS Statistics 21, Microsoft Excel 2010 and IBM SPSS Amos 21.

According to Figure 1, our model contains the following latent variables:

- Hierarchical Culture: 3 indicators
- Adhocracy Culture: 3 indicators
- Authenticity at Work: 2 indicators
- Work Commitment: 2 indicators
- Job Satisfaction: 3 indicators



Source: own representation based on the research hypothesis development from literature review

Figure 1. The Model – Correlation between organisational culture, authenticity at work and outcomes

4. DATA ANALYSIS

Our data analysis contains three different stages. First, we conducted an exploratory factor analysis (EFA) in order to determine whether the initial items (questions) are correctly associated with the dimensions (constructs) they represent. Then, we conducted CFA (confirmatory factor analysis) to test our proposed measurement model. Finally, in the last step of our data analysis we used the path analysis technique to create and test the causal model presented in Figure 1. During our research we used structural equation modelling methodology, we analyzed the convergent validity (Table 1) and discriminant validity (Table 2). Then we focused on the model fit and the hypotheses validation.

Table 1. The convergent validity of the model

Indicator variables		Latent variables	Standardized loadings	Square of Standardized loadings	Sum of Squared Standardized loadings	Number of indicators	AVE
HC1	<---	HC	0.965	0.931	2.165	3	0.722
HC2	<---	HC	0.933	0.870			
HC3	<---	HC	0.603	0.364			
AC1	<---	AC	0.896	0.803	2.462	3	0.821
AC2	<---	AC	0.930	0.865			
AC3	<---	AC	0.891	0.794			
AW1	<---	AW	0.913	0.834	1.654	2	0.827
AW2	<---	AW	0.906	0.821			
WC1	<---	WC	0.705	0.497	1.390	2	0.695
WC2	<---	WC	0.945	0.893			
JS1	<---	JS	0.844	0.712	2.255	3	0.752
JS2	<---	JS	0.861	0.741			
JS3	<---	JS	0.895	0.801			

Source: own representation based on the results obtained from Excel

As it can be seen, all the AVE values are greater than 0.50. These values fully confirm the convergent validity of the proposed model.

Table 2. Discriminant Validity

Latent Variables	HC	AC	AW	WC	JS
HC	0.850				
AC	0.062	0.906			
AW	0.297	0.459	0.910		
WC	-0.701	0.143	-0.146	0.834	
JS	0.130	0.215	0.036	0.301	0.867

Source: own representation based on results obtained from Excel

All the square roots of AVE are greater than the latent variables correlations.

Using these new data we can analyze the structural model and model fit. We calculated the following values in AMOS: χ^2/df ratio (CMIN/DF) is 3.609, the discrepancy divided by degrees of freedom is $220.132 / 61 = 3.609$ (condition: χ^2/df ratio < 5.00) and GFI (Goodness of Fit) is 0.800 (condition: $GFI \geq 0.800$).

The values of the estimates are presented in Table 3.

Table 3. Estimates and values

Constructs			Estimate	p-value
AW	<---	HC	0.348	***
AW	<---	AC	0.427	***
WC	<---	AW	-0.188	0.154
JS	<---	AW	0.271	0.005

Note: *** $p < 0.001$

Source: results obtained from AMOS software

Based on the estimates and p-values, it can be seen that:

- There is a positive and significant relationship between hierarchical culture and authenticity at workplace.
- There is a positive and significant relationship between adhocracy culture and authenticity at workplace
- There is not a significant relationship between authenticity at work and work commitment.
- There is a positive and significant relationship between authenticity at work and job satisfaction.

Based on these data we can focus now on the hypotheses validity, according to the results presented in Table 4.

Table 4. Hypotheses (in)validation

Hypothesis	Result
H1: Hierarchical culture has a significant influence on the Authenticity at work	Supported
H2: Adhocracy culture has a significant influence on the Authenticity at work	Supported
H3: Authenticity at work has a significant influence on Work commitment	Rejected
H4: Job satisfaction has a significant influence on the Authenticity at work	Supported

Source: own results based on data analysis

The hypotheses H1, H2 and H4 are fully supported. As for hypothesis H3, the research shows that there is a negative relation between work commitment and authenticity at work, contrary to the hypothesis, but the p-value doesn't suggest a significant influence. All these results are discussed in detail in the following section.

5. DISCUSSION. MANAGERIAL IMPLICATION

Based on the results obtained from the research, we can highlight some important aspects. The research shows that authenticity at the workplace depends positively and importantly on the hierarchical culture and the adhocracy culture. Authenticity at the workplace brings a certain satisfaction in the work of employees. But authenticity at work does not generate a certain commitment at work. Thus, our research can be a knowledge foundation for the managers in big companies where it is possible to have many departments with different types of cultures.

6. CONCLUSIONS, LIMITATION AND FUTURE RESEARCH DIRECTIONS

Regarding the *limitations* of the research, they can be identified based on the used methodology. We took into consideration only 127 valid respondents from the total of 310 considered at the beginning. Also, we have respondents only from Romania.

Considering these limitations, we propose some *future research directions*. For example, we intend to generate a detailed analysis on groups of jobs (IT, public administration, commerce etc.); also, we will repeat the study with a bigger sample size to compare the results with the current article. Another future direction involves a comparative analysis between regions and/or countries from Europe in order to have a regional picture about the correlation between variables taking also into consideration the national culture. Another further research direction is to extend the analysis in order to apply the construct to age groups to see the differences according to age variable.

According to the model, if the managers want to increase the work commitment, the solution is not authenticity at work. Authenticity at work has influences only on job satisfaction, so the managers should identify different “keys” to get the way to work commitment.

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THE EVALUATION OF PUBLIC AIDS TO BUSINESS ENTITIES DURING COVID-19 PANDEMIC: A SOAR ANALYSIS

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Abstract

The objective of the article is to evaluate, based on primary research, the effectiveness of the public aid of the entities during Covid-19 pandemic within their activity to be supported or, on the contrary, stopped the operation. At the same time, a proposal is made to evaluate the effectiveness of these supports from the point of view of business entities and public administration using SOAR analysis. The results showed that blanket support is not that effective, and a dialogue is necessary, which can be opened precisely with the help of the national recovery plan, when it was calculated that there could be an improvement from 38% to 76.25 in 2027.

Keywords: *SOAR; public aid; effectiveness.*

JEL Classification: D22, H25, L26

1. INTRODUCTION TO PUBLIC AID DURING PANDEMIC

The Covid-19 pandemic has created major problems not only for national economies but also for the entrepreneurs themselves. This financial behaviour is valid within a 'normal' situation without any problems, which affects whole economies due to the Covid-19 pandemic of March 2020 (Duháček Šebestová *et al.*, 2021; Duháček Šebestová, Pokorná and Krejčí, 2021). Many enterprises had to be closed or limited due to anti-epidemic restriction provided by national governments. It was the main reason why government support is provided to sole proprietors. In the current crisis caused by the COVID-19 pandemic, the ECB has announced the Pandemic Emergency Purchase Program (PEPP) worth of EUR 1,350 billion (Jabłońska *et al.*, 2021). A survey was conducted among 5,206 entrepreneurs in 23 countries (in the period from April to August 2020), provided by Stephan *et al.* (2021), showed that as many as 61% of entrepreneurs considered the existence of their business was at risk due to a significant decline in commercial activity during the Covid-19 pandemic, so it was the reason for public body activities, examples of which examples are mentioned in Table 1.

Table 1. Examples of different types of Covid-19 public business aid support

Source	Main focus of support	Country
Canady, 2020	CARES Act, support of mental health providers, small loan assistance, 2 trillion stimulus aid package, providers less than 500 employees	USA
Block, Fisch and Hirschmann, 2020; Nienaber, 2020	Aid package for sole and micro enterprises, immediate financial assistance in amount of € 9,000.	Germany
Brühlhart, <i>et al.</i> , 2020	Corona loans, compensations for employees	Switzerland
Granja <i>et al.</i> , 2020; Chetty <i>et al.</i> , 2020	Paycheck Protection Program	USA
Zoller-Rydzek and Keller, 2020	Evaluation of the impact of guarantee and loans on the financial health of microenterprises, three scenarios	Switzerland
Florczak, 2020	Support for employers through co-financing of remuneration for employees from the Guaranteed Employee Benefits Fund, One-off payment for persons conducting sole proprietorship in 80% of minimum wage rate 2020, A low-interest loan of PLN 5,000 is available for micro-entrepreneurs	Poland
EU Commission, 2021a - State Aid SA.61358 (2021/N) – Czech Republic - 2021	Compensation bonus for self-employed persons and partners of small, limited liability companies, who have been prevented – completely or partially – from carrying out their business activities as a result of the COVID-19 outbreak	Czech Republic
EU Commission, 2021b State Aid SA.61486(2021/N) – Sweden	Aid in the form of guarantees on new loans; loans will be guaranteed in 70%	Sweden
EU Commission, 2020a -State Aid SA.60274 (2020/N) – Cyprus	Support businesses and workers due to COVID-19 during the period 16 March 2020 – 31 October 2020 and have not suffered layoffs. This one-off lump sum grant will amount to: EUR 10,000 for self-employed and enterprises that employ up to 9 people and EUR 15 000 for self-employed and enterprises that employ 10 people or more	Cyprus
EU Commission, 2020b- State Aid SA.59996 (2020/N) – Slovakia	State Aid Scheme for Support of undertakings In relation to the COVID-19 outbreak – fixed costs subsidies	Slovakia

Source: author s comparison based on literature review

To support national aid schemes, the European Commission presented that temporary Support to mitigate Unemployment Risks in an Emergency (SURE) is available for Member States that need to mobilize significant financial means to fight the negative economic and social consequences of the coronavirus outbreak on their territory. It means protecting jobs and, thus, employees and self-employed against the risk of unemployment and loss of income within member states (EU Commission, 2022).

Table 2. SURE fund support within EU countries (2022)

Member State	Total Amount Granted*	Of Which Top-Up	Amount Disbursed*	Amount Outstanding
Belgium	8 197 530 000	394 150 000	8 197 000 000	0
Bulgaria	511 000 000	0	511 000 000	0
Cyprus	603 770 000	124 700 000	603 000 000	0
Czechia	2 000 000 000	0	2 000 000 000	0
Greece	5 265 000 000	2 537 000 000	5 265 000 000	0
Spain	21 324 820 449	0	21 324 000 000	0
Croatia	1 020 600 000	0	1 020 000 000	0
Italy	27 438 486 464	0	27 438 000 000	0
Lithuania	957 260 000	354 950 000	957 000 000	0
Latvia	305 200 000	112 500 000	305 000 000	0
Malta	420 817 000	177 185 000	420 000 000	0
Poland	11 236 693 087	0	8 236 000 000	3 000 000 000
Portugal	5 934 462 488	0	5 411 000 000	523 000 000
Romania	4 099 244 587	0	3 000 000 000	1 099 000 000
Slovenia	1 113 670 000	0	1 113 000 000	0
Slovakia	630 883 600	0	630 000 000	0
Hungary	651 470 000	147 140 000	504 000 000	147 000 000
Ireland	2 473 887 900	0	2 473 000 000	0
Estonia	230 000 000	0	230 000 000	0
Total	94 414 795 575	3 847 625 000	89 637 000 000	4 769 000 000

Source: (EU Commission, 2022, p.7)

The Czech Republic used this support with half the amount of support for Romania but double the amount of support for Slovakia. Public aid included many types of measures, from tax burden reduction to wage subsidies. However, according to Cirera *et al.* (2021) and their data analysis, it follows that the impact of bankruptcy or change in sales was contradictory, thus proving that a general support strategy may not always be effective (Business Europe, 2022).

National impact. Following Table 1, the main focus of this public support is to help sole proprietors to cover fixed costs and to give state-based guaranteed loans for this critical segment of entrepreneurs in the economy in the Czech

Republic, the active number of sole proprietors is more than 603 739 persons (Solitea, 2020; MPO, 2020).

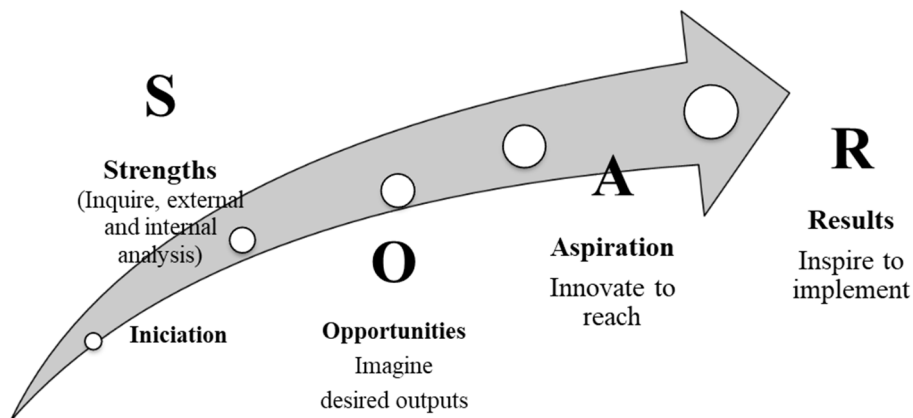
FAPI research (2020), conducted on 90 sole proprietors, has shown that due to the Covid-19 situation, who were "closed" their business de jure 28%, de facto others could use alternative ways, how to deliver their services and products to customers (via social media, e-shops). Their profits fell to 60%.

In line with that, these people tried to find some way to survive in that situation as others. They used a cost reduction (38%), closure of establishments/offices (32%), and a reduction of business activities (29%). The main costs they must cover are rent, energy and lease payments. Opposite to that, we obtain a piece of initial information about a sentiment of governmental support, when almost half (49%) accept it relatively warmly („it is better than nothing") and almost 16% are sceptical. These entrepreneurs stated that they would have a reserve fund to cover the cost (46%) in the words of financial planning. In terms of the plans, 39% of respondents plan to invest in gaining new customers, expanding activities, or expanding into new markets. These results and the existing list of supports were a starting point for finding a current research gap.

Research gap formulation. As already mentioned, EU states, in particular, tried to moderate the effects of the pandemic on business across the board, thanks to the resulting restrictions. However, for the time being, the metrics to measure the impact of social and economic impact are not updated. Above all, the studies focus on the restoration of economic growth, the maintenance of inflation, and other macroeconomic indicators without assessing the side effects of more or less nonfinancial indicators. This principle becomes the starting point for evaluating the situation of entrepreneurs in the Czech Republic (EU Commission, 2022).

2. PUBLIC AID IN THE CZECH REPUBLIC AND POSSIBLE IMPACT MEASUREMENT

The social and economic impact of the allocation of public aid will be assessed by several analyses, mainly secondary data, such as reports or government statistics. Evaluation will have several basic steps. In the first step, based on the data search, a SOAR analysis of public aid will be compiled. A SOAR analysis is a positive approach to strategic thinking and planning that allows an organization or public body to construct its future through collaboration, shared understanding, and commitment to action. It is a reason for using to start this case study (Stavros and Cole, 2013) (Figure 1).



Source: based on Stavros and Cole (2013)

Figure 1. SOAR analysis framework

Based on this analysis, a strategic map will be compiled in the second step, and then an evaluation using balanced dashboard indicators will be proposed to compare the simulation of the impact of a future recovery plan (Ştefan and Brezoi, 2021).

2.1 Strategic analysis of Covid-19 impact: Secondary data analysis

The pandemic had a negative impact on the ratio of defunct companies within the Czech Republic. As a result of the pandemic, far more companies have disappeared in a period without fluctuations in the economy. The failure rate therefore exceeded 50% (Table 3).

Table 3. Closed and new companies within the years 2012 to 2020

Year	Number of closed companies (A)	Number of company birth (B)	Rate of birth (B/A)	Closed companies in % (A/B*100)
2012	5 322	22 454	4.22	23.70
2013	5 249	22 845	4.35	22.98
2014	5 144	24 870	4.83	20.68
2015	6 640	26 953	4.06	24.64
2016	8 079	28 837	3.57	28.02
2017	11 517	32 187	2.79	35.78
2018	12 692	31 270	2.46	40.59
2019	15 044	29 781	1.98	50.52
3Q2020	11 212	20 093	1.76	55.80

Source: (Parlamentní listy, 2020)

On the other hand, as part of the pandemic situation, the government tried to help entrepreneurs with various types of assistance, as reported by the World Bank, which divides the measures into several groups such as finance, demand, employee support, and other aid (Table 4).

Table 4. Forms of public assistance during a pandemic in the Czech Republic

Type of support	Form	Explanation
Debt finance	Credit guarantees - new schemes, more generous guarantee levels	The government further approved the COVID II program with another 5bn CZK allocation in the form of guarantees for loans (CZK 10k to 15m) from commercial banks (with annual deferral of repayments), where the Czech-Moravian Guarantee and Development Bank will be subsidising the interest rate. This is expected to facilitate the distribution of up to CZK 30 billion among the program participants.
	New lending – under concessional terms	Liquidity release in the amount of EUR million 294 The government released CZK 3.3 billion for the 2020 Rural Development Program. This funding should help entrepreneurs in agriculture, food, and forestry while fighting the coronavirus crisis. The main reason for this support is to ensure the independence of Czech food.
Demand	Support for corona-related production - e.g., healthcare products (grants, procurement, et al.), either to ramp up existing capability or for new capability	The COVID Technology Program 19: a subsidy for projects directly linked to the fight against the further spread of coronavirus through the acquisition of new technological equipment and facilities, CZK 300 million in total and The Czech Rise Up Program, to encourage the introduction of new solutions to fight the coronavirus crisis by supporting innovative companies, including start-ups, CZK 200 million in total.
Employment support	Provide wage subsidies (can be broad or targeted – e.g., apprentices) as an alternative to direct payments to individuals	Employees ordered into quarantine will receive 60 % of their salaries, and the government will reimburse the company in full, and employers who must close or reduce operations because of the crisis measures will pay employees their full salaries, and the state will reimburse employers 80 % of the costs.
		The government approved a proposal to modify the Antivirus program. Applying for wages and salaries will be easy. The antivirus employment protection program is designed to help businesses protect their jobs. The state will use the Czech Republic Labour

Type of support	Form	Explanation
		<p>Office to compensate companies for the funds paid out. This measure will help employers better manage the current situation and will not have to resort to layoffs.</p> <p>The government will pay (through the respective employers) 60% of the average contribution base to employees affected by the quarantine. At the same time, the Government will support employers who continue, despite their businesses being shut down, to pay out 100% of the salary to affected employees by covering 80% of salary costs.</p>
Support for informal or self-employed workers		<p>The state will help self-employed people who are taking care of a child from 6 to 13 years of age and who cannot go to work due to the coronavirus by CZK 424 per day. All self-employed who have income only from their business will be given a six-month vacation from the payment of health and social insurance. Holidays cover the amount of the <u>minimum insurance premium</u>, that is, CZK 4 986.</p> <p>The state will pay 424 crowns per day, that is, just under 14,000 crowns per month, to all self-employed persons taking care of children aged 6 to 13</p>
Other finance	Support for firms that need to close or have reduced their activities	To keep the employment rate, the state will provide CZK 100 billion in direct support
Tax	Payroll/social security/VAT taxes/land taxes - rate reductions, credits, waivers, and/or deferrals	Introduction of the Institute of Tax Return retroactivity - entrepreneurs will be able to recover any losses reported from 2020 in their tax base in 2019 and 2018, thereby obtaining a refund from the Financial Administration.

Source: based on data provided by World Bank (2022)

This analysis showed that the public administration tried to stop the collapse of companies by using all available forms of assistance, but the question remained whether the subjects were actively used.

2.2 Strategic analysis of the impact of Covid-19 - Primary data analysis

Primary research was used to determine whether the forms of support were used as planned. Primary research with the owners of sole proprietors had to be carried out with at least a total sample of 177 active respondents randomly selected in the Czech Republic in the fall 2020 from the Amadeus database when the

authors requested a 1% interview 1% from their total number of 611 833 (as a primary activity, ČSSZ, 2020). Unfortunately, the sample size was not as representative (0.03% of the general sole proprietor population in the Czech Republic, but it could help to understand more profoundly the current situation in that business sector as a pilot study and a confirmation study of previous research (Cavana, Delahaye and Sekaran, 2001; FAPI, 2020).

The study's limitations can be seen in the validation of the results, where they describe each respondent's subjective opinion. This choice was appropriate for the research problem, which was to identify different behavioural models for social group support based on their socioeconomic and socio-cultural backgrounds (Alaslani and Collins, 2017).

The main group of respondents were men (65.5 %). When we focus on their experience, most of them have experience of more than 20 years (33.5%), 11 to 20 years (16.5%), 4 to 10 years (29.6%) and the shortest experience - to 3 years (20.4 %). It is essential to mention that most of the respondents (54.8%, 97 respondents) did not request public support. Several of the motives we had noticed are summarized in Table 5.

Table 5. Main motives for using or not using public support (N=177)

Main motives	Percentage share
<i>Active users</i>	35.5%
I really needed it, I used it and I reinvested it back in the business	29.7%
Why not use it when the state gives, and I am entitled to it	5.8%
<i>Not used</i>	64.5%
I did not use it because I did not want to, even though I was entitled to it	32%
I did not reach for any of the help	21.1%
I am embarrassed about this support	7.1%
There was no need for that	4.3%

Source: primary research data

The results had shown that within the respondents there were just two influential groups who believe that they a) must resolve financial problems individually (negative sentiment) and b) could use some supporting tools from the government when the offer is open (39.8%). Individual use of programmes we demonstrate in the following Table 6.

Table 6. A comparison of real Covid programmes using

Type of support	Programmes	No	Yes
Debt financing	Czech Rise Up program - Smart measures against COVID-19	98.5%	1.5%
	Aid for farmers affected by the coronavirus pandemic	99.0%	1.0%
Employment support	Antivirus program- so-called kurzarbeit	94.2%	5.8%
Other finance	COVID-Rent	91.7%	8.3%
	COVID - Program Accommodation	98.5%	1.5%
	COVID – Spa package programme	98.5%	1.5%
	Cultural and Creative Industry Program	99.5%	0.5%
Support for informal or self-employed workers	Compensation bonus = direct support for self-employed persons („pětadvacítka”; CZK 25,000)	48.5%	51.5%
	Program ‘Nursing benefits’ for self-employed persons	87.4%	12.6%
Tax	Forgiveness of social and health insurance contributions for self-employed persons	42.2%	57.8%
	Liberation package - removes entrepreneurs' advances on personal and corporate income tax	94.7%	5.3%

Source: primary research data

According to the results, sole proprietors prefer the direct form of public help to reduce insurance, compensation, bonuses, nursing benefits, and rent reduction. It seems that this type of support could help them with fixed-cost coverage.

Subsequently, they evaluated their future current strategy and their plans (Table 7).

Table 7. Future investment strategy (N=177)

Planned behaviour	Percentage share
I will not change anything - my strategy was good	49%
I will create a reserve fund	23%
I will invest more	19%
None of them – I have no idea	17%
I will not change anything - lack financial sources	10%

Source: primary research data

This table completes the view on the sole proprietor's behaviour when 49% of them are satisfied with their planning, resources, and strategy, supported by

their attitude to public support, mentioned in Table 5. The lack of financial resources was selected as the last option.

3. SOCIAL AND ECONOMIC IMPACT EVALUATION

Due to the analysis of projects, it was necessary to determine what we wanted to achieve through public aid to entrepreneurs. A SOAR analysis was used for this, which was the starting point for determining the mission of the project and setting the dashboard evaluation indicators.

A scale of 1 to 10 was used to evaluate individual factors, with ten being considered essential to achieve the goal of the project. The point evaluation of each factor within the analysis can take values between 1 and 10 (presented in Table 8). In Step 2, a strategic map of objectives was created based on the SOAR matrix. Each goal was evaluated by points, where the total sum of all goals was given by 100 points. The sum of the assessments of all objectives in each dimension gave weight to the entire area in relation to the strategic objective (Table 9). Based on that, an assessment of the current state of public aid was assigned (how far the target is now being met on a scale ranging from 0% to 100%, Table 10).

Table 8. SOAR analysis

Strengths (S)	Points	Opportunities (O)	Points	Aspirations (A)	Points	Results (R)	Points
Network with local bodies	5	New business wave	7	Innovation growth	8	% of successful partnership companies and schools	10
Experience from previous crisis	6	Access to finance	8	New networks	6	% of growth of jobs	10
Governmental Supporting programmes	6	involvement of entrepreneurs	8	Less bancruptcy rate	8	Innovations	10
						Best practices	10
Total	17	Total	23	Total	22		40

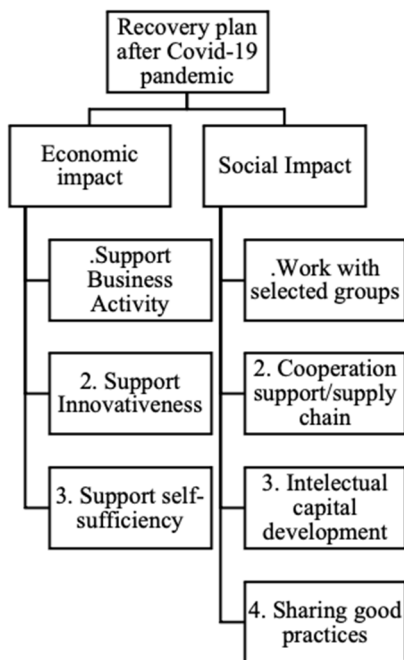
Source: own processing, 2022

The last step considers how the strategic change will strengthen the cooperation and performance of the organization, where ties with local

governments, educational institutions, and entrepreneurs are expected. The difference between the expected and actual conditions is the expected impact of public aid and it could help to implement the recovery plan introduced this year.

Table 8 shows that the multiplier effect of strength and opportunity on aspiration and results is appropriate. This increase shows a comparison of inputs on the potential side (strengths and possibilities) and on the output side (aspirations and outcome). The sum of S + O is 40 points, and the expected benefits of A + R are 62 points, which is a planned increase in efficiency by 33%. The calculation is the difference between the result and the input, either $(62 - 40) / 40 \times 100 = 55\%$.

Based on the previous analysis, the project's main goal was determined in the form of an impact on the community, which is in line with the strategy of the Czech Republic. This strategy is called the Czech Republic recovery and resilience plan (Národní plán obnovy, 2021). The main goal of the project was divided into four sub-goals, which follow from the SOAR analysis and contribute to the development of Aspirations and Results (Figure 2).



Source: own processing, 2022

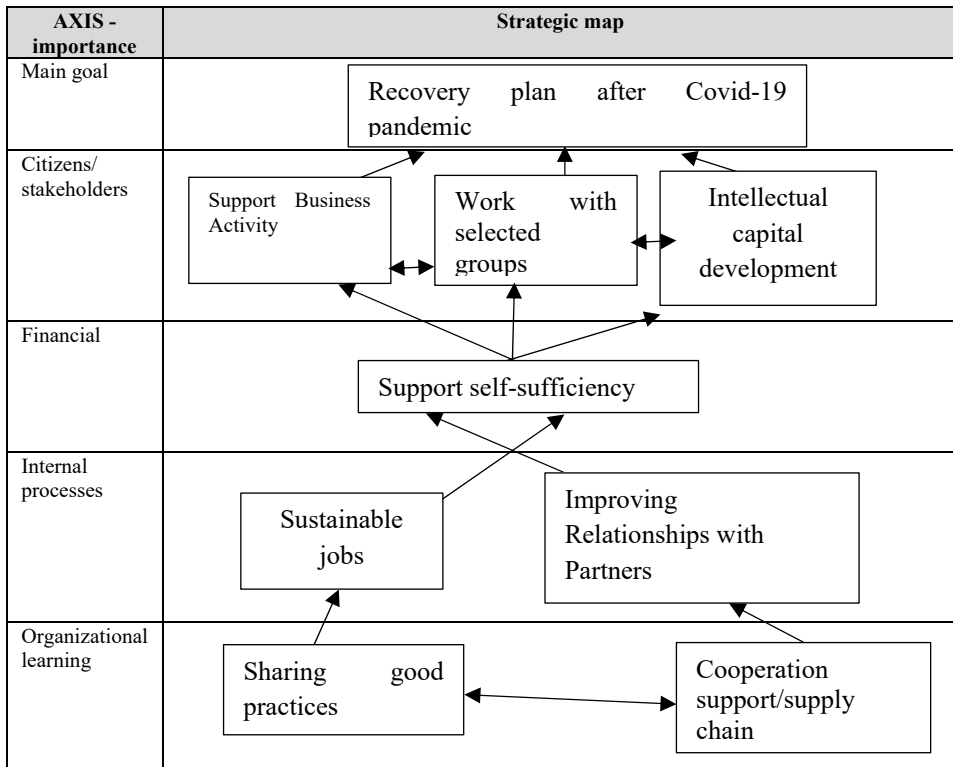
Figure 2. Strategic Goal Setting

The main goal of supporting business activities can be achieved with the help of the economic goal (impact) in the form of support for innovative solutions and

best practices. In the social field, we can see the positive impact of work directly on affected groups of people, stakeholders who develop cooperation and seek opportunities. By developing competencies, they support the diversity of intellectual capital in the selected regions (Figure 2).

Ştefan and Brezoi (2021) proposed a balanced dashboard model to increase the efficiency of public organisations. In their case study, it is possible to see a usable balanced scorecard (BSC) in a municipality and community development strategy, where social and economic impacts can be measured within four dimensions, namely, citizens/stakeholders; financial dimension, internal processes, and organizational learning.

Table 9. Strategic map priorities



Source: own processing, 2021

By linking the strategic goals and the dimensions of the scorecard, prioritizations of dimensions with a maximum value of 100 points were proposed. The impact on citizens received a weight of 40% (40 points out of 100), corresponding to the evaluation of the impact on the community. The other dimensions were given priority according to the impact on achieving the results.

Second, each activity in the following table received the ideal value that the organization could achieve and is currently being evaluated. This activity gave them a score in each dimension reflecting the current performance in evaluating "future direction". The second column then demonstrates the planned improvement that results from applying the strategy and the implementation of the recovery plan (expectations). The most significant impact can be seen in the impact on society (citizens), which is desirable (Table 10).

Table 10. Suggested dashboard

Axis	Objective	Objective value - nominal	Scorecard in % for period (1) and (2)					Weighted score	
			0	25	50	75	100	2022(1)	2027(2)
Citizens / stakeholders (40)	Support Business Activity	20	-	-	1	2	-	10	15
	Work with selected groups	10	-	1	-	2	-	2.5	7.5
	Intellectual capital development	10	-	-	1	2	-	5	7.5
	SUBTOTAL	40	-	-	-	-	-	17.5	30
Financial (20)	Support self-sufficiency	20	-	1	-	2	-	5	15
	SUBTOTAL	20	-	-	-	-	-	5	15
Internal processes (20)	Sustainable jobs	12	-	-	1	2	-	6	9
	Improving relationships with partners	8	-	1	-	2	-	2	6
	SUBTOTAL	20	-	-	-	-	-	8	15
Organizational learning (20)	Sharing good practices	5	-	-	-	1	2	3.75	5
	Cooperation support/supply chain	15	-	1	-	2	-	3.75	11.25
	SUBTOTAL	10	-	-	-	-	-	7.50	16.25
	Overall value of performance	100	-	-	-	-	-	38	76.25

Source: own processing, 2022

In the area of community impact, the project envisages the highest level of improvement by placing the organization directly in the affected regions, working with local people, and thus developing the external relations needed to support cross-border cooperation that already exists in the area. Furthermore, in finance, the plan could bring self-sufficiency through networking. It is necessary to mention the savings from possible incentives (preferential rent, special-purpose jobs), which could support the public aid financially (economic impact). The increased number of projects implemented positively affects the growth of innovation potential and cooperation in other projects. The result is the planned growth of the organization's performance from 38% to 85.25% for the entire programming period, which we consider reasonable in terms of feasibility.

4. CONCLUSIONS

The article aimed to present the advantages of cooperation within public aid and recovery plans for economic and social performance. At the same time, the situation within Covid-19 showed that in the case of the compromise alternative, maintaining the seat, hybrid cooperation can be used. Broad support often does not find its supporters; therefore, cooperation between the government and entrepreneurs is needed to achieve the planned results of recovery. However, strategic management elements must be actively involved if the organisation is to play a role in the development of intellectual capital in the regions concerned. It should be in the interest of public bodies to establish measurable indicators and uniform reporting for all types of public aid so that performance can be measured and adjusted as the dashboard is presented.

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CHALLENGES FOR EU PUBLIC ADMINISTRATION ON THE ROAD TO THE DIGITAL SOCIETY

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Abstract

This paper analyses basically the major challenges for the public administration from the actual EU27 countries on the background of the transition towards a digital society to be implemented in the entire EU as a declared goal of the European Commission. We analyse both the current status of the development of the digital economy and society in EU27 countries and its previous evolution and also the challenges still to be overcome in the next period, focusing especially on the digitalisation process of public administration. The paper provides an in-depth overview regarding the necessity of adapting the public administration to the changes brought by the new ICT technologies in our contemporary lives, stressing also both the advantages and some of the disadvantages of the transition towards an electronic administration, explaining the challenges of this process and finally concluding on the solutions to be applied for achieving a better public administration.

Keywords: *digital society; public services; e-government; DESI index.*

JEL Classification: H83, H11, O35

1. INTRODUCTION

The fast advance of the information and communication technologies combined with some specific events such as the recent COVID 19 pandemic have brought significant changes in the lives of all citizens and reshaped their relations with third parties, including with the authorities. Society is changing all over the world and willingly or not is evolving towards becoming a digital one.

The importance of implementing eGovernment was noticed from the early years of the third millennium and recognized also by significant world organizations such as United Nations, which started from 2003 to analyse the progress in its development in all the countries and developed a special index to evaluate it, namely E-Government Development Index (EGDI), calculated at each 2 years now, the latest one being released in 2020 (United Nations, 2020).

Moreover, the need to adapt the public administration to the realities of a new era based on information and communication technology was also considered by several researchers that studied what benefits brings eGovernment both for the citizens and for the authorities from all over the world. In this regard, there are worth mentioning the studies of Seri, Bianchi and Matteucci (2014); Ardielli and

Halásková (2015); Yera *et al.* (2020) on the European countries, of Welch, Hinnant and Moon (2004) on USA, of Verkijika and De Wet (2018) on sub-Saharan Africa, of Rana *et al.* (2017) on India, Santa, MacDonald and Ferrer (2019) on Saudi Arabia and many other studies analysing the issue of implementing eGovernment in different countries or regions.

During the latest two decades many authors have underlined the benefits of eGovernment (West, 2004; Mensah, 2020) but also the issues to be solved on the road to implementing it (McNeal, Hale and Dotterweich, 2008; Jadi and Jie, 2017; Wirtz and Kurtz, 2017; Botrić and Božić, 2021), many of them analysing the technical and human capital issues. However, many other studies are stressing the role of building peoples' trust in the public electronic services within the process of transition towards a digital public administration (Belanger and Carter, 2008; Alzahrani *et al.*, 2018; Santa, MacDonald and Ferrer, 2019).

As literature reveals, there appears to be no doubt that the society and specifically the public administration are moving on towards a digital form that brings many advantages for the people, but also raises challenges to be overcome linked both on technical and human capital issues, but also with the lack of trust of the users in the new technologies.

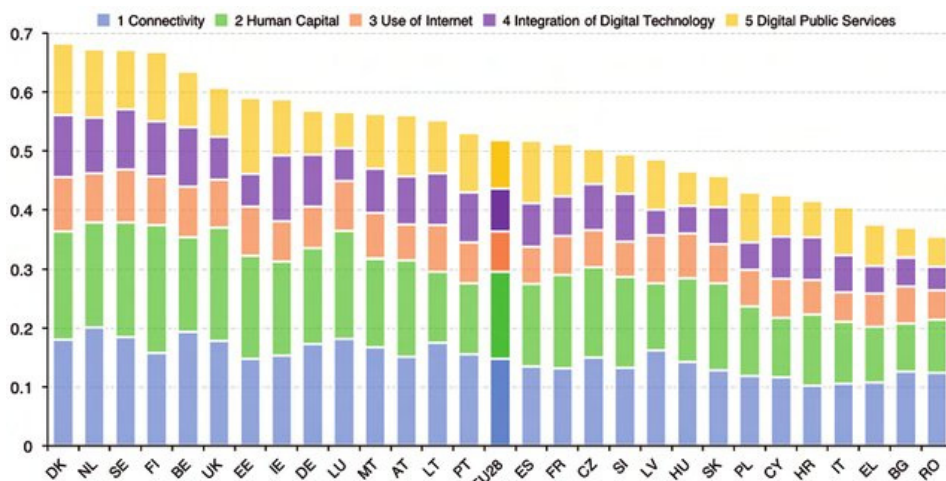
2. THE ROAD TO DIGITAL SOCIETY AND THE ROLE OF PUBLIC ADMINISTRATION IN EU27

While the advance of technologies has impacted the lives of all people and opened new possibilities for improving their lives and for increasing the economic competitiveness, the subject of digitalisation has become lately more and more of interest also for the EU. Therefore, the European Commission has dedicated a special chapter to implementing digital technologies in EU member countries within its general development policy, and also established starting from 2016 a special mechanism for monitoring their advances towards a digital society. In order to sustain the digitalisation process and to allocate rationally resources for it, European Commission had to find solutions for evaluating the level of digitalisation in EU countries and developed a special index in this regard, known as the Digital Economy and Society Index (DESI).

Meant to monitor the digital performance of the EU member countries and their evolution towards a digital Europe, DESI was structured first on five major components including Connectivity (in terms of technological capacity), Human Capital (reflecting people's ability to use technology), Use of Internet (as proportion of people acquainted to use an using Internet), Integration of Digital technology (measuring the degree of using technology in economy) and Digital Public Services (measuring the use of digital technologies in the interactions between Public Administration and the society).

We use in this paper data retrieved from the European Commission Yearly reports on DESI, released between 2016 and 2021. According to the first structure

of DESI, as described above, a first image on the level of digitalisation in the EU countries, dated from 2016, can be observed in Figure 1.



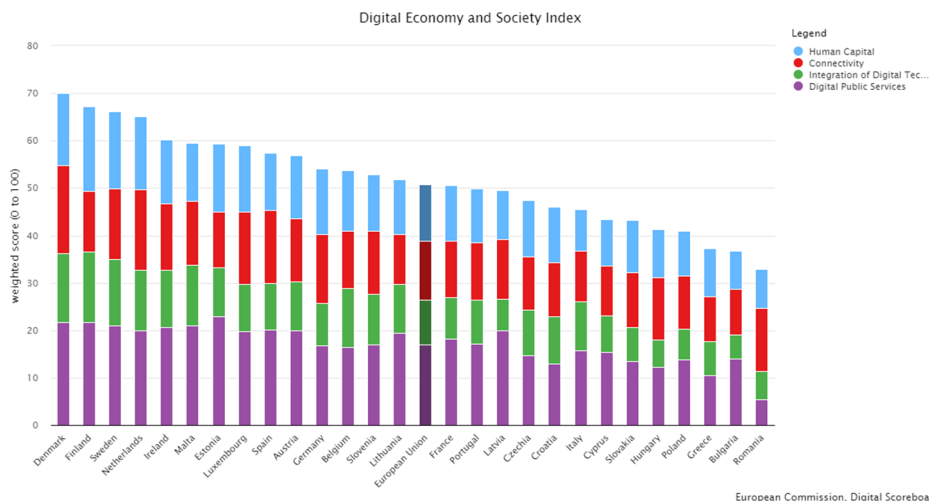
Source: Coscia and De Filippi (2016)

Figure 1. DESI level and structure in EU in 2016

As Figure 1 shows, the most advanced countries in digitalisation in 2016 were especially the developed countries from Northern Europe, such as Denmark, Sweden or Finland, while the Southern and especially South-Eastern countries, as Romania, Bulgaria or Greece were the less advanced ones. Moreover, almost all countries show better levels on Connectivity and Human Capital, but lower levels on Digital Public Services and Integration of Technology.

The experience gathered by annually monitoring the evolution of digitalisation in EU countries, using DESI, and the observation that the society is driven mainly by the advances of especially the last two components, which incidentally had the lowest levels of achievements, led the European Commission to reconsidering both the structure and the importance of DESI's components and configured the most recent situation as shown in Figure 2.

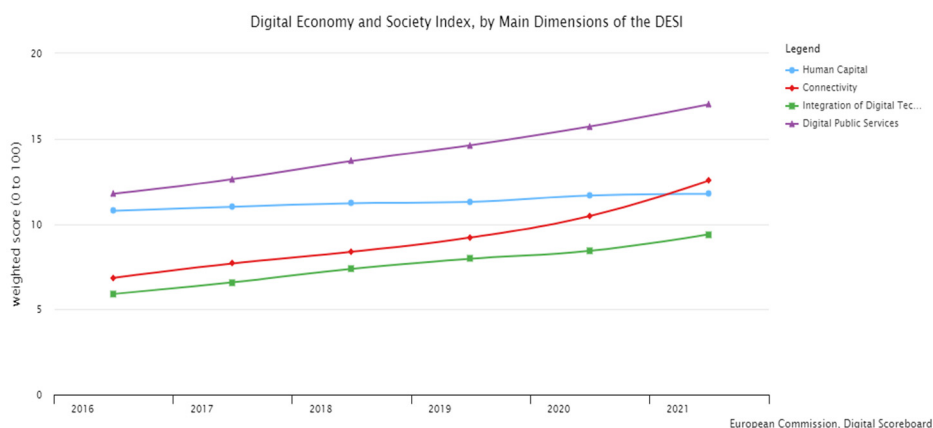
First of all, European Commission decided from 2021 that DESI's structure should include only four components consisting in Connectivity, Human Capital, Integration of Digital Technology and Digital Public Services, considered equally important and weighting each of them 25% from the entire DESI index. Therefore, while Connectivity and Human Capital are keeping now the same importance as before, Integration of Digital Technology raised its weight from 20% to 25%, but especially the Digital Public Services increased significantly in importance, from 15% to 25% in weight, showing that for EU countries and specifically for their citizens, the digitalization of Public Administration represents a major need.



Source: (European Commission, 2022)

Figure 2. DESI level and structure in EU in 2021

Even with these important changes in DESI’s structure, as it can be observed in Figure 2 the situation has not changed significantly from 2016, in terms of the position of the countries in the hierarchy, but it appears that most of the countries have acknowledged the importance of Digital Public Services and made important steps towards improving them.



Source: (European Commission, 2022)

Figure 3. DESI main components in evolution in EU 2016-2021

Moreover, it appears that there are positive evolutions regarding digitalisation at the level of each of the countries and on the aggregate level on the

entire EU27 region, and this latter fact can be more thoroughly analysed based on the next chart (Figure 3), which shows the detailed evolution of the four major components of DESI, for the period 2016-2021.

As it can be seen, on average, in EU, between 2016 and 2021 the only component of DESI that stayed relatively constant was that regarding Human Capital, while all the other components, and especially the Digital Public Services, have shown quite important developments, which confirms the above observations. However, even if on average, the evolutions appear to be good, not all the countries have shown the same rhythm of development and not all the aspects of each of the components have been improved similarly. Therefore, especially because of the already recognized importance of the Digital Public Services, we consider important to deepen the analysis on the specific aspects of digitalization in the Public Administration area of EU countries.

3. CHALLENGES FOR EU PUBLIC ADMINISTRATION FOR ACHIEVING A DIGITAL SOCIETY

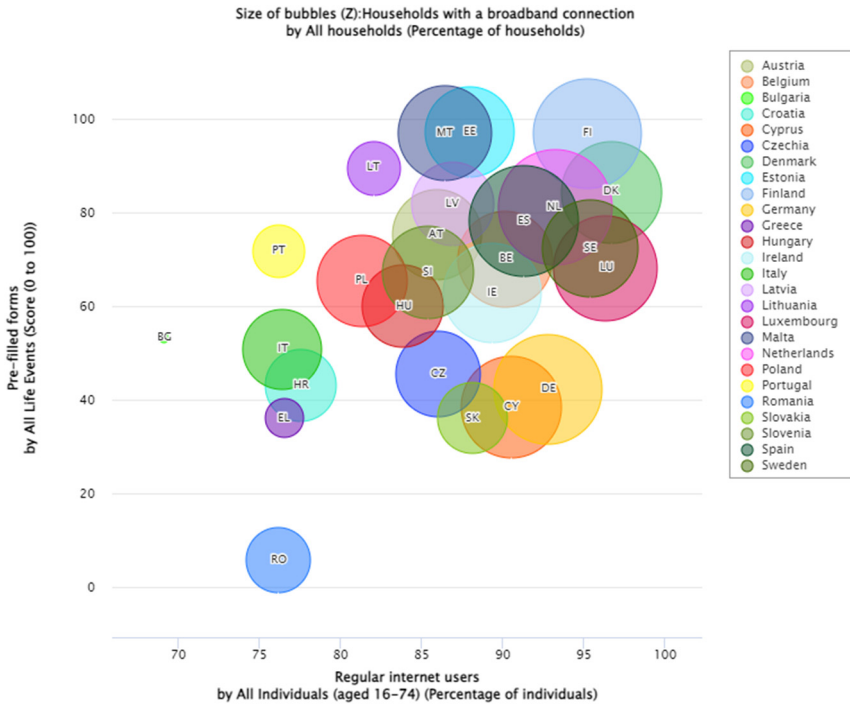
The quality of the digital public services has become one of the major issues to be approached by each European country on its road towards developing a sustainable digital society. This aim is also in accordance with the objectives and at the same time the challenges set by the European Commission as part of The Digital Compass and the Path to the Digital Decade (European Commission, 2021, p.13), to digitalize 100% the key public services, to ensure 100% access to medical records for the citizens and to issue digital ID for at least 80% of the people in all EU countries, by 2030.

Achieving such ambitious goals for digitalizing the Public Administration in EU implies specific actions of all governments and depends also on the already existing level of public services digitalization of each country and raises more significant challenges especially for the country starting from lower levels. Moreover, the digitalization of the public services implies also concentrating on specific issues to be solved such as developing the services for the citizens and for the businesses, increasing the number of the users of such services, developing their communication with the public authorities by using pre-filled forms, open data and finally ensuring online service completion.

In order to identify the major challenges of Public Administration of the EU countries on their road towards the digital society, it is necessary to analyze the stage of digitalization in these countries, looking specifically at the specific issues of the governments as mentioned above. Therefore, we will use bubble charts representations to give a general image on the situation of the Public Administration digitalization in each of the EU countries in relation to indicators as the percentage of households with a broadband connection (as a measure of the prerequisite technical conditions) and the percentage of the regular internet users (as a measure of the existing digital skills). We drew the charts using the data and

the software platform of European Commission available online (European Commission, 2022).

Using pre-filled forms within the digitalized interaction between the Public Administration and the citizens or the companies is one of the important issues, but also it appears the simplest one to fulfil. However, fulfilling it seems to be not so simple for all the EU countries, as Figure 4 shows.



Source: own calculations based on data and software of European Commission (2022)

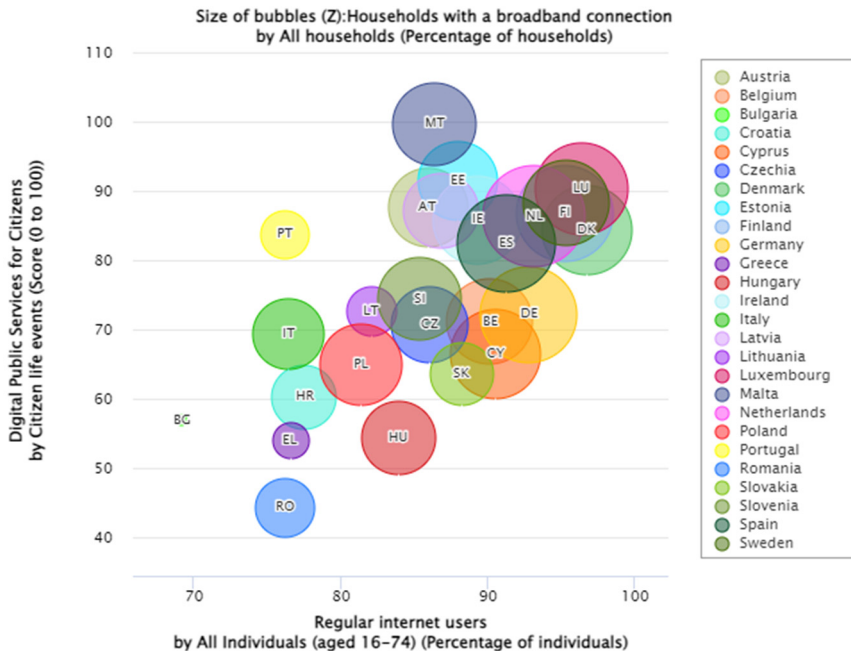
Figure 4. The use of pre-filled forms in EU27 by the end of 2020

By the end of 2020, according to Figure 4 and based on the data from European Commission, in most of the EU27 countries the pre-filled forms are used in a proportion of over 60% within the interaction between public administration and the rest of the society. Moreover, some of the countries have succeeded to raise the use of the pre-filled forms to over 90%, such as Estonia (97.18%), Finland (96.87%) or Malta (96.87%), followed by Lithuania (89.48%), Denmark (84.37%) or Latvia (81.84%), while EU27 average was 63.36%.

On the other hand, a big discrepancy appears in the case of Romania, where the use of pre-filled forms was only of 5.55% even if, compared to Latvia, there were registered more households with a broadband internet connection. The discrepancy appears also when comparing Romania, Slovakia or Greece (both the

latter with 36%) with Portugal, which uses pre-filled forms in over 71% of the public services, even the conditions appear to be quite similar in these countries. Therefore, public administrations from countries as Romania, Slovakia or Greece, but also from even more developed countries as Germany or France, using pre-filled forms in proportions lower than 50%, will have to surpass as faster as possible the challenge of raising this percentage to 100%, in accordance with the target set by the European Commission for this decade.

The development of the Digital Public Services for citizens, in EU countries, by the end of 2020, can be observed in Figure 5.

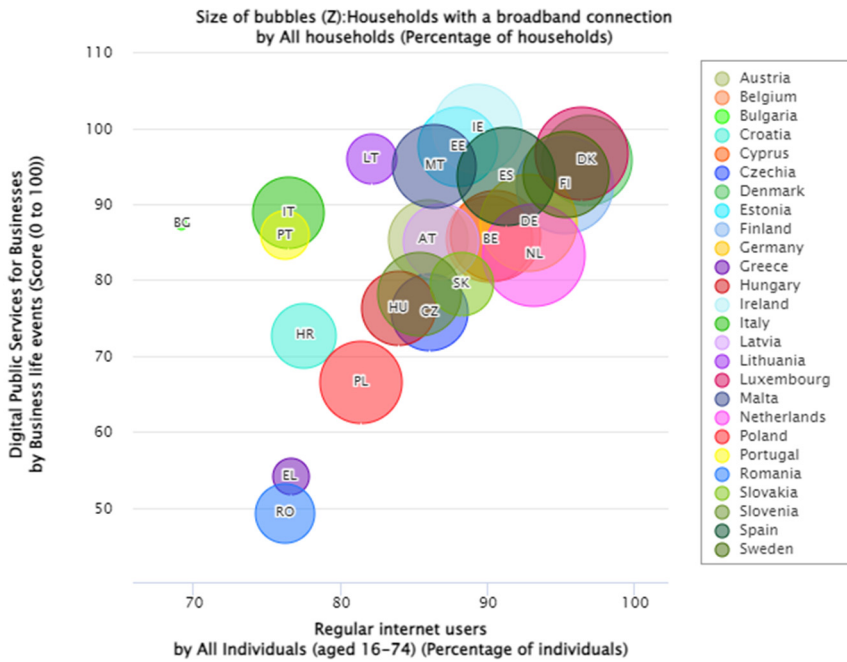


Source: own calculations based on data and software of European Commission (2022)

Figure 5. The Digital Public Services for citizens in EU27 in 2020

Figure 5 shows again that most of the public administrations from EU27 have already succeeded to deliver over 60% of the public services for citizens using digital channels, the most performant cases being that of Malta (99.6%), Estonia (91.4%), Luxembourg (90.3%), Sweden (88.2%) and Austria (87.6%), EU27 average being 74.9%. However, there are again countries with very much lower performance in implementing the digital services for citizens such as Romania (44.4%), Greece (53.9%) or Hungary (54.3%) which appear to have a lot of work to do for reaching the goal of 100% public services for citizens delivered digitally.

On the other hand, the situation of the Digital Public Services for businesses, in EU countries, by the end of 2020, is depicted in Figure 6.

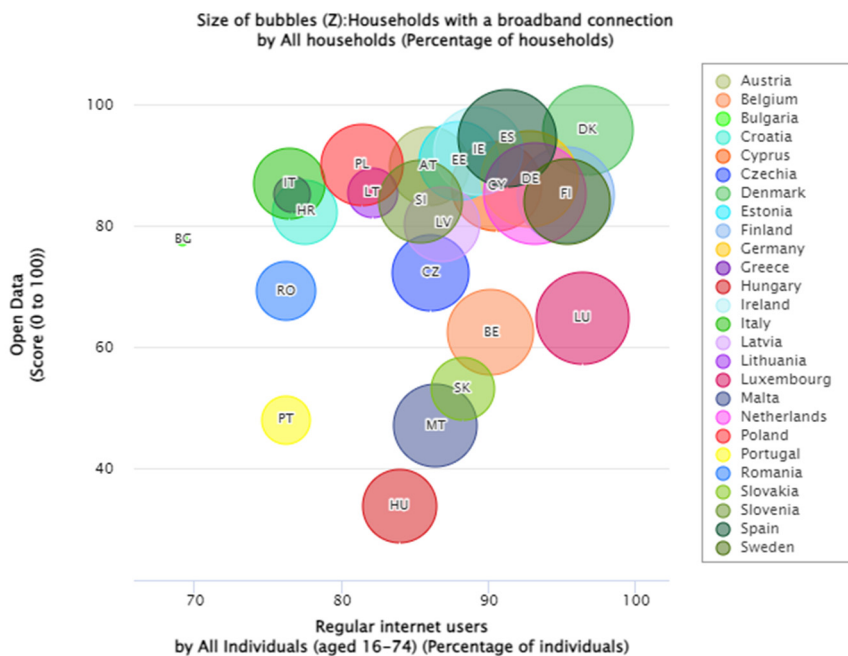


Source: own calculations based on data and software of European Commission (2022)

Figure 6. The Digital Public Services for businesses in EU27 in 2020

The public digital services for businesses appear to be better implemented in EU27, while most of the countries have fulfilled their development in proportions over 70%. Once again, Estonia (97.5%), Luxembourg (96.7%), Denmark (95.8%) and especially Ireland (100%) result to be the most advanced countries on this issue, while Romania (49.3%) and Greece (54%) offered the less digitalized public services for businesses, by the end of 2020, quite far from EU27 average of 84.4%.

Another component used for estimating the level of digital public administration, namely Open Data, evaluates the open data policy in place, its impact and the characteristics of the national data portal from each country of EU27. According to the European Commission latest report, an image of the positions of the EU27 countries by the end of 2020 can be synthesized as in Figure 7.



Source: own calculations based on data and software of European Commission (2022)

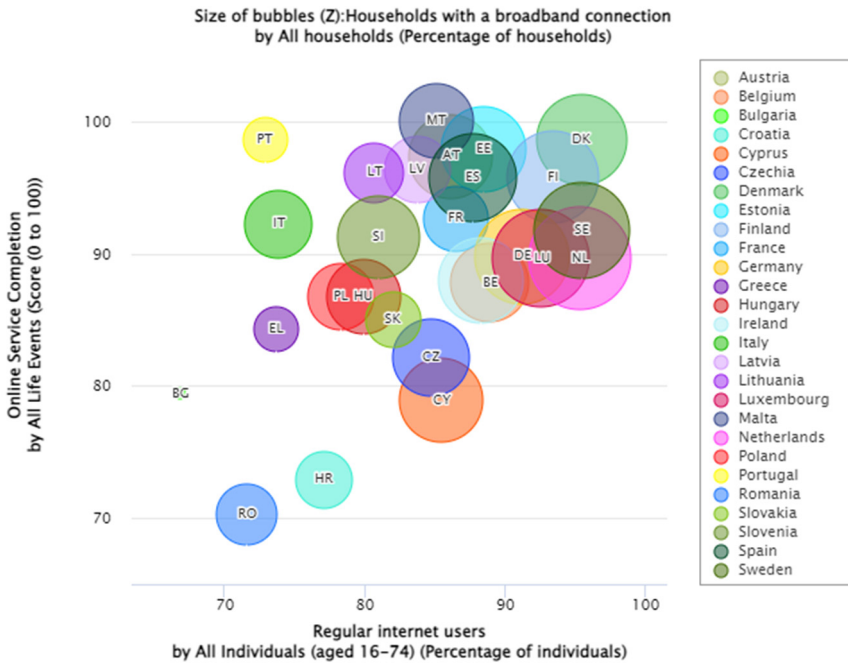
Figure 7. Open Data in EU27 in 2020

Over 20 countries have fulfilled more than 70% of the requirements for this criterion, the most advanced being Denmark (95.7%), Spain (94.6%), France (94.3%), followed by Ireland, Estonia and Poland with proportions also over 90%. The lowest levels for Open Data are registered by the end of 2020 in Hungary (33.8%), Malta (47%), Portugal (48%) and Slovakia (53%), far from the average of EU27 (78.1%).

The situation of the Online Service Completion by the end of 2019 and the beginning of 2020, showed in Figure 8, offers an image on the degree of the user centricity specific to digital public services delivered by the public administrations from EU27 countries.

Due to the data availability the most recent data on the Online Service Completion refer to the end of 2019 and the beginning of 2020, and show, however, that this target was fulfilled in a proportion of over 50% in more than 20 countries of EU27.

As Figure 8 shows, while the EU27 average was 89.45%, 12 countries, including Denmark, Portugal, Estonia, Austria, Latvia, Lithuania, Finland and Spain reached levels of over 90%, one of them, Malta, succeeding to reach 100% for this indicator.



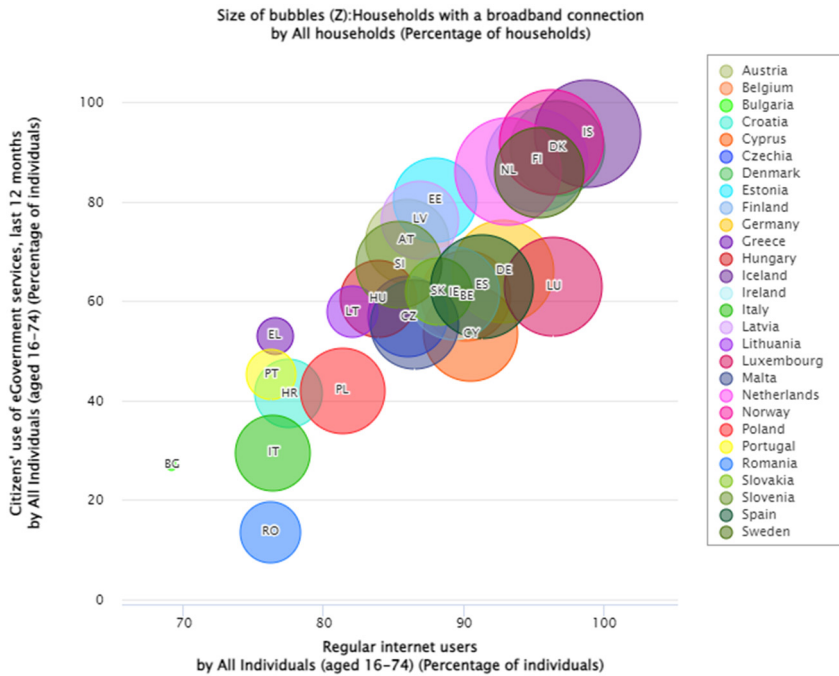
Source: own calculations based on data and software of European Commission (2022)

Figure 8. Online Service Completion in EU27 at the beginning of 2020

On the other hand, the public administrations from countries as Romania (70.25%) or Croatia (72,87%) need to intensify their efforts in order to become as performant as the leaders in this area.

Finally, an analysis of the Citizen’s use of eGovernment services, as result of both the Governments’ efforts to digitalize the supplied public services, but also the citizens’ readiness of using electronic public services can be performed by looking at Figure 9.

According to Figure 9, the countries of EU27 where there are the most eGovernment users are Denmark (91.8%), Finland (90.8%) and Netherlands (90.7%), while on average the entire European Union registers 64.2% users of eGovernment services. On the other hand, the fewest citizens that use eGovernment services are those from Romania (15.8%), Bulgaria (36.3%) and Italy (36.4%).



Source: own calculations based on data and software of European Commission (2022)

Figure 9. Citizen’s use of eGovernment services in EU27 in 2020

The results from the previous figures show many discrepancies between the countries of EU27 that need to be overcome in order to ensure the success of the Public Administration digitalization. We note that the most advanced countries in this process are also registering high levels in the development of the technical infrastructure and in that of the digital skills, while the less advanced countries. For instance, the percentage of regular users is very high in countries as Denmark (96.7%), Finland (95.2%), Netherlands (93.2%) or Estonia (88%), compared to Romania (76.2%), Greece (76.6%) or Croatia (77.5%). Moreover, the percentage of households with a broadband connection is also high in Denmark (92.5%), Finland (94.8%), Netherlands (97%) or Estonia (89.1%), compared to Romania (83.6%), Greece (80%) or Bulgaria (78.6%).

4. CONCLUSIONS

The road towards developing the digital society in EU27, as a goal to be achieved during this decade, implies the necessity of digitalizing the Public Administration in all the countries of the union. However, due to the different levels achieved till now by these countries within this process, many important challenges are staying in front of them, especially in the case of the less advanced countries such as Romania, Bulgaria or Greece, but also in front on some more

developed countries as Italy or, on some specific administrative issues, even France or Germany.

The results in the Public Administration digitalization, better in many cases or worse in the others, can be explained basically by the observations made before regarding the quality of the services offered by the public administrations and their degree of digitalization and on the level of ensuring the necessary prerequisite conditions for accessing eGovernment services, regarding the development of technical infrastructure and of the digital skills of the potential users of such services. However, they are also depending on the degree of trust perceived by the population and by their willingness of trying to do things differently than they were acquainted to.

Therefore we consider that governments from EU27 countries should not only take actions towards improving their own eGovernment services by investing in the development of electronic public services, but also take measures to encourage the development of the technical infrastructure nationally by sustain the companies involved in such actions, to improve the digital skills of the population by offering specific courses regarding the use of computer and Internet and also by increasing the level of awareness and trust of the population in the benefits of using eGovernment services.

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INFLUENCE OF DIGITAL AGENDA FOR EUROPE ON THE
DEVELOPMENT OF DIGITAL SERVICES IN ROMANIA.
EVOLUTION AND OBJECTIVES

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Abstract

The European Union attaches great importance for digitization, in the complex sense, from ensuring digital infrastructure, the digitization of public services and the private environment and the assurance of ICT specialists needed for this process. At European level, the Digital Agenda for 2020 and for 2030 were created, Romania needs to rally with the objectives set at European level and to develop projects and strategies in order to digitize Romania. The European Digital Agenda provides the common vision for the member countries of the European Union and the financial support through financial instruments in the exercises scheduled by the European Commission to develop the necessary infrastructure for the digitization and improvement of specialists. This study will focus highlighting the evolution of digitization in Romania considering the two European digital agendas and the objectives assumed at European level. The state of digitization in Romania can be seen by analysing specific European indicators such as the index of the economy and digital society, but also by analysing the fields of action such as e-government, eCommerce, digital infrastructure and ICT in education, health, culture and e-Inclusion. Digitization in Romania is stimulated for the digitization process due to membership of the European Union and because society faces new challenges, to which public authorities must respond with ample and complex reforms. Thus, the paper will highlight the objectives assumed by the National Strategy for the Digital Agenda and the state of their fulfilment.

Keywords: *Digital Agenda; Digital Services; European Union; Romania.*

JEL Classification: G20, L84, L86

1. INTRODUCTION

The digital agenda for Europe has emerged as a result of the Lisbon Strategy. It was set up for 10 years and two such digital agendas have been published, 2010-2020 and 2020-2030. The role of the digital agenda at European level is to highlight the importance of ICT in achieving Europe's goals. The Treaties of the European Union do not legislate on information and communication technologies (ICT), but relevant measures have been taken in sectoral and horizontal policies to support ICT: industrial policy (Article 173 of the Treaty on the Functioning of the European Union – TFEU), competition policy (Articles 101 and 109 TFEU), trade policy (Articles 206 and 207 TFEU), trans-European networks (TEN) (Articles 170 and 172 TFEU), research and technological development and space (Articles 179 and 190 TFEU), energy policy (Article 194 TFEU), approximation of laws to improve the establishment and functioning of the internal market (Article 114 TFEU), free movement of goods (Articles 26 and 28-37 TFEU), free movement of persons, services and capital (Articles 45 and 66 TFEU), education, vocational training, youth and sport (Articles 165 and 166 of the TFEU) and culture (Article 167 of the TFEU; Ratcliff *et al.*, 2022).

The Digital Single Market Strategy was adopted in 2015, leading to its development, setting out specific provisions based on three pillars aimed at ensuring a fair, open and secure digital environment:

- ✓ ensuring better access for consumers and businesses to digital goods and services across Europe;
- ✓ creating the right conditions for the development of digital networks and services;
- ✓ making the most of the growth potential of the digital economy.

The second five-year digital strategy, "Shaping Europe's digital future", was launched in 2020 and focuses on the following digital goals:

- ✓ technology at the service of citizens;
- ✓ fair and competitive economy;
- ✓ open, democratic and sustainable society.

Also, in 2021, the strategy was completed by Busola for the digital dimension for 10 years: the European model for the digital decade, which formulates in concrete terms the digital objectives of the European Union for 2030 (Ratcliff *et al.*, 2022).

Due to the existence of the Digital Agenda for Europe, the Romanian Government adopted the National Strategy on the Digital Agenda for 2020 by Government Decision no. 245 of April 7, 2015 (). The adoption of this document is a first step that highlights the correlation of digital policy in Romania to the European agenda. The use of information and communication technology (ICT) has an important role to play in achieving the targets set at European level for 2030. The National Digital Agenda Strategy defines four areas for action, as follows:

1. e-Government, Interoperability, Cyber Security, Cloud Computing and Social Media - an area that aims to increase efficiency and reduce costs in the public sector in Romania by modernizing the administration;

2. ICT in education, health, culture and eInclusion - an area aimed at supporting these technologies at the sectoral level;

3. eCommerce, research and development and innovation in ICT - a field that aims at Romania's regional comparative advantages and supports economic growth in the private sector;

4. Broadband and digital infrastructure services - an area aimed at ensuring access to ICT and Internet equipment, to increase digital literacy and improve digital skills.

A manual for monitoring and evaluating the national strategy on the digital agenda in Romania has been developed, which is a set of practical tools and a roadmap for use by line ministries in the process of monitoring the achievement of the National Strategy on Digital Agenda, published in January 2016. Thus, at the governmental level, the Ministry of "Communications and Information Society" was established, which has a decisive role in achieving digitalization in Romania (Ministerul Comunicațiilor și pentru Societatea Informațională, 2016).

The use of information and communication technology is a necessity, both at national and European level. Their use requires a legal framework, which in turn will help to create the necessary infrastructure, to identify the financial instruments to support digitization. Romania, due to its membership in the European Union, on the one hand must identify the tools needed to achieve the objectives of the digital agenda at European level, and on the other hand is supported to modernize using information technology. This study will highlight how the Digital Agenda for Europe has influenced the digitization of Romania and what is the stage of achieving the set objectives.

2. LITERATURE REVIEW

The launch of the Europe 2020 strategy was aimed at ensuring smart, sustainable and inclusive growth, but initiatives have been proposed to achieve this goal, including the "Digital Agenda for Europe" (Ratcliff *et al.*, 2022). This digital agenda "aims to deliver sustainable economic and social benefits from a digital single market based on fast and ultra-fast internet and interoperable applications". The digital agenda has proposed several reforms that need to be made to European internet and technology policies to ensure the functioning of a strong digital single market (Farrand, 2014).

There are papers in the literature that investigate the situation of high-speed broadband in the EU and its prospects. Broadband development has been achieved to meet the objectives of the Digital Agenda, which uses an implementation model to estimate the investments needed to meet the broadband targets set by the European Commission in its Europe 2020 strategy at different stages: from 2016,

after the expected deployment of operators, after public subsidies and investments by 2020 (Feijoo *at al.*, 2018).

The Digital Agenda for Europe addresses the challenge of building an inclusive, fair and sustainable European information society (European Commission, 2010). Stimulating innovation in digital technology is perceived as the one that ensures economic growth and competitiveness and stimulates citizens' abilities to take advantage of the opportunities offered by ICT (Mansell, 2014).

The development of information and communication technology (ICT) interspersed with the use of the Internet on a global scale has led to a new phase of development of society - the Information Society. ICT is increasingly used in all human activities, which are inextricably linked to economic growth. The driving force of the information society consists essentially in digital information and communication technologies, which lead in an irreversible way to the explosion of information and profound changes in all aspects of social organization, economy, education, health, environment and administration (Zamfir, 2016).

The Digital Agenda is seen as the future of Europe, which lies in its ability to become the protagonist of a new season in EU politics, in which countries can only demand more flexibility if they can prove both structural reform and good governance, and Member States can help Europe to complete its transition from austerity to prosperity (Renda, 2014).

In Romania is the Ministry of Communications and Information Security and the Agency for the Digital Agenda for Romania, which deals with the implementation of the Digital Agenda. The existence of the National Strategy for Romania's Digital Agenda, as well as the directions and trajectories to follow, have the role of providing institutional and legislative support for achieving the objectives of the Digital Agenda (Irimie, 2015).

3. METODOLOGY

The study analyses the specific objectives and a series of indicators established in the Strategy for the Digital Agenda of Romania for 2020, which aims to highlight the status of these indicators, since the statistics are recorded and the status of 2020-2021. The analysis will also highlight the evolution of whether setting targets for 2020 has played a key role in this regard. The analysed data were centralized on the website of Digital Agenda based on Digital Economy and Society Index – DESI (2022). The indicators analysed in this study are:

- ✓ Households having a broadband connection;
- ✓ Share of fixed broadband subscriptions ≥ 30 Mbps (% household);
- ✓ Share of fixed broadband subscriptions ≥ 100 Mbps (% household);
- ✓ Individuals ordering goods or services online;
- ✓ Individuals ordering goods or services online, from sellers from other EU countries;
- ✓ Enterprises using e-Commerce marketplace for sales;

- ✓ Individuals who are regular internet users (at least once a week);
- ✓ Individuals who have never used the internet;
- ✓ Individuals interacting online with public authorities, last 12 months;
- ✓ Making an appointment with a practitioner via a website (eHealth);
- ✓ Open Data (eGovernment);
- ✓ Digital Public Services for Businesses;
- ✓ Science and technology graduate;
- ✓ 4G mobile broadband (LTE) coverage (as a % of households);
- ✓ Rural 4G mobile broadband (LTE) coverage (as a % of households).

The study will highlight the importance of the existence of the Digital Agenda for Romania, adapted to the specific objectives at European level, in the context of the digitization of services in public, private, civil society institutions. Digitization must be done in a specific integrated context, which involves providing the necessary infrastructure. The specific objectives of the Digital Agenda aim at developing the digital infrastructure.

4. RESULTS AND DISCUSSION

4.1 Digital Agenda in Romania - general information

The National Strategy on the Digital Agenda for Romania was based on several guiding principles, which help other areas at the same time: encouraging and attracting taxpayers and businesses, promoting initiatives focused on citizens and businesses, using standards and reference models, promoting legislative projects that support ICT initiatives, ensuring security and confidentiality, encouraging transparency and openness, promoting continuous development, focusing on sustainable initiatives, facilitating innovation and maximizing initial investment (Ministerul pentru Societatea Informațională, 2015). The document underlying the correlation of the Digital Agenda for Europe 2020 was made through socio-economic analyses, consultations with civil society and public institutions in public administration. Following these steps, they have defined the four major areas of action adapted to the current context, which aim is the sustainable economic growth and increasing competitiveness through the Digital Agenda.

The field of eGovernment, Interoperability, Cyber Security, Cloud Computing, Open Data, Big Data and Social Media aims to increase efficiency and reduce costs in the public sector in Romania by modernizing the administration. The field of ICT in Education, Health, Culture and eInclusion intervenes in the social challenges at a sector level and will ensure that ICT investments will create a positive impact in the social context. The field of eCommerce, Research, Development and Innovation in ICT is based on the comparative advantages of regions in Romania and supports economic growth in the private sector. Broadband and Digital Services Infrastructure are the basis for

the implementation of the areas of action listed above and their related services, and beyond the need to invest in state-of-the-art ICT equipment is the development of broadband and digital services infrastructure (National Strategy on Digital Agenda for Romania, 2015). Internet access and ICT infrastructure at the same time facilitate social inclusion, increase digital literacy and improve digital skills. The implementation of the measures in the listed areas is intended to have an impact on the economy and increase employment.

The National Strategy on the Digital Agenda for Romania has set the achievement of the following indicators for 2020:

- ✓ at least 35% of citizens to use e-Government systems;
- ✓ at least 60% of citizens to use the internet regularly;
- ✓ at least 30% of citizens to make purchases online;
- ✓ coverage with broadband communications networks (over 30 Mbps) of at least 80%.

The implementation of the Digital Agenda for Europe 2020 in Romania involved the improvement of the legislative framework, the development of digital skills, the integration of the main pillars of the agenda in the specific objectives for Romania. An important aspect for achieving the objectives set in the areas of intervention for the Digital Agenda for Romania 2020 are the financial resources, which at the time of launching the document were 3,963.8 million euros, and the largest amount was identified for Broadband 3,100 million euros. The financial resources consist of both European non-reimbursable funds and government funds.

4.2 Results

The 5 common goals of the Digital Agenda for Europe 2020 require a joint effort by Member States to achieve them. In this context, Romania must consider maximizing the impact of public policies and view investment in ICT to transform the Romanian economy. The Monitoring and Evaluation Manual of the National Strategy on the Digital Agenda in Romania (2016) lists the indicators that are monitored for the implementation of the National Strategy for the Digital Agenda of Romania, indicating the reference values and those that should be achieved for each area. The implementation of the Digital Agenda Strategy for Romania was the result of a socio-economic study, which focused on the objectives of the digital agenda at European level and their targets for 2020 assumed by Romania. Table 1 lists the main objectives that the Romanian Government has considered for the implementation of the Digital Agenda Strategy, the stage of the indicators, from the moment statistical data are identified and their evolution in the period 2020 - 2021. Following the implementation of the table can be observe the level of achievement of the objectives at the Romanian level regarding the Digital Agenda for 2020.

Table 1 Specific objectives for the Digital Agenda 2020 (target and current stage)

Specific objective 2020	Target UE 2020	Target RO 2020	Initial stage RO	Stage RO 2020	Stage RO 2021	Stage UE 2020	Stage UE 2021
Households having a broadband connection	100%	100%	5.2178 (2006)	83.5828	88.204	89.3592	90.2107
Share of fixed broadband subscriptions >= 30 Mbps (% households)	100%	80%	44.9528 (2011)	90.4588	91.9279	70.7739	73.9215
Share of fixed broadband subscriptions >= 100 Mbps (% households)	50%	45%	16.0006 (2011)	82.9492	85.7532	48.3343	52.17
Individuals ordering goods or services online,	50%	30%	1.4351 (2004)	44.7774	43.9149	72.6575	74.3946
Individuals ordering goods or services online, from sellers from other EU countries	20%	5%	1.6542	4.6831	missing data	24.0933	missing data
Enterprises using e-Commerce marketplace for sales	33%	20%	1.5396 (2017)	7.6546	4.4933	7.7057	8.4817
Individuals who are regular internet users (at least once a week)	75%	60%	9.9245 (2004)	76.1913	81.8166	85.844	87.1766
Individuals who have never used the internet	15%	30%	74.0058 (2006)	14.053	11.3637	8.8057	7.7012
Individuals interacting online with public authorities, last 12 months	50%	35%	6.962 (2009)	13.4322	14.6523	57.207	58.4963

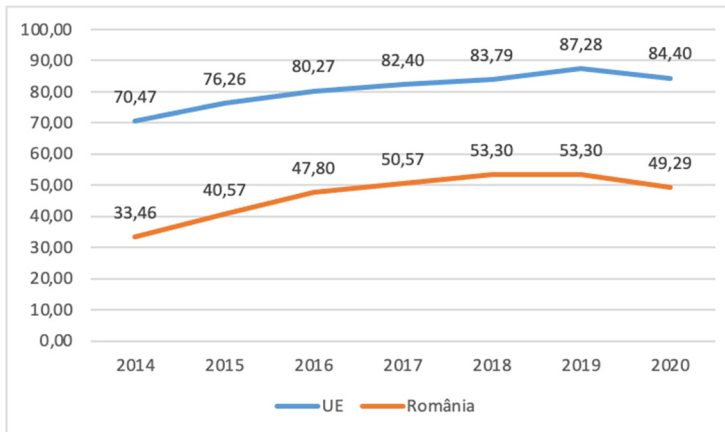
Source: own representation based on the data provided by the Directorate-General for Communications Networks, Content and Technology – CNECT (2022)

Following the analysis of Table 1, the existence of specific objectives for the Digital Agenda at European level, adapted to their level in Romania, is a state commitment that led to the development of the specific basis for digitizing services (public or private) in society. Other relevant indicators, which are found in the four main areas of action of the Digital Agenda Strategy for Romania are:

- ✓ Open Data (eGovernment);
- ✓ Digital Public Services for Businesses;
- ✓ Making an appointment with a practitioner via a website (eHealth);
- ✓ Science and technology graduate;
- ✓ 4G mobile broadband (LTE) coverage (as a % of households);
- ✓ Rural 4G mobile broadband (LTE) coverage (as a % of households).

The analysis of these indicators highlights the influence of the implementation of the National Digital Agenda for Romania 2020 Strategy. The establishment of the strategic and legislative framework in Romania, correlated with the European framework of the Digital Agenda, offered Romania the opportunity to develop digital infrastructure in the field of eGovernment, the indicators "Digital Public Services for Businesses" and "Open Data" being

analysed. The digitalization of public services in Romania needs a complex of factors, and the Digital Agenda for Europe provides the context and the premises to achieve this aspect. Digital Public Services for Businesses highlights the extent to which a business service or service information is provided online and through a portal. This indicator is calculated as the average of national and cross-border online availability for basic and extended services in Business Life Events over the past two years (Start-ups and Regular Business Operations).

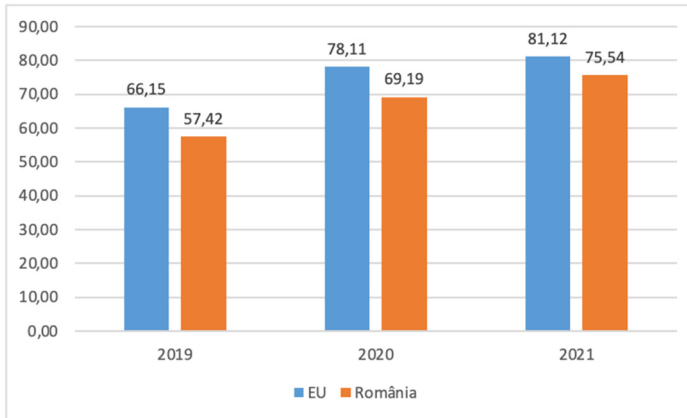


Source: own representation based on the data provided by CNECT (2022)

Figure 1. The evolution of Digital Public Services for Businesses in Romania and the European Union (2014 - 2020)

At the level of the European Union, this indicator was 70.47% in 2014, while Romania had the value of 33.46% (Figure 1). In 2020, in the European Union it was 84.40%, while in Romania it was 49.29%. In Romania in 2019 it was the highest value, of 53.30%, while in the European Union it was 87.28%. The decline in 2020 may be due to the COVID-19 pandemic. However, the development of digital public services for business has been in a continuous growth in the period 2014 - 2020 in Romania, but this type of service still must recover the gap at European level.

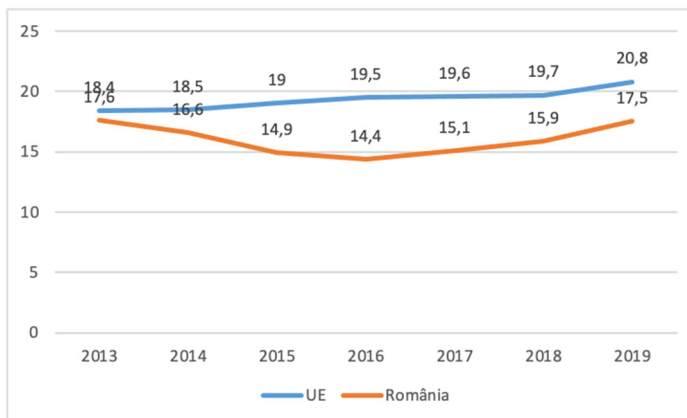
The "Open Data" indicator represents several indicators selected to measure the maturity of open data in Europe (Figure 2). They mainly cover the level of development of national open data promotion policies, an assessment of the features made available on national data portals, as well as the expected impact and quality of open data. The evolution of the Open Data indicator in Romania and the European Union for the period 2019 - 2021 shows a significant increase in Romania from 57.42 in 2019 to 75.54 in 2021. There is a difference between Open Data in the European Union and Romania, in the year 2021 being a difference of 5.58 points.



Source: own representation based on the data provided by CNECT (2022)

Figure 2. The evolution of Open Data in Romania and the European Union (2019 - 2021)

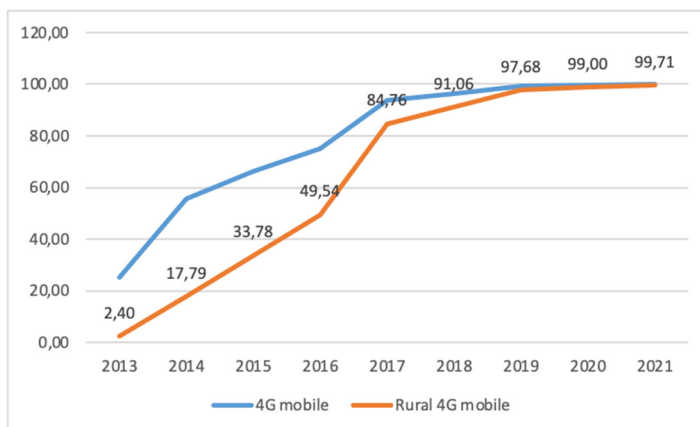
As for the 'Science and technology graduates' indicator, it refers to graduates of higher education in science and technology per 1,000 inhabitants aged 20-29 inclusive. These graduates of new higher education in a calendar year from public and private institutions, who complete graduate and postgraduate studies, compared to an age group that corresponds to the typical graduation age in most countries. Qualified human resources in the IT segment are needed for the phenomenon of digitization. Thus, this indicator is decreasing in Romania from 17.6 in 2013 to 17.5 in 2019, while in the European Union it is increasing from 18.4 in 2013 to 20.8 in 2019. In this sense, it is observed that there is a gap between Romania and the European Union, and the trend in Romania does not highlight the prospects of reducing this gap (Figure 3).



Source: own representation based on the data provided by CNECT (2022)

Figure 3. Science and technology graduates' evolution in Romania and European Union (2013 – 2019)

Connectivity is an important issue for the European Digital Agenda. Thus, the indicators "rural 4G mobile broadband (LTE) coverage (as a% of households)" and "4G mobile broadband (LTE) coverage (as a% of households)" have the role of highlighting whether there are differences between connectivity in urban areas and the rural one. Digitization as a whole includes, in addition to the development of infrastructure and the education of citizens in the sense of using digital services, awareness of the efficiency of their use. However, infrastructure remains essential to be able to develop digital services. In this respect, the indicator shows the percentage of households living in areas covered by advanced fourth generation mobile broadband (LTE protocol). Between 2013 and 2021 these indices had a continuous evolution, and in 2021 the difference between rural and urban 4G mobile network is only 0.02%, while in 2013 there was a difference of 22.61%. 4G infrastructure has started to develop progressively since 2017, when it was 84.76% in rural areas. Providing mobile 4G infrastructure for both urban and urban space shows that they are the basis for using digital services in Romania (Figure 4).



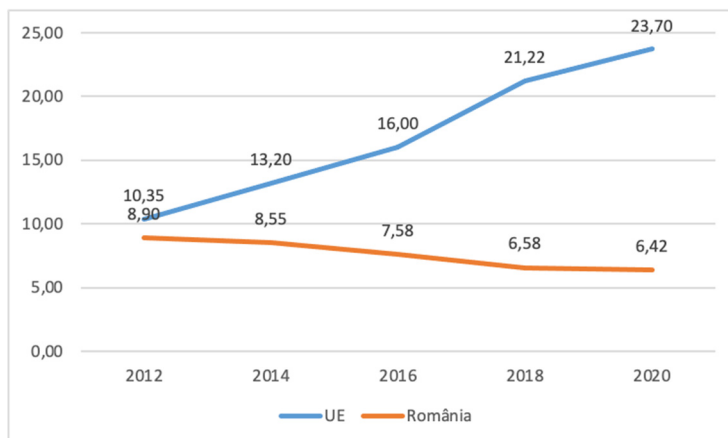
Source: own representation based on the data provided by CNECT (2022)

Figure 4. The evolution of rural 4G mobile broadband and 4G mobile broadband in (2013-2021)

For the eHealth field, the indicator “making an appointment with a practitioner via a website” was analysed, which shows a very big difference between the European Union and Romania. Thus, setting up a meeting with a doctor through a website at European level increased from 10.35 in 2012 to 23.2 in 2020, while in Romania it increased from 8.9 in 2012 to 6.42 in 2020. The decrease of people who use doctor's appointments through a website highlights the decrease of the digital population in Romania, but also precariousness in the use of the Internet for medical appointments. Thus, the medical system needs development in the sense of providing digital medical services to patients, and this field has been integrated in the National

Digital Strategy of Romania, which means that stages of the development of this system will be completed in the next period.

The analysis showed that the information technology infrastructure is constantly evolving and the coverage of access to households in all areas, urban and rural is about 100%, which indicates that the Digital Agenda for Europe has played an important role in its development. Pursuing the achievement of the objectives set by the National Digital Strategy of 2015, but also by implementing the Agenda for Europe 2020 - 2030 can help reduce the gaps between Europe and Romania. The Digital Agenda is an important pillar for the development of the digitalization of public services in Romania. The financial resources needed to achieve the set objectives can be identified both from European non-reimbursable funds and from government funds. Digitization is a necessity for both public and private services, and the COVID-19 pandemic has highlighted this, especially when there are restrictions to combat it (Figure 5).



Source: own representation based on the data provided by CNECT (2022)

Figure 5. The evolution of making an appointment with a practitioner via a website in Romania and the European Union (2012 - 2020)

Public institutions in Romania need support for digitization, and the Digital Agenda ensures this aspect through the established objectives, by identifying the provision of the necessary legal framework and financial resources. The interaction of Romanian citizens with public institutions through electronic means is low, even if increasing compared to 2006 from 5% to 14% in 2021. This specific objective of the Digital Agenda for Romania 2020 has not reached its target of 35 %, although the number of citizens using the Internet has increased, in 2021 being 81.81% (the target being 60%). In this sense, the study can be continued by deepening each field of action in the Digital Agenda for Romania 2020 in order to identify indicators where targets have not been met, factors that influenced this

aspect and action prospects for the next period. in order to achieve the objectives in this sector, digital.

5. CONCLUSIONS

The Digital Agenda for Romania 2020 has considered the pillars of the Europe 2020 digital agenda, thus establishing the priority areas for action. Even though targets were set for the main objectives at the time of the implementation of the National Digital Strategy for Romania 2020 in 2020, not all targets were met, which shows the widening of the gaps in the digital sector between Romania and the European Union.

Bridging the gap in ICT infrastructure or developing digital services in the public and private sectors are stimulated through the Digital Agenda. One of the most important aspects for Romania is the fact that the set targets are correlated with both the situation in Romania and with the European one, being set realistic objectives.

The development of the Digital Agenda at European and national level is perceived at a complex level, as it ensures socio-economic development. It also contributes to social inclusion, bridges the digital divide. However, the analysis showed that there are significant differences in the implementation of the digital agenda pillars in the Member States of the European Union. The analysis was aimed at highlighting the difference between Romania and the European Union for the analysed indicators. Thus, although some gaps have narrowed, there are still differences in areas such as eHealth, eCommerce or eGovernment.

The digital sector in Romania has development perspectives in the context in which the Digital Agenda for Europe 2020 - 2030 was launched, but what is needed is to launch or update the National Digital Strategy, through which to update the specific objectives and correlated with the new European document. At the Romanian level, part of the financial resources can be provided from non-reimbursable European funds through the European financial year 2021 - 2027 for the development of the digital sector.

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ASPECTS REGARDING THE LIABILITY PRESCRIPTION OF A PUBLIC SERVANT INVESTIGATED BY NATIONAL INTEGRITY AGENCY

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Abstract

Law no. 115/1996 for the declaration and control of the wealth of dignitaries, magistrates, persons with management and control positions and civil servants does not provide a statute of limitation for integrity inspectors to carry out investigations on the assessment of the assets of a public servant. The purpose of the research carried out by the inspectors of the National Integrity Agency is to ascertain whether the public official has acquired sums of money that he cannot justify, thus ordering the confiscation of unjustified wealth. In case of finding the acquisition of property unjustified, the presumption of its acquisition arises as a result of the commission of an illegal act.

The commission of an illegal act will entail the legal liability of the public servant. Legal liability (regardless of its nature, administrative, criminal, etc.) presupposes a violation of a legal provision, which gives rise to a legal report of constraint that has the state, on the one hand, and the person who violates the legal provisions, on the other hand. The content of the legal relationship consists of the State's right to hold the person who violated the legal provisions by applying the appropriate sanction and the obligation of the person concerned to execute the sanction imposed. Regardless of the nature of the legal liability, the legislator provides a statute of limitation, which, following its fulfillment, the legal liability is removed. The fulfillment of the limitation statute for the commission of an unlawful act also implies the impossibility of establishing the guilt of the public servant, thus determining the impossibility of drawing the consequences of finding this act. However, in the current regulation, Law no. 115/1996 provides with priority the confiscation of wealth found to be unjustified and only later the problem of the public servant's liability is raised. In case the liability of the public servant cannot be attracted, by the fact that the term of prescription of liability is fulfilled, we find that the sanction of confiscating a private property that cannot be proved as being acquired illegally is contrary to the provisions of article 44 paragraph 8 of the Constitution.

Keywords: *public servant wealth research; exception of unconstitutionality; national integrity agency; the presumption of lawful acquisition of property.*

JEL Classification: K39, K41

1. THE INCIDENCE OF THE PRESCRIPTION OF LIABILITY'S INSTITUTION OF THE PUBLIC SERVANT IN CASES HAVING AS OBJECT THE RESEARCH OF THE ASSETS REGULATED BY LAW NO. 115/1996

In a case having as object the investigation of the wealth of the public servant by the National Integrity Agency, the person investigated invoked the prescription of the legal liability of the act by which the alleged unjustified wealth was acquired.

The confiscation of the property of the investigated person (the purpose of the procedure regulated by the provisions of Law no. 176/2010 in conjunction with the provisions of Law no. 115/1996) is a consequence of the *a priori* perpetration of an allegedly illicit act.

Legal liability (regardless of its nature, administrative, criminal, etc.) presupposes a violation of a legal provision, which gives rise to a legal constraint relationship that has as the state, on the one hand, and the person who violates the legal provisions, on the other hand.

The content of the legal constraint relationship consists of the state's right to hold the person who has violated the legal provisions liable by applying the appropriate sanction and the obligation of the person concerned to execute the sanction imposed.

Regardless of the nature of the legal liability, the legislator has provided a limitation period, which following its fulfillment, the legal liability is removed.

The fulfillment of the term of prescription for committing an illegal act implies also the impossibility of establishing the perpetrator's guilt, thus determining the impossibility of attracting the conclusions of the finding of this fact.

Relevant in this regard is the Constitutional Court Decision no. 449/2015, with reference to art. 11 of Law no. 176/2010: "The Court notes that, according to the criticized text of the law, the activity of assessing the declaration of assets and conflicts of interest and incompatibilities is carried out by the National Integrity Agency "both during the exercise of public functions or dignities, and within 3 years after their termination". In other words, the text sets a deadline within which the Agency has the right to carry out the evaluation. Thus, it has at its disposal a time interval equal to the term of office of the local elected representative, plus another 3 years from the time of the end of the mandate, in which it can carry out the said activities.

Therefore, that text sets only the maximum period within which the National Integrity Agency may exercise that competence without containing any regulation regarding the term of prescription of liability of the person over whom it carried out the assessment.

The juridical norms, rules and time limits within which civil (tort, for own act), criminal or administrative (disciplinary) liability is prescribed, and cannot be engaged, are regulated by the juridical norms specific to these matters.

Thus, in civil matters, which also covers the administrative field, the general prescription term of 3 years, provided by article 2.517 of the Civil Code, or depending on the moment of the act and the applicable law, by article 3 of Decree no. 167/1958 on the extinctive prescription republished in the Official Gazette of Romania, Part I, no. 11 of 15 July 1960, abrogated by Law no. 70/2011 for the implementation of Law no. 287/2009 on the Civil Code published in the Official Gazette of Romania, Part I, no. 409 of 10 June 2011.”

Thereby, the term of prescription of the responsibility of the investigated person flows independently of the right of National Integrity Agency to carry out the evaluation report.

The research activity of the public servant’s wealth due to the analysis by the inspectors of the National Integrity Agency started on 30 June 2014.

The period subject to evaluation was 20 November 2006 to 31 December 2017. The National Integrity Agency approach aims to involve the public servant’s liability for alleged wrongdoing on a date prior to 20 June 2006, as well as until 31 December 2017.

Assuming that the term of prescription of legal liability for alleged wrongdoing resulting in the acquisition of the alleged unjustified wealth of the public servant was not fulfilled at the time of the commencement of the assessment by the National Integrity Agency, the 3-year term of the investigated person’s liability would have been fulfilled on 31 December 2020.

The term of prescription, by which the passivity of the National Integrity Agency in handling the files for assessing the situations of wealth research is sanctioned, is liable to interrupt according to article 2.537 of the Civil Code, since the interruption, as well as the suspension of the term of the extinctive prescription are of the essence of this legal institution in civil matters.

The provisions of the article 2.537 of the Civil Code represents the common law in the field of cases of interruption of the course of the term of prescription, having also applicability the analyzed matter.

However, for its practical application, the interpreter is obliged to use the analogy method to determine the similar case of interruption of the term of prescription applicable, since the same cause or reasons must produce the same effect.

The Constitutional Court assessed in Decision no. 74 of 16 November 2020 (published in the Official Gazette no. 183 of February 24, 2021 that “of the cases of interruption regulated by the Civil Code, for the identity of reason can be applied in the specific matter analyzed, the situation referred to in point 2 of the abovementioned rule that ‘the prescription shall be discontinued (...) 2. by filing an application for a summons or arbitration, by registering the claim at the table of creditors in the insolvency proceedings, by submitting the application for intervention in the course of the enforcement initiated by other creditors or by invoking, by way of exception, the right whose action is prescribed”, therefore, the situation in which the person against whom the limitation period runs falls out

of his or her sanctionable passivity and triggers the procedures corresponding to the recognition of his or her right or legitimate interest claimed.”

By reference to the criticized provisions, although the legal relationship of constraint arising from the commission of an alleged illegal act is extinguished as a result of the fulfillment of the prescription of liability of the person under investigation, following the issuance of the evaluation report and proving the unjustified character of the property of the investigated person, the consequences of this liability consisting in the confiscation of the property, producing legal effects.

In other word, although the legal liability consisting in committing the illegal act can no longer be drawn up as a result of the fulfillment of the prescription of liability, the purpose of this legal relationship of confusion becomes an incident by the confiscation of the property of the person investigated.

In all branches of law in which the actions regarding the liability of the person who violated the legal provisions fall under the responsibility of the state bodies, there are incidents provisions that prevent the legal contribution of constraint to produce legal effects following the fulfillment of the term of depression.

Thus, according to article 22 of the Fiscal Procedure Code “tax claims are extinguished by payment, compensation, forced execution, exemption, cancellation, prescription, payment and others expressly provided by law.”

According to article 51 paragraph 2 letter a) of the Fiscal Procedure Code “the issuance of another fiscal administrative act is no longer possible in situations such as:

a) fulfillment of the term of prescription provided by the law.”

Regarding the contravention liability, article 13 paragraph 1 of O.G no. 2/2001 provides: “The application of the sanction of the contravention fine shall be prescribed within 6 months from the date of the offense.”

At the same time, as regards the criminal responsibility, the criminal investigation bodies themselves order the case to be closed following the fulfillment of the term of prescription provided by article 16 of Criminal Procedure Code: “The criminal action cannot be set in motion and when it has been set in motion can no longer be exercised if:

b) amnesty or prescription occurred, the death of the suspect or defendant or the removal of the suspect or defendant legal entity was ordered.”

Even the special confiscation security measure provided by article 112 of the Criminal Procedure Code can no longer be disposed, as it is impossible to establish the perpetration of an act stipulated by the criminal law.

Even more it cannot be disposed the extended confiscation provided by article 112 of the Criminal Code, because it cannot be disposed a conviction decision regarding the investigated person.

Under the Civil Code regime, the term of prescription, according to article 2.523, begins to run from the date when the holder of the right to action knew or according to the circumstances, had to know his birth.

The right to action is understood, according to Article 2.500 (2) of the Civil Code, the right to compel a person, by means of public force, to perform a certain benefit, to respect a certain legal situation or to bear any other civil sanction, as the case may be. According to the Constitutional Court Decision no. 74 of 16.11.2020, “the national integrity Agency is held in the exercise of its powers to evaluate the declarations of assets, the data and information on the wealth, as well as the changes in the patrimony that may occur in the persons referred to in Article 1 of Law no. 176/2010, during the performance of public functions and dignities, by triggering specific investigations within the general term of 3 years provided by art. 2.523 of the Civil Code, which begins to run from the date when it knew or, as the circumstances may be, was supposed to know the legal or factual situation with relevance in the exercise of its powers, which will be interpreted in the specific note of the public relations in which the Agency acts, but only late 3 years from the moment of termination of the public offices or dignitaries who object to the investigations.”

The evaluation activity of the national integrity Agency is therefore subject to the general limitation period provided by Article 2.523 of the Civil Code, civil sanction that is applicable taking into account its entire legal regime.

By transpiring to this reasoning to the activity of the national integrity Agency, we note that the interruption of the limitation period of the liability of the person investigated can take place by taking two steps by this institution:

- the first step consisting in initiating investigations toward the person suspected of illicit acquisition of wealth;
- the second step consists in issuing the evaluation report and notifying the wealth research commission.

The assessment report issued by the integrity inspectors concerned submitted for analysis was issued with 03.03.2021, thus exceeding the limitation period.

At the same time, other state bodies have not conducted investigations into alleged facts that allegedly resulted in the acquisition of supposedly unjustified wealth, research that would interrupt the term depression.

Thus, in the case under consideration, the legal liability consisting in committing the illegal act can no longer be drawn up as a result of the fulfillment of the limitation period.

The purpose of the proceedings before the court is to ascertain the justified or unjustified character of the property of the person under investigation and possibly to confiscate that property as a result of these findings.

2. ASSESSMENTS REGARDING THE BREACH OF THE PRESUMPTION OF LAWFUL ACQUISITION OF PROPERTY

The confiscation of the property of the investigated person has the legal nature of a punishment, sanctions applied to the public official, whose wealth is thus presumed to be acquired by illicit means.

However, as I have pointed out above, there is an indissoluble link between the committing of the alleged unlawful act and the drawing of a legal consequence for that act, as it is inconceivable to establish a penalty without establishing the perpetrator's guilt.

In order to dispose the confiscation of unjustified property, it is necessary that:

- to prove the existence of the illicit act as a result of which the unjustified wealth was acquired;

- there is the possibility of further proof of the existence of the illicit act as a result of which the justified property was acquired.

Confiscation of property is a sanction of committing an illegal act that is not and cannot be ascertained by the court according to the current regulations.

The application of a sanction before the public servant is found to have committed an illegal act and its guilt violates the presumption of innocence. At the same time, the civil servant is violated the right to a fair trial by the impossibility of invoking the prescription before the court, because in the analysis of the fulfillment of this term, the court must fix the time of the commission of that act.

In these circumstances, we consider that is cannot be broken down the analysis of the commission of the illicit deed by which the unjustified wealth was acquired by the analysis of the justified or unjustified character of the property.

By ignoring the fulfillment of the limitation period of legal liability for the hypothetical illicit act as a result of which an allegedly unjustified wealth would have been acquired, the court would order the confiscation of this property, without the possibility of establishing the perpetrator's guilt.

Such a decision would flagrantly violate the provisions of Article 44 paragraph 8 of the Romanian Constitution, according to which: "Legally acquired property cannot be confiscated. The licit character of acquisition is presumed."

Moreover, we consider that Law no. 115/1996 regarding the declaration and control of the wealth of dignitaries, magistrates, persons with management and control positions and public servants presents criticisms of unconstitutionality in its entirety, Whereas it lays down the procedure whereby the confiscation of goods or sums of money whose origin has not been justified may be ordered, thereby presuming that any values which are not justified have been acquired unlawfully and providing for the possibility of confiscation of property even though they were not intended, Used or resulting from offenses or contraventions, contrary to Article 44 paragraphs (1), (2), (8) and (9) of the Constitution.

Thus, we note in particular article 18 of Law no. 115/1996 which deviates from the terms used by the Constitution – bid wealth/ illicit wealth – and operates under the terms justified wealth/unjustified wealth.

The term "unjustified wealth" means goods in respect of which the person under investigation cannot demonstrate provenance.

Obviously, such goods may have a tender origin but, under Law no. 115/1996, may still be subject to confiscation.

The procedure does not require at any stage the finding and unlawful character of unjustified property before the confiscation is ordered, and administrative and judicial practice is constant in the sense of ignoring the question of whether the provenance is lawful or illicit.

Moreover, by using the unjustified term, Law no. 115/1996 actually establishes a reversal of the burden of proof, whereas neither the administrative nor the judicial bodies must prove the illicit origin of the goods before they are seized, but throughout the proceedings the person under investigation must prove their lawful origin.

3. ASSESSMENTS REGARDING THE VIOLATION OF THE PRINCIPLE OF EQUALITY BEFORE THE LAW AND THE RIGHT TO A FAIR TRIAL

The provisions of article 28 paragraph 3 of Law no. 115/1996 are contrary to article 16 Constitution on the principle of equality before the law, as well as article 124 paragraph 2 of the Constitution as the fulfillment of the limitation period extinguishes the most serious form of legal liability, namely the criminal one, the prosecutor ordering the closing of the case, while the integrity inspectors of the National Integrity Agency have a perpetual right to investigate the property of a person, which, if the term of prescription is fulfilled, would be devoid of an end consisting in establishing the perpetrator's guilt.

At the same time, by issuing the evaluation report, a real accusation is made regarding the person evaluated. Under these circumstances, the investigated person must be guaranteed all the constitutional rights of a fair trial in criminal matters.

In its constant case-law (Decision No 766 of 18 November 2021, published in the Official Gazette No 294 of 25 March 2022), the Constitutional Court stated that the diversion of legal regulations from their legitimate purpose, through a systematic misinterpretation and application, Of these by the courts or other subjects called upon to apply the provisions of law, may determine the unconstitutionality of that Regulation, in which case the Court has jurisdiction to eliminate the vice of unconstitutionality thus created, essential in such situations being to ensure the respect of the rights and freedoms of persons, As well as the supremacy of the Constitution.

At this time, the constant practice of both the National Integrity Agency, the wealth research commission and the courts called to rule on the confiscation of property is the sense that the exception of the limitation of the liability of the person investigated as a reason for the termination of the proceedings cannot be received.

Or, the refusal to recognize the right of the person under investigation to defend himself, including by invoking the lack of purpose of the proceedings before the Commission for the investigation of assets and the court of trial by reference to the fulfillment of the limitation period of legal liability and the

disposition of property in the absence of a basis, is blatantly contrary to the right to a fair trial governed by article 21 (3) of the Constitution.

Consequently, although the evaluation report is issued by the national integrity Agency in order to hold the person under investigation liable (contravention, criminal, administrative, etc.), in the event that the limitation period of this legal responsibility is fulfilled, the approach of this institution is devoid of purpose, it is impossible to establish the guilt of the person who committed the alleged unlawful act.

For the reasons set above, such a situation infringes the provisions of article 16 on the principle of equality before the law, article 20 on international human rights treaties, by reference to article 6 of the Convention for the Protection of Human Rights and Fundamental Freedoms, article 23 paragraph 3 on the right to a fair trial.

4. CONCLUSIONS

According to the current legal provisions, ascertaining that the public servant's wealth cannot be justified by its owner, although there is no previous finding of illicit acquisition of this respective wealth, as a result of committing a contravention or crime, allows the seizure of wealth.

At the same time, Law no. 115/1996 does not make any reference to the prescription of liability for the deed that generated the acquisition of unjustified assets.

Our conclusions are that the analysis of the illicit deed by which the unjustified property was acquired cannot be separated from the analysis of the justified or unjustified character of wealth.

De lege ferenda we propose a change of the legislation regarding the investigation of the assets of civil servants, in accordance with the constitutional norms.

Thus, we propose that in the investigation of the civil servant's wealth, the integrity inspectors should have the task of identifying and legally classifying, at least at an affirmative level, the deed or deeds of the civil servant through which he acquired a fortune that he cannot justify.

Of course, the competence to investigate these facts will fall in the hands the competent institutions, as it is forbidden to amalgamate the competencies of other state bodies in favor of the integrity inspectors within the National Integrity Agency.

We consider necessary the express regulation of the solution that the integrity inspectors, respectively the wealth research commission and the courts must adopt in the situation of meeting the prescription term of the civil servant's responsibility for the deed that generated the acquisition of unjustified wealth.

A conclusion contrary to our proposal would imply the issuance of the evaluation report by the National Integrity Agency in order to hold accountable (contraventional, criminal, administrative liability, etc.) the civil servant for an act for which the limitation period of legal liability has been met, the approach of this institution being in these conditions without fruition.

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THE LINK BETWEEN ECONOMIC AND POLITICAL INTEGRATION IN EUROPE

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Abstract

This contribution analyses the link between economic and political integration in Europe from a historical perspective. The aim is to shed light on the dynamics behind the various phases of European integration, which – it bears clarifying from the start – is first and foremost a political project. In the first part of the paper, I will look at the context in which the European Communities were created after the Second World War. I will then present Jean Monnet's vision and analysis of Europe, before expanding the scope to include some competing visions. This will be followed by an explanation of the shift in European integration in the 1990s. I will conclude with a look at the latest integration-related issues and the prospects for the future.

Keywords: *European Communities; European Union; history.*

JEL Classification: N44

1. INTRODUCTION

This essay analyses the link between economic and political integration in Europe from a historical perspective. The aim is to shed light on the dynamics behind the various phases of European integration, which – it bears clarifying from the start – is first and foremost a political project.

The essay consists of four parts. First, I will look at the context in which the European Communities were created after the Second World War. I will then present Jean Monnet's vision and analysis of Europe, before expanding the scope to include some competing visions. This will be followed by an explanation of the shift in European integration in the 1990s. I will conclude with a look at the latest integration-related issues and the prospects for the future.

2. THE CREATION OF THE EUROPEAN COMMUNITIES AFTER THE SECOND WORLD WAR

Europeans, as well as people throughout the rest of the world, paid a huge price in the two world wars that were waged in the first half of the 20th century. These wars laid bare the many mistakes from the past, such as nationalism, protectionism, egoism, weak multilateralism and the arms race. While these issues

have by no means been resolved – quite the contrary in fact – they have been largely put aside between countries within the European Union (Grin, 2022, pp. 31-42).

We must never forget the courage of the founding fathers of a united Europe and their objectives of peace, prosperity and freedom. The European venture began after the Second World War, at a time when the United States was heavily involved in Europe and there was a drive for European multilateralism. Yet as we know, the Cold War placed geographical constraints on that venture. To begin with, six Western European countries came together to try out this new form of integration. They included France and West Germany – two longstanding enemies whose reconciliation was a major historical milestone (Grin, 2022, pp. 43-80).

In the late 1940s, a number of multilateral organisations were set up in Western Europe, including the Organisation for European Economic Cooperation (OEEC), the North Atlantic Treaty Organization (NATO) and the Council of Europe. However, these institutions were intergovernmental in nature, with each member State possessing a right of veto.

Jean Monnet, who designed and then became the first president of the European Coal and Steel Community, the first of Europe’s communities, wrote the following in 1955: “Governments will base their choice less on the immediate path they will take together than on the route they have agreed to. If they keep to the blueprint to which we are accustomed and that ended in failure, unable to prevent the wars we suffered, we will hear talk of cooperation. If, on the other hand, they take the joint decision to change the form of their relationship – and only change can lead to our salvation – we will hear that they have all agreed to delegate powers exercised poorly as separate entities and that they are delegating them to a common authority. In the first scenario, we will return to the League of Nations, having already suffered its failure and the ensuing war. In the second scenario, we will move towards a United States of Europe, with the hope of peace and prosperity for all” (AJMFE, 1955a, pp. 3-5).

The European Communities marked the start of a new form of integration, one that included some supranational aspects and that was underpinned by the quest for common interests among States. The first of Europe’s communities – the European Coal and Steel Community – was created in 1952. Then in 1954, after plans for a European Defence Community fell through, the focus shifted to economic rather than political union, and the European Economic Community and Euratom were created in 1958. This represented a kind of “backwards” path to federalism, weakening the European Communities’ supranational reach.

That is how the community approach to integration came about. The best definition was perhaps provided by Jean Monnet’s Action Committee for the United States of Europe in 1962: “[European countries] have adopted a new method of collective action. After a period of trial and error, this method has developed into a regular interchange, between a European body responsible for suggesting solutions

to common problems and the governments of member countries which put the national points of view. This is a completely new approach. It does not create a central government. But it does result in Community decisions being taken within the Council of Ministers notably because the proposal of solutions to common difficulties by the independent European body makes it possible, without risk, to give up the unanimity rule. The Parliament and the Court of Justice underline the Community character of the whole. This method is the real unifying factor in Europe” (AJMFE, 1962, p. 2).

From the 1950s to the end of the 1980s – a time when the two world wars were still fresh in people’s memories – the European Communities enjoyed a high level of output legitimacy, and the security provided by the United States had a stabilising effect on Western Europe. Many people saw the development of the European Communities as a technocratic process, even though this approach to European integration and the resulting institutions were in fact politically driven.

The European Commission represented the common interest. It prepared and proposed legislation through a process of dialogue with the Council, with which it shared the executive function, and it was accountable to the European Parliament. However, it fell short of being a European government, since this was not what member States wanted. Lastly, the Court of Justice was the Communities’ judicial arm.

The aims of European integration were broadly political, as demonstrated by the southern enlargements in 1981 and 1986, which consolidated the return to democracy in Greece, Spain and Portugal. Yet the full substance – and potential – of these common institutions remained hidden, and the lines between economics and politics were blurred. This was accentuated by disagreements on supranational issues and what integration should ultimately lead to.

3. JEAN MONNET’S VISION AND ANALYSIS OF EUROPE AND OTHER, COMPETING VISIONS

When Jean Monnet was involved in European affairs after the Second World War, he advocated for a step-by-step approach to integration – for him, that was the only effective option. The Schuman Declaration of 9 May 1950, which was drafted by Jean Monnet and led to the creation of the European Coal and Steel Community, stated: “Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a *de facto* solidarity” (AJMFE, 1950, p. 1). Five years later, Jean Monnet, who went on to become the first Honorary Citizen of Europe, wrote: “It cannot all be done at once – or nothing will be done at all. We need to act now, in a practical way, in a limited but real way, and also have bigger and more distant aims before us” (AJMFE, 1955b, p. 4).

Jean Monnet saw economic integration as the cornerstone of any political union: “Any agreement organising the system of co-operation that will be

necessary at the outset must clearly guarantee the continuity and future of economic integration, which is the basis of political union. This economic integration cannot be called in question, either now or in the future” (AJMFE, 1962, pp. 2-3). But there was no simple way of moving from economic to political integration: “Economic integration with social progress shapes and brings nearer political integration, but [...] the latter will not arise spontaneously without effort and deliberate will” (AJMFE, 1969, p. 6). Even though member States had embarked on the path to political union, there were still several routes they could take.

In a concept note written in 1952 and expanded five years later, Jean Monnet set out the following sequence: from single market to a single currency and then to a federal system (AJMFE, 1952, p. 1). Monetary integration played a key role, bridging the gap between economics and politics. From 1960 onwards, Jean Monnet began pushing for a confederal model as a step towards a European federation (Grin, 2014, p. 19).

A declaration by Monnet’s Action Committee in 1962 stated that: “It should now be made clear that after the initial period of co-operation the revision of the commitments entered into by the States should provide for the gradual adaptation to the political sphere of the method which has already made it possible to achieve the economic integration of Europe” (AJMFE, 1962, p. 3). This suggested that the institutions and approaches that had driven Europe’s economic integration could help to shape the political union.

In 1964, the Action Committee advocated a community approach to foreign policy and defence. This would be built on a grassroots model involving universal suffrage, either during or at the end of the process. This would culminate as follows: “Once they have transformed relations between them in this way and come to speak with one voice on the essentials of policy, the European nations will be able to open the great debate which will ultimately enable them to decide what form a democratic government of Europe is to take” (AJMFE, 1965, p. 5).

General Charles de Gaulle, French president from 1959 to 1969, had a competing vision of European integration. He was in favour of both economic and political integration and threw his support behind some flanking policies that would strengthen economic integration, such as the common agricultural policy. However, he wanted an intergovernmental community – a Europe of nations. He saw European political integration as a way of extending France’s influence both on the continent and worldwide. He did not want European security to be so reliant on the United States.

Yet another vision of Europe emerged with British Prime Minister Margaret Thatcher, in power from 1979 to 1990. She did not want anything other than economic integration in Europe, with a focus on deregulation. She was against any strong flanking policies and wanted supranational features to be kept to a minimum – they should only be allowed where necessary for the internal market.

She opposed any form of monetary union or political integration and believed that European security should be ensured solely by NATO.

Jacques Delors, the president of the European Commission from 1985 to 1995, shared the same vision as Jean Monnet. Within Europe, he was seen as Thatcher’s intellectual and political rival (Delors, 1994, 2004). Table 1 provides a summary of the different visions presented above.

Table 1. Competing Visions of Europe

	Jean Monnet and Jacques Delors	Charles de Gaulle	Margaret Thatcher
Economic integration in Europe	Yes With flanking policies	Yes With flanking policies	Yes, but with a focus on deregulation No major flanking policies
Political integration in Europe	Yes	Yes	No
European security	Ensured by a European organisation and NATO	Ensured by a European organisation	Ensured by NATO
Method of integration	Federalism and a community approach	Intergovernmental approach	Limited supranational features

Source: own representation

4. THE SHIFT IN EUROPEAN INTEGRATION IN THE 1990s

The Treaty on European Union, more commonly known as the Maastricht Treaty, was signed in 1992 and came into force in 1993. It created a European citizenship in addition to member States’ individual nationalities. It marked a break with previous approaches to integration, as it provided for the Europeanisation of monetary policy, something previously considered a sovereign power held by member States. It brought a more federal approach, with the euro introduced in 1999. This key development – recalling Jean Monnet’s note from 1952 – would build on the success of the internal market programme, which had been initiated in 1985.

A study of political speeches in the late 1980s shows that, while there were some economic reasons for this shift, the main motivations were political. The three main aims were: to make the integration process irreversible, an ambition that gained traction with the fall of the Berlin Wall and the reunification of Germany; to move beyond the status quo at the time, in which Germany’s Bundesbank set the tone for monetary policy across Europe; and to strengthen the international monetary order (or rather non-order) and protect Europe from the global forces of speculation.

One of the main limitations of the Maastricht Treaty was that the economic union, which was part of the first pillar, and the new pillars – those of common foreign and security policy (the second pillar) and of justice and home affairs (the third pillar) – would be intergovernmental in nature. Here, the Council and the European Council would play a key role.

Maastricht and the treaties that followed – those of Amsterdam, Nice and Lisbon – bestowed an increasingly hybrid role on Europe's institutions, which became both more supranational and more intergovernmental. The European Parliament emerged as a key supranational institution within the European Union, whereas the increasingly powerful European Council was primarily intergovernmental in nature (Beaud, 2009; Quermonne, 2008, 2015).

The scope of European integration was expanded in the 1990s and thereafter, and new policy areas were embraced. The result was a European Union that was more political but weaker in these new policy areas. This can be put down to the collective resilience of national sovereignty – a phenomenon not unique to Europe. A noticeable exception was the subsequent application of the community approach to key parts of what had been the third pillar of the Maastricht Treaty – justice and home affairs.

The European Union is clearly different from fully federalist systems, such as those in Germany, the United States and Switzerland. History has shown that monetary integration cannot be successful over the longer term without political union. For this, strong internal solidarity is key.

5. LATEST ISSUES AND PROSPECTS FOR THE FUTURE

Economic integration should be seen as a never-ending process with three components: negative integration, positive integration and systemic integration. Negative integration entails getting rid of obstacles to integration by removing national protective mechanisms, such as quotas and tariffs; this was very important in the 1950s and 1960s. Positive integration involves removing obstacles by replacing national rules with European ones; this became particularly important from the 1970s onwards, with the fight against non-tariff barriers. Systemic integration relates to the economic and social model chosen at the European level. It is strongly linked to tax and social policy issues. Needless to say, this third type of integration is more political, and it is where there has been the least progress.

Economic integration, still constrained by loopholes in the internal market and the economic union, carries with it echoes of the Myth of Sisyphus.

The internal market was supposed to have been completed by the end of 1992 – nearly 30 years ago. Much was achieved then and has been done since to better manage and deepen the market, which has been shaped by several factors and challenges: the enlargement from 12 countries in 1992 to 30 in the European Economic Area today, the increasingly complex institutional setting,

globalisation, technological developments such as digitisation and the shift to a low-carbon economy.

The internal market is least advanced when it comes to the integration of services, taxation and social policy. Small and medium-sized enterprises, as well as liberal professions, get the least out of it. Recent studies show that 40% of the potential economic gains from the internal market are not harnessed (European Commission, 2018; European Parliamentary Research Service, 2019). The Covid-19 pandemic and the war in Ukraine have highlighted the need for enhanced strategic autonomy and resilience capabilities. Yet these crises have also shown that the European Union is increasingly capable of responding and adapting swiftly.

The economic union – the second part of the Economic and Monetary Union – has been considerably developed since 2010. Four main components have been developed: rules have been adopted to ensure budgetary discipline; coordination between national economic policies has increased, and monitoring of macroeconomic imbalances has been stepped up; the Banking Union and the Capital Markets Union have been set up; and new solidarity-based mechanisms, such as the European Stability Mechanism and the Recovery and Resilience Facility, have been created. Here too, the agenda is far from complete.

Still, there is no common understanding between the 27 member States of the European Union of what a completed political union should look like. This can be seen in the initial reactions to the conclusions of the Conference on the Future of Europe.

It is clear that one necessary step will be to make qualified majority voting widespread in the Council and the European Council, yet there is still widespread opposition from national governments. Debates over sovereignty, as well as over the meaning of the word “federal”, are endless. The view of the United Kingdom, which chose to leave the European Union in 2020, is to some extent shared by other member States. The European Union is still overly dependent on political changes in larger member States, which creates hurdles and is not fair on smaller ones.

The European Commission has become more political and geopolitical. Yet it needs to maintain its technical, policy-related expertise and its role as guardian of the treaties. The Commission has become an increasingly vertical structure, with closer links to the European Parliament and the European Council, arguably the European Union’s most powerful institutions, the roles of which have been increased by every treaty since the Single European Act of 1986.

Jean Monnet wrote in his memoirs that “I have always believed that Europe would be built through crises, and that it would be the sum of their solutions” (Monnet, 1978, p. 417). The Covid-19 pandemic led to the partial mutualisation of debts. But will this be a one-off, or will it be rolled over in the future? There are likely to be some intense political battles on that front. The way the European Union

and its member States respond to the attacks on the rule of law in some member States will also be crucial – the soul of the European project is at stake.

Recently, the war in Ukraine has strengthened EU foreign policy, with EU-wide sanctions imposed on Russia and weapons sent to Ukraine. Perhaps now more than ever, the European Union and NATO have a complementary role. But Europeans will likely have to increasingly take their security and their fate into their own hands.

The European Communities, and later the European Union, have always been essentially political entities. And the project's political dimension has been growing stronger since the 1990s. Today's European Union is a combination of a confederal and a federal system – we are a long way from creating a federal European State. Europe is an open-air laboratory for how different States and people can live together. May her future be bright.

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THE FINANCIAL DECISIONS ON HUMAN RESOURCE: SUSTAINABILITY OF SALES

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Abstract

In general, finances are constantly exposed to numerous risks, shocks or pressure factors, demographics changes, political disturbances including economic and financial crises depending on the year stages economic cycle. Based on this context, we aim to analyze the impact of the decision to finance human capital on sales sustainability. The sustainability of company sales requires substantial investment in equipment and training of human resources. This study will analyze data on the evolution of internal process integration among enterprises, the use of the Internet by employees in enterprises, and the evolution of Internet sales and the adoption of e-business applications in enterprises. It is important to note in the analysis carried out how the companies were developing before the pandemic and how the pandemic influenced this aspect and whether sales feel this aspect. The study will indicate prospects for carrying out other studies, based on the analysis carried out in this paper.

Keywords: *financing decision; human capital; sales; sustainability; pandemic crisis-Covid-19.*

JEL Classification: G20, L86

1. INTRODUCTION

The generations have the same goals, which are characterized by technological, economic and social growth and expansion, which represents a higher standard of living. The ambition to achieve these goals has prevented people from reaching the current stage of expansion. But the unwanted result joins the preferred ones, even when evolution represents progress. Companies are becoming more and more interested in becoming sustainable, due to the pressures exerted by mega forces, many of which represent real challenges for them, thus forcing them to overcome them. Therefore, companies will have the opportunity to transform intangible assets such as brand value or reputation and create networks of new customers, competitors and suppliers, contributing to the process of developing sustainability. However, it is certain that economic sustainability strengthens the profitability of the company for this reason, companies must tend to a calculated sustainable development, thus driving sales growth. Today it is no longer a secret that sales are a form of direct profitability of the company. Thus,

the way of building sales must be developed in a process of economic sustainability.

Sales within large companies are influenced by several factors, and in the last two years they have been affected by the pandemic. Financial resources are constantly exposed to numerous risks, shocks or pressure factors, demographic changes, political disturbances including economic and financial crises. The evolution of society and the emergence of new tools to make the activity of companies more efficient has led their management to invest substantially in human resources, technological equipment and to move towards a digitized activity.

The COVID-19 pandemic has led companies to reorganize their activity, and office activity to be carried out from home "work from home" for the first time at a general level. In this context, the need for digitization in the private and public environment was obvious and necessary. Digitization has changed the rules in both the private and public sectors of the economy; therefore, the study of its effects has become more relevant. The impact of digitization on economic indicators has not been quantitatively investigated in depth, but it is evident on the economy, especially on GDP (Mammadli and Klivak, 2020). There are factors that have an important role in society such as sustainability, digital transformation, innovation and entrepreneurship. These dimensions have become more and more relevant as there are specific threats such as climate change, which can damage properties and infrastructures and end up affecting productivity, inducing mass migration, etc. For this reason, concern has arisen to reduce negative economic impacts, and specific production activities to be developed by promoting a circular economy (Bilge *et al.*, 2016).

Companies have become more and more concerned with using Enterprise Resource Planning (ERP) in recent years (especially large companies) because it helps them manage and integrate important parts of their businesses. Thus, ERP is used by companies for various departments. Customer relationship management (CRM) software has always been driven by the need to manage customer relationships to increase revenue and profits. CRM does this by giving firms access to critical customer and business data to help streamline the sales cycle, identify new markets, build unique customer histories, and support informed business decisions across the company. The main objective of enterprise resource planning (ERP) software is to help companies operate as efficiently as possible (Garrehy, 2021).

By using modern software such as ERP, which helps to develop complementary software with the aim of integrating and streamlining the processes within a company, large companies have the opportunity to increase their sales and have a sustainability in this sense. Companies using CRM have access to customer information, while ERP provides sales, inventory, financial and other critical business data for manufacturers.

The sustainability of company sales requires substantial investment in equipment and training of human resources. This study will analyze data on the evolution of internal process integration among enterprises, the use of the Internet by employees in enterprises, and the evolution of Internet sales and the adoption of e-business applications in enterprises. It is important to note in the analysis carried out how the companies were developing before the pandemic and how the pandemic influenced this aspect and whether sales feel this aspect.

2. LITERATURE REVIEW

According to the specialized literature, sustainability is being defined as: Sustainability refers to logical systems (e.g., an economic policy, an ecosystem, etc.). In the specialized literature, we also find a consensus of opinion on the dimension between sustainability and durability, even if there are also certain differences in this term. Authors such as Von Hauff and Kleine (2009), Chapuy (2009), and Raderbauer (2011), and researchers such as (Project, 2001) believe that sustainability has three essential components that are consistent: environmental sustainability, social sustainability and economic sustainability. The economic sustainability of the company refers to how the company makes profit in order to survive and to benefit the totality of local, national and global systems. The goal of economic sustainability is perceived through the quality of life. In a broader concept, we can perceive that the sustainable development of the company leads to the implementation of the principles of sustainability to the operations of the company. Within the company's operations, sustainability determines how resources are used in such a way that the company can operate for many years, with a view to ensuring profit.

The use of new technologies, automation and Big Data are technologies that already exist and companies in different sectors are using them for great benefits. There is automation technology that when implemented will have great benefits in customer service as information will always be available for customers to access and ask simple questions, which will help companies reduce labor costs. Technologies will bring great benefits to businesses, but they must use them to create loyal customers and retain new customers. These technologies can be used alone or with a combination to have a greater competitive advantage (Trevizo, 2022).

Digitization has changed the rules in both the private and public sectors of the economy. Therefore, there are papers that study the effects. The impact of digitization on economic indicators has not been quantitatively investigated in depth. The impact of digitization is on the economy and more specifically on GDP. Synthetic indices have been created, the Digitization Index (ID), which reflect the state of digitization at the country level (Mammadli and Klivak, 2020).

The continuous expansion of the IT industry generates trends and migrations not only technological, but also geographical and even social and cultural. The

new Industry 4.0 is based on a much more heterogeneous resource than that of semiconductors: human capital. The inhomogeneity comes from a series of characteristics of the individuals who form it, based on criteria of a technological nature (due to a wide variety of technologies used), availability (which refers to the location where they do their work: from the office or remotely), level of experience, or even from the technological background (many resources do not have an initial technical training, but choose to convert to the technological area) or the cultural one (which can significantly influence the communication processes between resources from different cultural backgrounds).

The use of information technology is increasingly common in society, but especially among companies. The information system has the role of explaining the interaction between business value, processes and IT systems. The use of ERP by companies requires the allocation of higher investments, and the results of IT investments in terms of productivity and business value have begun to increase. The use of Enterprise Resource Planning (ERP) in business processes by companies can discover/reverse-engineer their process flow and find deviations from the desired flow (Najmul *et al.*, 2019).

The flow of different types of information is very important for companies. ERP systems are a special type of integrated information management systems (IIMS). Using ERP systems, companies can streamline management processes that. The use of ERP systems has advantages and disadvantages, but it brings many benefits, including reducing logistics costs, information flow, etc. These benefits are visible not only to individual employees, but also to the entire company. They also have a positive impact on business relationships with customers and suppliers (Ociepa-Kubicka, 2017).

There are studies about the efficiency of companies' activity that highlight since the 2000s that ERP systems are the main set of business IT pantry tools. Companies need to streamline management processes that have so far been done in physical format (paper) or over the phone (Lee *et al.*, 2003). The implementation of an ERP system involves a considerable financial cost, especially among small and medium-sized enterprises. However, studies show that entrepreneurs start implementing ERP systems because they see numerous benefits of their application (Ociepa-Kubicka, 2017).

Sales within companies are closely related to the use of information technology. The information system has the role of explaining the interaction between business value, processes and IT systems. The use of ERP by companies requires the allocation of higher investments, and the results of IT investments in terms of productivity and business value have begun to increase. The use of Enterprise Resource Planning (ERP) in business processes by companies can discover/reverse-engineer their process flow and find deviations from the desired flow (Najmul *et al.*, 2019).

3. MATERIAL AND METHODS

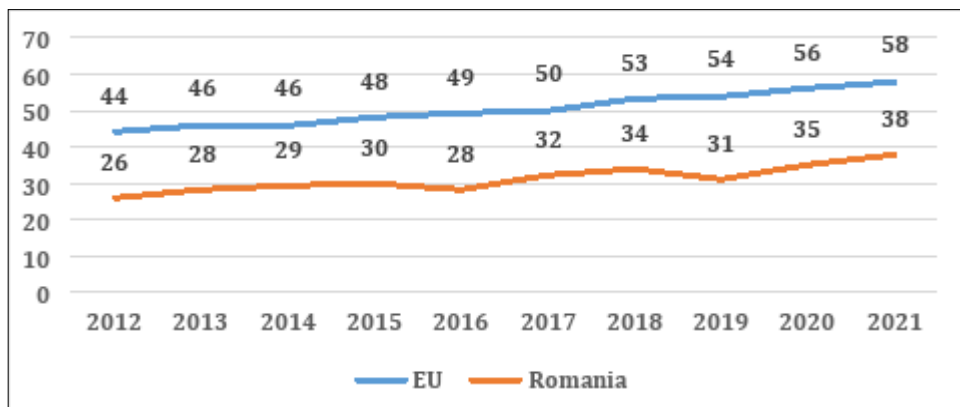
The study analyzes some statistical data at the level of the European Union and Romania for the period 2012 – 2021 in order to observe the influence of the use of the Internet by companies, the integration of internal processes and the use of sales through applications. The statistical indicators are centralized from the website <https://ec.europa.eu/>. The main indicators used are:

- Use of computers and the Internet by employees;
- Integration of internal processes among enterprises;
- Companies with e-commerce sales;
- Adoption of e-business applications in enterprises;
- Businesses with web sales (via websites, apps or marketplaces);
- Business using software solutions such as CRM to analyze customer information for marketing purposes;
- Integration of internal processes and use of social networks by type, Internet advertising.

The selection of these indicators was made in order to observe the modernization trend of companies and the interest to invest in modern solutions that ensure them high sales or a portfolio of loyal customers.

4. RESULTS AND DISCUSSIONS

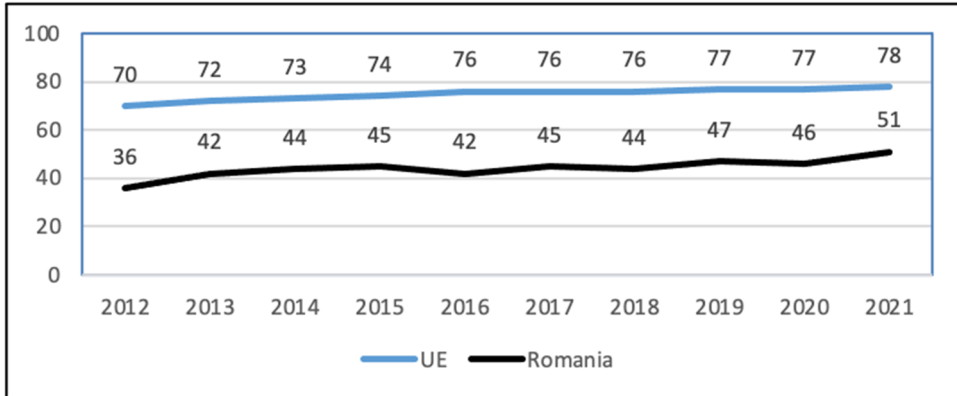
At the level of the European Union, there are statistical data that highlight the use of ERP systems by the business environment through their use in their activity (including trade). At the enterprise level, the use of ERP solutions helps to develop companies and to make the activity more efficient, because not only accounting or management systems are used. European statistics refer to the use of ICT for e-business integration. ICT is considered an integral part of the operation of the enterprise, and its extensive and intensive use, combined with new ways of efficient use of the Internet, is decisive for the way enterprises conduct their business, organize internal communication, share information with business partners and communicate with the customers. EU businesses' use of the Internet and use of ERP and CRM software are highlighted by the indicators "businesses whose business processes are automatically linked to those of their suppliers and/or customers" and "websites and functionality". The use of computers and the Internet by employees (see Figure 1) has evolved from 26% in 2012 to 38% in 2021 in Romania, while in the European Union it has evolved from 44% in 2012 to 58% in 2021. It can note that this indicator is below the level of the European Union, but its increase in the period 2019-2021 is higher than in the European Union, being an increase of 7 percent, compared to 4 percent. This aspect highlights the need to recover the existing gap, on the one hand, but also the fact that the use of computers and the Internet have become an important factor for the conduct of business activities.



Source: Eurostat database

Figure 1. Use of computers and the Internet by employees

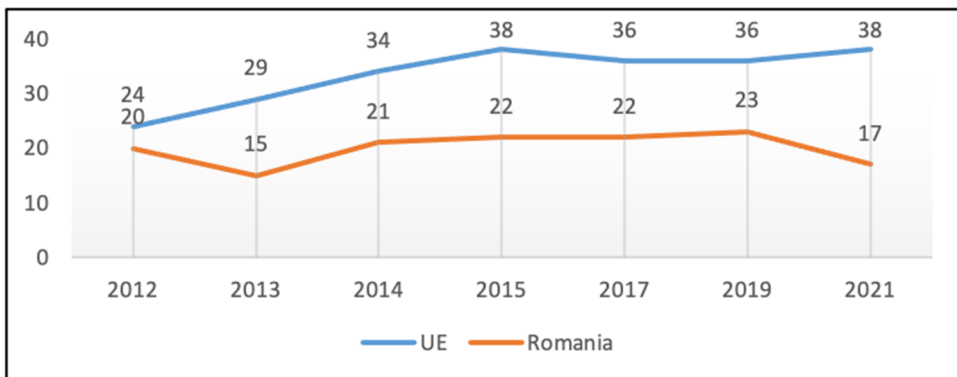
The evolution of businesses with a website (see Figure 2) shows that in Romania there were 36% of businesses with a website in 2012, in 2019 there were 47% and in 2021 there were 51% (5% increased between 2020 and 2021), while whereas in the European Union the percentage increased from 70% in 2012 to 78% in 2021 (an increase of 1% between 2020 and 2021). It can be observed that in the period 2020 – 2021 there was a significant increase in companies that have a website in Romania, which denotes an awareness among them for digitalization and promotion. Websites play an important role for businesses because they help them advertise, promote their services and attract customers. At the European level, the percentage of businesses that have a website increased between 2012 and 2021 from 70% to 78%. In Romania, the percentage of businesses that have a website increased from 36% in 2012 to 51% in 2021. It can be seen that there is a significant difference between the average of businesses that have a website throughout the territory of the European Union and Romania.



Source: Eurostat database

Figure 2. Evolution of businesses with a website (2012-2021)

An important indicator at the European level that is measured is the "integration of internal processes among enterprises" in order to be able to highlight the state of use of ERP or CRM systems in the activity of companies. Statistical data for this indicator are for the period 2012-2021. At the level of the European Union, it evolved from 24% in 2012 to 38% in 2021, while in Romania it decreased from 20% in 2012 to 17% in 2021 (see Figure 3). At the level of Romania, it can be observed that this indicator has an oscillating evolution, because between 2014 and 2019 it evolved from 15% to 23%, the decrease being in the last two years.

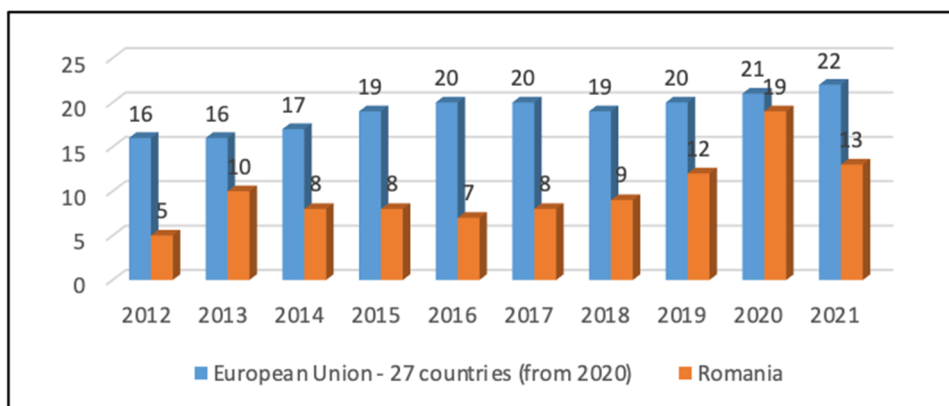


Source: Eurostat database

Figure 3. Evolution of the integration of internal processes among enterprises (2012-2021)

The analysis is completed with the analysis of the "companies with e-commerce sales" and "companies with e-commerce purchases" indicators for the

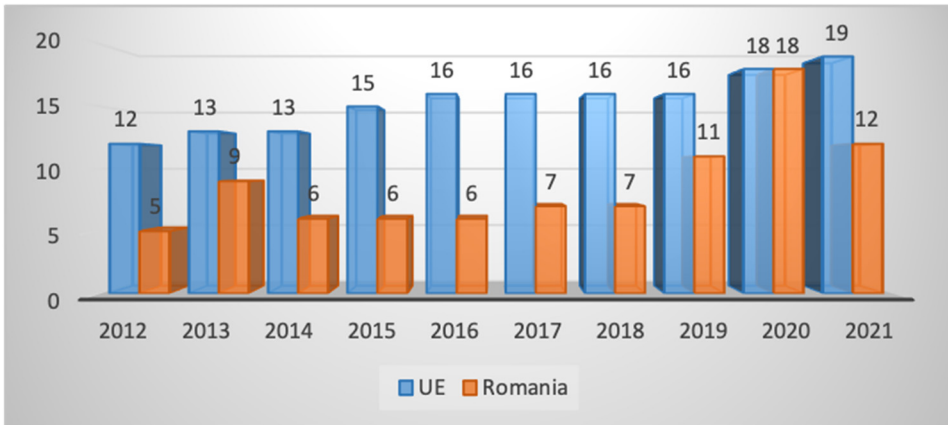
period 2012 - 2021 at the level of the European Union and Romania (see Figure 4). These indicators are also chosen to be able to observe whether the analysis of the first two indicators is reflected in their statistical data, and an interdependence relationship can be deduced. Thus, for the "companies with e-commerce sales" indicator at the European Union level, it has evolved from 16% in 2012 to 22% in 2021, while in Romania it has evolved from 5% in 2012 to 13% in the year 2021. Differences can be observed between the evolution within the European Union and Romania, in the sense that at the European level there is a certain evolution, while in Romania the evolution is fluctuating with increases and decreases, in the year 2021 being a decrease from 19% in 2020. This indicator shows a certain agreement with the analysis of the indicator from figure 2, where it had an oscillating evolution at the level of Romania.



Source: Eurostat database

Figure 4. Evolution of businesses with e-commerce sales (2012-2021)

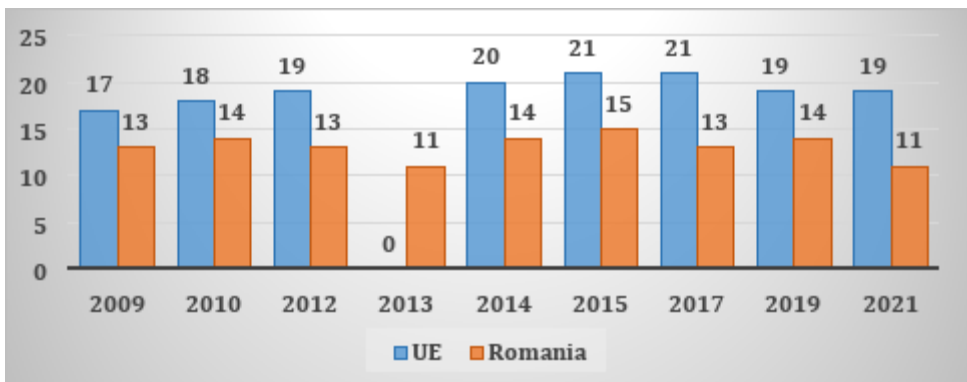
The indicator "companies with web sales (through websites, applications or marketplaces)" shows that at European level there is an evolution from 12% in 2012 to 19% in 2021, a constant evolution, while in Romania it is an evolution from 5% in 2012 to 12% in 2021, but with a decrease compared to 2020 (see Figure 5). It can be seen that in the period 2019-2020 this indicator increased in Romania from 11% in 2019 to 18% in 2020 (the same value being at European level). The increase from 2019 to 2020 may be due to the negative effects of the COVID-19 pandemic, which affected the companies' activity.



Source: Eurostat database

Figure 5. Evolution of businesses with web sales (via websites, apps or marketplaces) (2012-2021)

The indicator "companies whose business processes are automatically linked to those of their suppliers and/or customers" is analyzed for the period 2009-2017 and it can be seen in Figure 6 that at the level of the European Union it evolved from 17% in 2009 to 19% in year 2017, while in Romania it decreased from 13% in 2009 to 11% in 2021. Both at the level of the European Union and Romania, the evolution of this indicator fluctuates with periods of growth and decline.

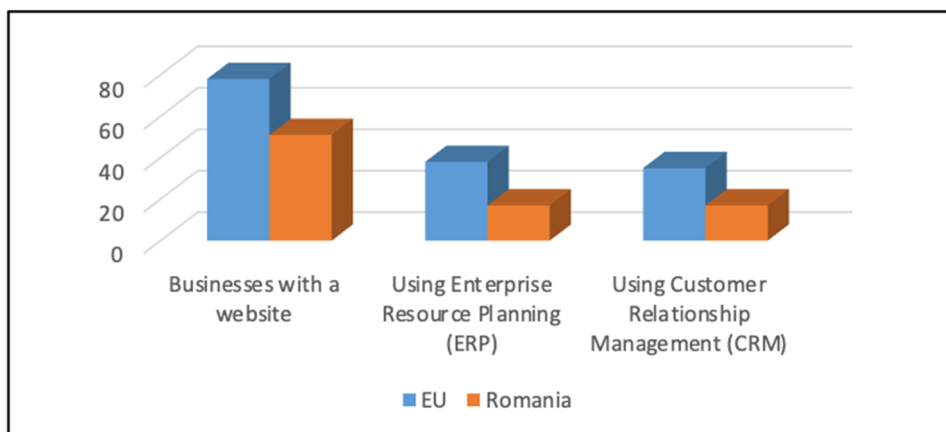


Source: Eurostat database

Figure 6. Evolution of businesses using software solutions such as CRM to analyze customer information for marketing purposes (2009-2021)

For the year 2021, the European Union pays important attention to the analysis of the adoption of e-business applications in enterprises at the level of the European Union's component countries. Thus, at the level of the European Union

it is found that in 2021 78% of businesses have a website, 38% use enterprise resource planning (ERP) and 35% use customer relationship management (CRM) (see Figure 7). In Romania, it can be found that 51% of businesses have a website, 17% use enterprise resource planning (ERP) and 17% use customer relationship management (CRM). There is a significant difference between the adoption of e-business applications in enterprises at the level of the European Union and at the level of Romania. Thus, the gap is considerable, especially regarding the use of ERP and CRM in companies, being a percentage of only 17%, which indicates that Romania is not even half of the European Union average. The causes can be multiple, including the reluctance of companies to use these systems, the high prices of these systems or the lack of specialists. In Europe, ERP is used by 57 companies in Belgium and 52 companies in Portugal, while the lowest number is for Romania and North Macedonia (15%). CRM is used in the highest proportion by companies in Belgium (54%) and the Netherlands (52%), while the lowest values are in Turkey (14%) and Serbia (11%), candidate countries for the European Union.



Source: Eurostat database

Figure 7. Adoption of e-business applications in enterprises (2021)

Regarding the analysis of the use of CRM, ERP and enterprises with a WEB site in enterprises, depending on their size, in the year 2021 at the level of the European Union, large enterprises have a percentage of 94% for the existence of a website, 81% for the use of ERP and 65% for CRM use, while small firms have the lowest percentages of 75% for having a website, 33% for ERP use and 31% for CRM use. It can be seen that the use of ERP is closely related to the size of an enterprise.

The adoption of e-business applications in enterprises at the level of the European Union highlights that they are influenced by the field of activity in the

first place, most likely they are integrated according to the efficiency that their managers consider and the size of the enterprise, which can justify for driving them utility for activity and efficiency. Following this analysis, it was found that there is a significant difference between their use of ERP and CRM systems at the level of the European Union and in Romania. In Romania, these systems are used in a small percentage compared to the average of the European Union, which indicates that there is reluctance among companies due to the costs or the lack of specialists.

5. CONCLUSIONS

As a result of the study, it was found that sales within companies are influenced by their receptivity to modernize, invest in human resources, technology and digitization. The adoption of e-business applications in enterprises at the level of the European Union highlights that they are influenced by the field of activity in the first place, most likely they are integrated according to the efficiency that their managers consider and the size of the enterprise, which can justify for driving them utility for activity and efficiency. Following this analysis, it was found that there is a significant difference between their use of ERP and CRM systems at the level of the European Union and in Romania. In Romania, these systems are used in a small percentage compared to the average of the European Union, which indicates that there is reluctance among companies due to the costs or the lack of specialists.

Human resources need to be perfected and helped to be effective by integrating modern management systems within enterprises. Sales within companies are closely aligned with their modernization and digitalization. The COVID-19 pandemic has highlighted the importance of e-commerce and e-business among all businesses, regardless of their size. The study can be continued by deepening the analysis with case studies and highlighting the importance of investing in human resources to develop the company's activity.

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FRAMING AND DECISIONS: THE PUNCTUATIONS OF THE MEXICAN POWER GENERATION POLICY SUBSYSTEM¹

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Abstract

A growing body of policy research has argued for the significance of idea framing in policymaking. In this study, I examine the relevance of the framing process in decision-making by using the case of the Mexican electricity sector — a historically contested subsystem. Using discourse network analysis (DNA), I identify and map the concepts debated between 1994 and 2018 and compare the framings used in each presidential administration to support or oppose policy change. The findings show that during periods of policy change (incremental or radical), the coherence and dominance of the framing promoting the change was greater than that of the frame rejecting it. On the contrary, during the periods in which the status quo prevailed, despite efforts to change it, the framing of ideas was not coherent or pervasive enough to achieve it. As a result, it is argued that if a policy change is to be managed, the framing process is a critical factor to consider.

Keywords: *framing process; punctuations; policy change.*

JEL Classification: D85, Q48

1. INTRODUCTION

The way ideas are framed in public debate has an impact on decision-making. This is so because policies are more than just decisions and tools; they are the result of collective meaning formation (Cejudo, 2010). Only within the parameters established by the collective do public problems — and their solutions — exist (Schneider and Ollman, 2013).

The social construction of a public problem is determined by the public debate that leads to its social construction. Many stakeholders must believe that an existing public problem is serious enough to warrant political action or that a policy change is required to address it when the time comes. When new information and ideas are made available, there is a chance that public perceptions of how to solve a problem will change (Hurka and Nebel, 2013). As a result, the

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policy process is comprised of the preferences and ideas of the actors who interact in a particular policy sector.

From this perspective, policy changes are inextricably linked to the dominant ideas of the debate, which will shape the preferences of those who participate in the policymaking process. This process, known as *framing*, is a discursive process in which shared interpretations of a public problem are constructed, and intervention strategies are defined (Bossner and Nagel, 2020).

With this as a backdrop, the purpose of this research paper is to answer the question, *to what extent does the framing of ideas determine policy change?* Responding to this question is important for two reasons- The first, to contribute to the literature on policy change from a perspective of collective meaning construction. The second, to analyse the relevance of a subsystem's discursive spectrum in policy formulation and policy change.

To that end, I examine the Mexican power policy subsystem from 1994 to 2018 as a case study to map the concept networks used in public discourse and contrast the decision-making contexts of each period. This case is interesting because over the two decades studied, a series of incremental — but critical— changes and a major policy change — a constitutional reform — occurred as public problems evolved, debated, and were reinterpreted.

The article is organized as follows: in section two, I depart from the punctuated equilibrium theory to review the literature on discourse, framing, and policy change. Section three describes the Mexican power generation policy subsystem during the period under consideration. In section four, I present the methodology and data used. Section five contains the results. Finally, in section six, I discuss the conclusions and policy implications.

2. FRAMING AND POLICY CHANGE

As a prerequisite for public action, policy deliberation occurs in a discursive space; therefore, the discourse has been identified as an endogenous factor of policy change (Muller, 2015). Therefore, ideas have emerged as a reliable explanatory factor for explaining policy change (Hajer, 1993).

Policy discourse, in its most basic form, is a verbal interaction between actors that primarily consists of statements or assertions about policies and the instruments they believe are helpful — or not — in solving public problems (Leifeld, 2017). Policymaking, then, necessarily involves the temporal and transversal interdependence of the concepts debated. According to the punctuated equilibrium theory (PET), this interdependence occurs as part of a dynamic process that includes policy stability and change (Baumgartner, Jones, and Mortensen, 2009; Vieira Silva, 2020).

The punctuated equilibrium theory is based on the idea that the policy process, in general, is subject to long incremental periods of small policy changes or adjustments (Lindblom, 1979) that are only occasionally disrupted by major

policy changes (Baumgartner, Jones, and Mortensen, 2009). In other words, this theory attempts to explain long periods of policy stability interspersed with intense periods of change.

According to this viewpoint, incremental periods are associated with a policy monopoly, which occurs when the process is dominated by a single way of understanding the public problem and its solutions, i.e., by a single policy image. This image may be susceptible to positive feedback, which strengthens it and makes change less likely, or negative feedback, which weakens it and, as a result, may be a factor leading to policy change.

To put it another way, long periods of stability result from a political image anchored in preserving the status quo. On the other hand, the disruptions are associated with using a new political image that competes with the current one, mobilizes political actors, and causes an imbalance between political forces. As a result, an unstable equilibrium occurs when the policy monopoly is challenged and destroyed, followed by a successful promotion of the new policy image (Cairney, 2012).

The concept of framing is, without a doubt, central to this theory. This concept essentially refers to "ideas strategically embedded in arguments that political actors in general use to redefine the nature of problems" (del Tronco Paganelli, 2020, p. 39). In other words, the debate process defines and redefines the policy image of how a public problem should be understood and addressed.

Moreover, the study's central hypothesis is that *all else being equal, the more coherent the framing of ideas that promote change (new policy image), the more likely policy change is*. This is so because when the frame shifts and is rebuilt, the likelihood of policy change increases (Baumgartner, Jones, and Mortensen, 2009). As a result, idea framing is required for policy change in all its dimensions.

3. THE MEXICAN POWER GENERATION POLICY: A BRIEF OVERVIEW

Over 40 years ago, integrated industry structures under state ownership were implemented to develop electricity systems worldwide. Mexico was no exception; the electric industry was nationalized in 1960, and power generation remained a state monopoly. This model advanced for over two decades until it began to deteriorate in the 1980s.

However, in tandem with technological advances in electricity generation, global regulatory reforms have been taking place all over the world since the early 1990s. The goal of these reforms was to deconstruct the electricity industries to increase competition and efficiency.

During these years, Mexico implemented the first significant change in the power generation sector, specifically in 1992, by allowing particulars to participate in electricity generation solely to sell it to the state-owned company (the Federal Electricity Commission, or CFE).

This change, however, was insufficient to supply electricity in the quantities, quality, and price required by the investment opportunities of those years,² as well as the demand growth caused by population growth. As a result, a reform initiative to open the power sector to the market was discussed during Ernesto Zedillo's presidency (1994-2000). However, for this policy change to happen, a constitutional reform was needed, which needed a qualified majority of votes in congress. The proposal's central arguments were purely economic: for Mexico to grow, it needed to invest in electricity, and the state lacked the resources; it was necessary to explore other investment options. This initiative, however, did not receive enough support and was defeated in congress.

Three years later, another initiative to modify the constitution to open the power generation sector to the market was sent to congress during Vicente Fox's presidential term (2000-2006). Still, it met the same fate as the previous initiative. Later, during the presidency of Felipe Calderón (2006-2012), there was no initiative to reform the sector; however, minor changes to secondary laws — or incremental changes — were made to promote the national energy transition. These modifications had little effect on electricity generation at the time, but they laid the groundwork for the future policy changes that would take place in the following years.

Finally, during Enrique Peña Nieto's presidential term (2012-2018), a large-scale reform was passed in congress to open the electricity generation sector to private participation, allowing different types of generators to compete in a major market for the first time in decades.

4. METHOD AND DATA

For this research I used Discourse network analysis (DNA), which is “an attempt at measuring actors’ policy beliefs and discourses systematically using text sources” (Leifeld, 2020, p. 180). The basic unit of analysis is the *concept*, which represents the contents under deliberation. The actors reveal their preferences through statements that advocate for or against these concepts. A statement is defined as “a paragraph of text in which an actor reveals his policy preferences on a particular concept” (Fisher and Leifeld, 2019, p. 475).

To identify these concepts, I searched for the central debates in the *Reforma*, a Mexican national newspaper, between 1994 and 2018. I used the keywords “electricity policy” and “electricity reform” to find the most relevant articles. This search yielded approximately 1,450 articles, 408 of which contained at least one statement about a particular concept made by a specific actor about the power generation policy.

² The North American Free Trade Agreement (NAFTA) was signed in 1994 between Mexico, U.S., and Canada.

After identifying the relevant articles, I went on to codify the debate concepts for each of the presidential terms. The decision behind this is that the framing process, by definition, has a temporal dimension that allows its identification. In the case of this research, they are the presidential six-year terms. I identified all statements and concepts for each article and coded 1577 statements on 23 concepts.

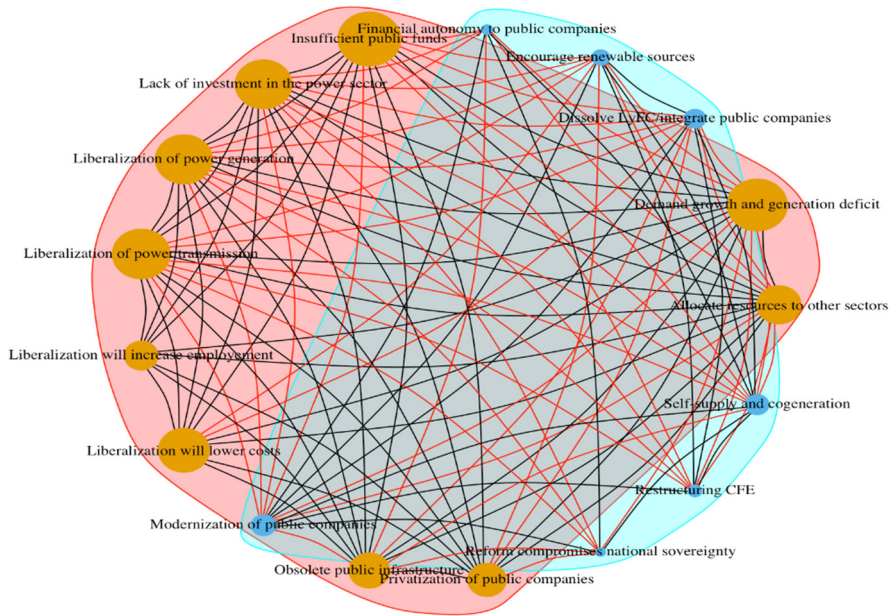
To operationalize the framing, I mapped the congruence networks (one-mode networks) of the concepts for each of the six-year terms. For these networks, two concepts are connected if they are used in the same way by the same actor, and the edge weight between any two concepts equals the number of actors referring to both concepts (Leifeld and Haunss, 2012). In other words, the vertices between the concepts indicate whether the actors used them in the same sense in the debate.

Furthermore, the ideas expressed in the debate can be classified into clusters representing shared beliefs or policy preferences, which can be operationalized as frames (Leifeld, 2017). In other words, concept communities can be interpreted as coherent histories or concept framing because they must be compatible to some extent to be usable by the same actor or group of actors. To perform this detection, I used the walk trap algorithm for cluster detection (Nerurkar, Chandane and Bhirud, 2019). Using this algorithm, I assume that if random steps are performed in a network of concepts, they will tend to remain in areas with a high density of interconnected nodes, representing the coherence of the frameworks used in the debate.

5. RESULTS

1994 – 2000

During the first attempt to reform the generation sector, two apparent frames (red and blue shades in Figure 1) appeared. Promoters wielded the first frame to justify the sector's opening to the market (red shade) with concepts such as a lack of investment in the industry, insufficient public resources, public infrastructure obsolescence, and supply deficit (demand growth). Table 1 also displays the five most contentious concepts during this period to give us an idea of the discourse exchanges.



Source: adapted from Gutiérrez Meave (2022)

Figure 1. Cluster of concepts from 1994 to 2000

The arguments advanced against the opening of the sector to the market (blue shade) included the need to strengthen and modernize state-owned enterprises and give them management and budgeting autonomy. During this period, the two frames appeared to be coherent. They dominated the discursive spectrum so that the frame used by proponents of change was as consistent as that of opponents, which likely resulted in a deadlock and the preservation of the status quo. Despite the executive's efforts, there were no significant changes in the sector during these six years, as previously stated.

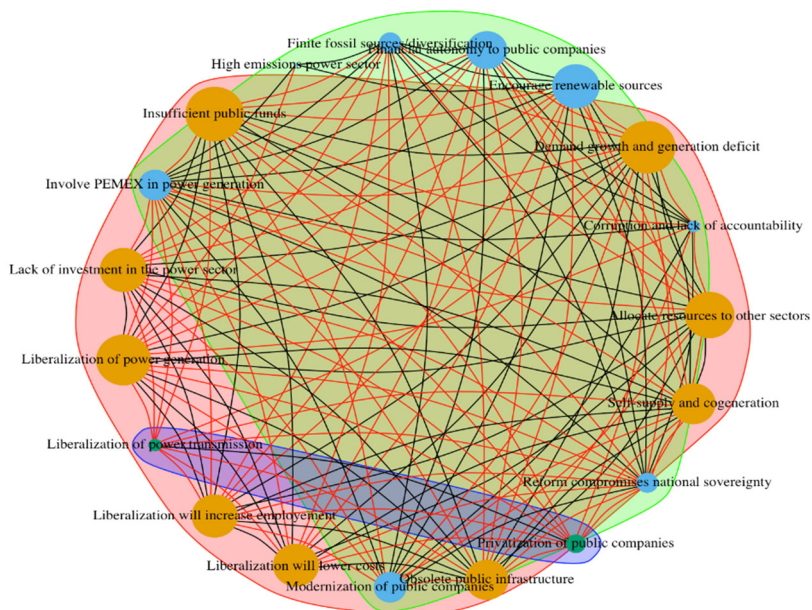
Table 1. The top five concepts debated between 1994 and 2000

Concepts	Period
Liberalization of power generation	1994-2000
Liberalization of power transmission	
Demand growth (generation deficit)	
Insufficient public funds	
Obsolete public infrastructure	

Source: own elaboration

2000 – 2006

When Vicente Fox sent his reform initiative to congress during the following six-year term, the concepts and framing basically remained the same, and the grouping of arguments did not change much, as shown in Figure 2 (green shade and red shade).



Source: adapted from Gutiérrez Meave (2022)

Figure 2. Cluster of concepts from 2000 to 2006

Table 2. The top five concepts debated between 2000 and 2006

Concepts	Period
Liberalization of power generation	2000-2006
Demand growth (generation deficit)	
Insufficient public funds	
Reform compromises national sovereignty	
Privatization of public companies	

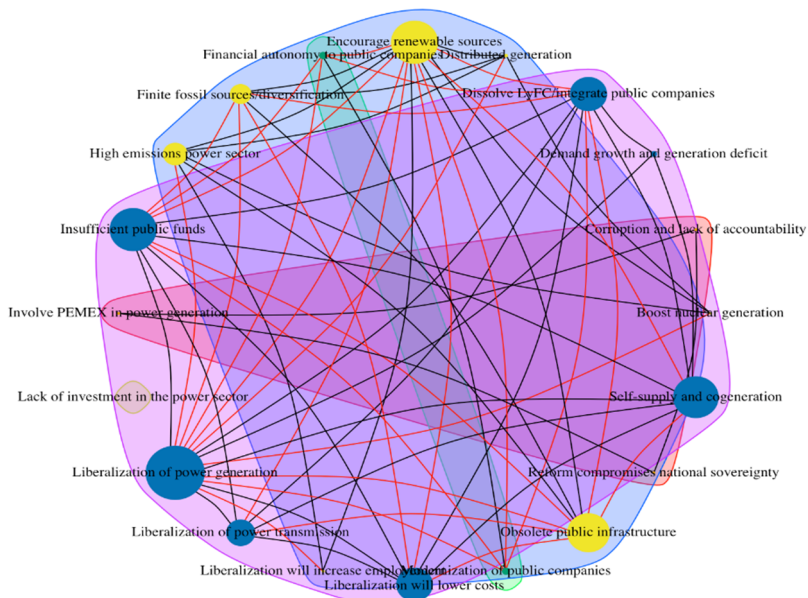
Source: own elaboration

As shown in Table 2, the concepts most mentioned for justifying the reform were the supply deficit and a lack of public resources. On the other hand,

opponents argued that the reform jeopardized national sovereignty and was intended to privatize state-owned enterprises. However, there is a third framing (blue shade) of concepts on opening the transmission process to the market following parastatal privatization. These are more radical reform arguments, which may have been wielded by those actors seeking a more aggressive reform. Still, despite the efforts of the executive and some stakeholders to reform the sector by changing the constitution, the initiative was rejected in Congress, and the status quo prevailed once more.

2006 – 2012

During the 2006-2012 period, when there was no reform initiative, a greater variety of frames can be observed (as shown in Figure 3). For its part, the frame on the need to open the sector to the market (purple shade) remained the same, arguing a lack of public resources, demand growth, and a possible decrease in cost generation by allowing competition. On the other hand, the arguments against the reform were centred on the threat to national energy sovereignty, and the need for financial and management autonomy of parastatals.



Source: adapted from Gutiérrez Meave (2022)

Figure 3. Cluster of concepts from 2006 to 2012

However, as shown in Table 3, some new concepts were introduced into the debate, pushed by the international agenda and the concern for the sector's long-

term sustainability. Three key concepts framed this agenda: the need to diversify power generation sources, promote renewable energy, and concerns about high emissions in the electricity generation process (blue shade in figure 3). Although this framing did not result in a constitutional reform, minor — incremental — changes were made by amending secondary laws to address these preferences and concerns, such as the Law for the Use of Renewable Energies and the Financing of Energy Transition.

Furthermore, these ideas and changes would lay the groundwork for and be critical in the framing process for legitimizing the reform during the next presidential term.

Table 3. The top five concepts debated between 2006 and 2012

Concepts	Period
Disolve State Company (<i>Luz y Fuerza</i>)	2006-2012
Liberalization of power generation	
Encourage renewable sources	
Liberalization will lower costs	
High emissions power sector	

Source: own elaboration

2012 – 2018

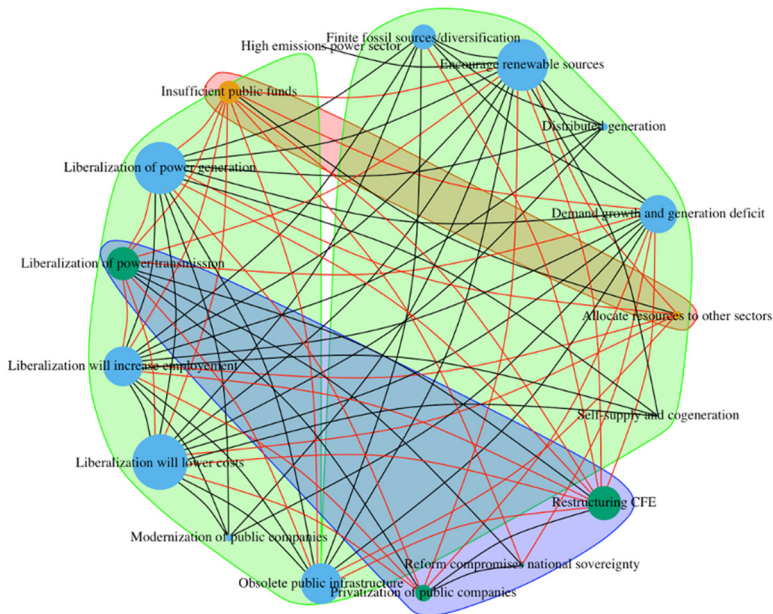
Finally, during the six-year term of Enrique Peña Nieto, when the reform was finally approved (2013), the most mentioned concept, again, was the need to open the electricity generation process to the market. Unlike previous attempts, however, the discussion here was contextualized by the sustainable agenda, which had already been introduced in the debate during the last six-year term (see Table 4).

Table 4. The top five concepts debated between 2012 and 2018

Concepts	Period
Liberalization of power generation	2012-2018
Liberalization will lower costs	
Encourage renewable sources	
Liberalization will increase employment	
Liberalization of power transmission	

Source: own elaboration

As a result, rather than justifying the opening to the market due to a supply deficit, lack of state resources, and the obsolescence of state plants — concepts with less relevance in this period — the debate focused primarily on justifying competition in the generation process for the benefit of sector sustainability and electricity production from renewable sources, as well as other benefits related to increased employment and lower electricity tariffs because of lower generation costs.



Source: adapted from Gutiérrez Meave (2022)

Figure 4. Cluster of concepts from 2012 to 2018

Finally, as shown in Figure 4, when the reform was approved, the frame used by the reform's promoters — or the ideas strategically linked in arguments to justify it — significantly dominated the discursive spectrum (green shadow). This dominance of the discourse suggests that the reformers' set of arguments was consistent and coherent.

Furthermore, as can be seen, as part of the efforts to legitimize the reform, this community absorbed the sustainability agenda (in addition to the fact that it was an essential part of its content). This modification implies a shift in the perceptions and preferences and a new way of viewing the problem and its solutions, which, according to the punctuated equilibrium theory, is required for major policy change to happen.

6. CONCLUSIONS

The purpose of this article was to infer the effect of the framing process on policymaking. I analysed the Mexican electricity sector debate over the last twenty years, and by identifying and grouping the concepts promoting or rejecting the changes, I showed that policy changes were accompanied by a change in the framing of the ideas to justify such changes.

The policy implications of this study are straightforward. Because framing is the process by which public problems and interventions are defined, it is through this process that stakeholder preferences are translated into policy decisions, just as happened in the Mexican electricity sector. This implies that if a policy change is to be managed, the discursive component and the coherence and consistency of the framing with which it is justified cannot be overlooked.

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CRISIS MANAGEMENT: THE CASE OF MANAGING THE CORONA CRISIS IN NURSING HOMES FOR ELDERLY PEOPLE IN ISRAEL

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Abstract

This article seeks to map the situation of the Corona epidemic in Israel and how it was dealt with in nursing homes for elderly people. As part of the study, a comprehensive analysis of data and analysis of publications by various official and semi-official Israeli institutions was conducted about the situation of elderlies in nursing homes during the First and Second Waves of the pandemic. What is known is that the percentage of those infected in inpatient care institutions, institutions for the mentally debilitated and in nursing homes of the Ministry of Welfare is roughly 5 times higher in comparison to the percentage of the elderlies who became infected in the community. However, the increase in infection in these institutions in the second wave is somewhat lower in comparison to the increase in infection in the community. In contrast, the percentage of those infected in sheltered housing and in housing clusters for the elderly of the Ministries of Housing and Absorption is similar to the percentage of infection of the elderly in the community.

Keywords: *crisis management; Covid-19; nursing homes for elderly; Israel.*

JEL classification: I18, H12, M12.

1. INTRODUCTION

The corona virus is a global pandemic and caused a huge economic crisis, which is still ongoing. The corona virus first broke out in Wuhan province in China in late 2019, and from there spread to all corners of the globe. On December 31, 2019, the Chinese notified the World Health Organization about the virus. By mid-January 2020 it had spread to other provinces in China. In January 2020, after it was discovered that the virus had broken out outside China, the Ministry of Health in Israel issued guidelines on how to treat a person who develops the symptoms of the disease. On January 30, returnees from China were required to stay in solitary confinement for fear of contracting the virus, and flights from China to Israel were banned. On February 17, the isolation provisions were also extended to returnees from Singapore, Thailand, Macau, Hong Kong and South Korea (Eiland, 2020). On February 27, 2020, the first corona patient was found in Israel who was not in isolation. The patient had returned from Italy four days earlier, leading to the first cases of infection in Israel. On the same day, the Minister of the Interior announced

that Italian tourists would no longer be allowed to enter the country. Following these and other cases, by the end of March 2020, more than 6,000 Israelis had been sent to solitary confinement, and the number of verified corona patients in Israel was 4,500; 90 of them in critical condition; 85 of them in fair condition; 18 of them died; 140 reported recovering (Maor, Sulitzeanu-Kenan and Chinitz, 2020). From the moment the World Health Organization declared that the corona virus was an international pandemic until the discovery of the first case of the virus in Israel, almost an entire month passed. It was a much longer period than was given, for example, to countries such as South Korea and Taiwan, which, as mentioned, did well to deal with the crisis. In terms of transition from routine to emergency, a month is a very long period.

In the following months, the virus continued to spread in Israel and a series of restrictions and precautions were taken against it. Including: extensive closure, social distancing, and the obligation to wear masks. During the first half of 2020, there had been a daily, renewed and alarming increase in the number of patients diagnosed and Israel entered into a Second Wave - no less acute and dangerous than the First Wave. This article analyses the response to the First Wave from March to May, 2020 and the Second Wave from June to October 31, 2020 and the malfunctioning in containing the crisis in nursing homes for elderly people (Eiland, 2020; Tzur and Cohen, 2020).

2. NURSING-HOMES AND THE CORONA CRISIS IN ISRAEL

Within a nursing-home there are sometimes a number of departments that come under the authority of two main Israeli government ministries: the Ministry of Health and the Ministry of Welfare. The departments under the responsibility of the Ministry of Health:

- A. Nursing
- B. Mentally debilitated
- C. Respirators

While the Ministry of Welfare is responsible provides care services for the elderly population that include getting in and out of bed and providing assistance with feeding, bathing, dressing and more within these nursing homes. However, nursing-homes differ from other sheltered housing in that they also provide a high level of medical care, typically 24 hours a day (Comas-Herrera, Ashcroft and Lorenz-Dant, 2020). A licensed physician oversees each patient's treatments, and nurses are almost always in the field. Other medical professionals, such as occupational therapists or physiotherapists, are also available and allow for medical and health treatments that not available elsewhere (Labrague and de Los Santos, 2021).

The order of residence varies from one nursing-home to another. Thus, some rooms may be private, and others shared. There are places with a bath and toilet

in each room, and there are some shared in the hallway. Some meals may be served in the room, while others may be served in the main dining room.

In Israel, there are about 72,000 elderly people living in institutions, of which about 21,000 are in inpatient institutions for nursing and the mentally debilitated (long-term geriatrics) and about 4,000 are in active geriatric wards, under the responsibility of the Ministry of Health. In addition, there are 5,000 elderly people staying nursing homes for the debilitated and 15,000 in sheltered housing under the responsibility of the Ministry of Welfare; and the rest - about 27,000 - in nursing houses of the Ministry of Housing and the Ministry of Absorption (Cohen-Mansfield, 2020; The-Association-of-Elderlies'-Families-in-Nursing-Houses, 2020). These people are scattered in 112 nursing-homes that are in a contract with the Ministry of Welfare and can receive tenants for welfare.

Residents of nursing-homes and the mentally debilitated are more sensitive and vulnerable to the corona epidemic than other populations, both in Israel and around the world. The reasons for this:

1. Risk group - Due to their age and medical condition, the occupants are at high risk for complications and mortality from coronary heart disease, in case of infection.

2. Difficulty in self-reporting - Tenants with cognitive decline or other neurological impairments may have difficulty reporting that they are not feeling well, and as a result the detection of the disease may be delayed and, in the meantime, additional tenants may become infected.

3. Living conditions - the risk of infection in an institution for nursing and the mentally debilitated and in nursing-homes for the debilitated is higher, due to the relative density, since these institutions usually have two people in a room that is an integral part of the ward.

4. The nature of the treatment - the greater the therapeutic needs derived from the medical and functional condition of the residents, the more they require exposure to many caregivers and close contact with the care staff.

5. Characteristics of the care staff - a significant part of the caring staff (non-professionals) is from a lower socio-economic status expressed in denser housing and public transport. These caregivers, due to their living conditions, are exposed to higher risk outside their workplace and accordingly increased the risk of infection.

To providing a specific hospitalization solution for corona patients from nursing-homes and sheltered housing, a number of geriatric medical centres have been set up nationwide to provide inpatient response to asymptomatic or symptomatic corona patients who have completed primary care and in need of isolation or continued treatment in mild to moderate conditions. On September 25, 2020 the Ministry of Health issued guidelines to general hospitals regarding the manner of transferring patients to corona wards in a geriatric setting, i.e. a geriatric medical centre (Dwolatzky, 2020).

Geriatric Medical Centres are geriatric hospitals whose wards have been prepared to care for Corona patients and are equipped with appropriate instruments. The Geriatrics Division is the body that approves the allocation of a geriatric medical centre dedicated to this issue.

2.1 Test Default

Managing an effective and comprehensive system of tests in the early stages of the outbreak of the virus is a critical action during a pandemic, especially when it comes to a new virus that is uncertain as to its behaviour and how it spreads. Nevertheless, throughout the period of the crisis, and especially in its early stages, the way the testing system in Israel was conducted suffered from serious flaws to the point of systemic failure.

2.2 Laboratory Operation and Test Processing

In Israel, there are 27 laboratories that can check for infection of the corona virus in a body. Despite this, for about two full months only one laboratory was allowed to test it. Further, the corona virus test takes about six hours - from the moment the sample arrives at the laboratory until the results are received. However, the Ministry of Health insisted that all the results should be processed by the Ministry first, and only then they can be passed on to the patient. As a result, the length of time required in Israel from the time the result was known until the patient received the notification of the result lasted a few days. Thus, for a period of a few days, the patient could have infected more people (Eiland, 2020; Eizenkot, 2020).

In general, there are four Health Maintenance Organizations (HMOs), where each has clinics scattered all over the country in each and every village and town. HMOs have direct contacts with their patients and can update the patient about tests (for example, blood tests can reach the patients within minutes of the test); the update is done online through each HMO's website and goes directly to the patient's personal account (Waitzberg *et al.*, 2020). Why were the corona results reported to the patient only a few days on average and not within minutes? The delay is due to one reason: the Ministry of Health insisted on conducting the entire procedure itself from the centre, while misusing its bureaucratic authority and without having a robust and efficient information system like the one available to the HMOs (Eizenkot, 2020).

Further, at the beginning of the crisis, the heads of the health system opposed increasing the number of tests, although technically this was possible (Carmeli, 2021). The Ministry of Health adhered to the concept that testing is not important and in fact there is only one protective measure: insulation and quarantine. Insulation is indeed important, but it has two significant disadvantages: (a) its damage to the economy and society is the most severe of all safeguards; (b) it is effective only when accompanied by a wealth of information that paints a broad

picture. Tests are the means to form such a picture, and therefore only people who contracted the virus or those who were in close contact with them should be in quarantine.

In Israel, a variety of measures have been taken to reduce infection in institutions. In early April, a dedicated coordinator's headquarters was established "Fathers and Mothers Shield" (Magen Avot Veemahot), jointly managed by the Ministry of Health and the Ministry of Welfare, and in coordination with the Ministries of Absorption and Housing, to formulate the situation and national response plan (Knesset-Israel, 2020). Personal protection for staff dealing with outbreaks, launching a staff and tenant sampling program for early detection of cases and amputation of infection chains, and a family outreach centre (Savitsky *et al.*, 2021). In addition, "Arrow" teams were set up at the beginning of the epidemic to provide replacement staff, while the Home Front Command has been tasked with disinfecting and assisting institutions (Rapaport and Shemesh, 2020). Since April 2020, the Ministry of Health has set up dedicated wards for corona patients in mild and moderate condition, in the geriatric setting, and continues to increase their numbers as needed.

Along with government activity, the third sector was also mobilized to assist institutions, especially during the First Wave. Operation Vashemeret, initiated by the Shitufim Association, Zionism 2000 and the National Enterprise Fund, was launched in March, in coordination with the Ministry of Health (Gesser-Edelsburg *et al.*, 2020). The operation included distribution of protective equipment to all geriatric institutions, training and assimilation for staff, assistance in strengthening manpower, production of information materials for staff in institutions, distribution of tablets to maintain contact between residents and families and addressing the resilience of residents and staff (Eizenkot, 2020).

Despite the gradual increase in the number of tests as the crisis lingered, the diagnosis of the subjects continued to be based on only two criteria: the onset of symptoms, and the presence of a verified patient. However, in addition to these considerations, tests were required in accordance with two additional criteria:

A) Elderly people with a high potential for infection. Even when an almost general closure was applied to the entire population in Israel, there were still some active places, such as supermarkets and other shops selling food. Every cashier who works at the supermarket meets many customers every day and is much more likely to be infected. Those of a man sitting in his house, there are thousands of cashiers in Israel, but no one bothered to check them proactively.

(B) People who are severely infected. The infection of certain groups in the population - such as doctors or nursing-home workers - may be more dangerous than that of a normal person, as these may infect vulnerable people, such as inpatients or elderly people living in nursing-homes. It was right to test these groups proactively (Horesh, Kapel Lev-Ari and Hasson-Ohayon, 2020; Comas-Herrera *et al.*, 2020).

3. THE FIRST WAVE (MARCH-MAY): IMPLICATIONS FOR NURSING HOMES

With the outbreak of the Covid-19 Pandemic, on March 12, the Ministry of Health decided to close the nursing-homes and sheltered housing to visitors and ban the eviction of the tenants in these settings. It also did not allow the entry of private or professional therapists into these buildings, nor did it allow professional therapists, such as physiotherapists, occupational therapists, and communication clinicians who are an integral part of the frameworks to enter them (Gal and Hertz, 2020). In addition, all cultural activities were stopped, and the entry of cultural and social event operators was banned. This conduct was contrary to the Basic Law of Human Dignity and Liberty, the Patient's Rights Act, the Legal Qualifications and Guardianship Act, as well as contrary to the Public Health Order (Levkovich *et al.*, 2021).

These authorities led some of the directors of the institutions to decide that the visit would last only a few minutes and once a month or once in a few weeks. The other institutions allowed a visit once a week for only 20 minutes to a family member. Over time, it has been clarified to the directors of the institutions by the representatives of the Ministry of Health that they may prevent visits whenever they wish, and that this visiting procedure is not binding and constitutes only a recommendation.

With the opening of the visits, the call centre established by The Association of Elderlies' Families in Nursing Houses (henceforth the Association) received harsh reports about the consequences of the long disconnect that caused severe damage to the tenants in the various frameworks (The-Association-of-Elderlies'-Families-in-Nursing-Houses, 2020):

- 3100 incidents of pressure sore formation;
- 6000 incidents of dehydration, urinary tract infections and sharp weight loss;
- 5000 incidents of depression requiring drug involvement;
- 5800 Cognitive withdrawal incidents to the point of non-identification of family members visited by tenants.

The Association is acting against them through warnings to the Ministry of Health as well as through legal proceedings that lead to the cancellation of the closure. Despite this activity, the Association periodically finds that the family centre set up by the Fathers and Mothers Shield headquarters claims to families who turn to it with a complaint about the closure of the visiting institution that the directors of the institutions have the authority to aggravate and change procedures and close institutions (Gamzo, 2020). Also, the director of an institution is allowed to limit the number of visitors to one (the law allows through the Public Health Order up to 2 visitors per tenant (and to reduce the visit to a few minutes. The Association files a complaint, but the issue was not always enforced).

Due to these injustices, Minister Meirav Cohen from the Ministry of Civil Equality issued a letter clarifying the visitation procedures, according to which the directors of the institutions must allow visits for a minimum of half an hour and at least once a week to a tenant in the form of a distance of 2 meters. The letter allows for a visit with contact for demented nursing-home residents as well as for people with special needs such as the deaf and blind. It also allows the transfer of food and hygiene products and cosmetics from the visitor.

The beginning of the First Wave in the framework of geriatric institutions and sheltered housing tends to be formally attributed to March 12, 2020 is the day of the closure of the institutions for visits and departure of tenants under the direction of the Ministry of Health.

The period defined as the First Wave is thus attributed to the months of March, April and May 2020. At the beginning of the First Wave, in the face of a lack of governance and control over what was happening in the nursing-homes, each institution acted according to the criteria and rules it created for itself. Some of them waited for the instructions of the Ministry of Health and were mostly the ones who were mostly affected. Surprised by the spread of the virus in Israel, the Israeli government set up a small body to deal with the epidemic, which included the prime minister, the health minister, the finance minister, the national security staff, and the director general of the Ministry of Health.

The Ministry of Health, referring to the spread of the epidemic in geriatric institutions at the beginning of the epidemic, did not find it appropriate to outline a uniform policy for all institutions, some of which are under the responsibility of other ministries, and did not consider it appropriate to equip them with appropriate protection. The basic premise that led the Ministry of Health to deal with the institutions in the early days of the pandemic was based on the following principles:

- Geriatric institutions are private institutions and therefore it is their responsibility to equip themselves and organize themselves with self-financing and to take care of the quality of life of the residents within their framework.
- The epidemic should be treated as a seasonal virus in an increased trend and there is no need to close the institutions.
- Sending patients from nursing-homes and the sheltered housing to the hospitals should be avoided in order to prevent the flooding of the hospital beds by elderly patients.
- It is not necessary to perform tests for all residents of the institutions, but only for symptomatic patients.
- Symptomatic patients will be treated in settings until the stage where they will need respiratory support.
- Each government ministry will direct the institutions under its auspices and will be responsible for funding them if necessary.

- The ministry did not see the need to collect data from the field and did not conduct an epidemiological investigation into the events of the pandemic outbreak.
- The ministry believed that this was a short-term epidemic, so it did not examine the effects of the events taking place on the residents of the nursing-homes and therefore did not set up a thinking and planning team to address their needs.

3.1. Conduct of the Directors of the Nursing-homes

In the absence of a guiding body, some of the directors of the nursing-homes adopted the decision to close the frameworks completely and prevent double work of staff in several institutions as well as the entry of temporary service providers, private therapists / social security, and physiotherapists. Some were not fully closed and allowed first-class family visits only and guardians.

Also, in the absence of state-of-the-art transportation solutions, the directors of the institutions financed the transportation of staff members by taxis that allowed one person to be transported in a vehicle. Transportation expenses for a medium-sized institution amounted to tens of thousands of shekels a week.

Head nurses in the institutions conducted donations for the purchase of protective equipment from Israel and around the world, and private bodies responded to the institutions' requests for the purchase of mechanization and disinfection equipment.

In the absence of disinfectants, institutions used bleach as a substitute for cleaning surfaces.

Some of the directors of the nursing-homes contacted the association's organization, private bodies and activated personal contacts to enable the transfer of patients to the hospitals, to receive tests and protective equipment.

Some nursing-home managers have adopted the Ministry of Health's approach to their right to tighten the ministry's procedures. A right not conferred on them by law.

The lack of control over the outbreaks in the nursing-homes and the high death toll (30 deaths) led to harsh public criticism of the Ministry of Health's conduct. On April 11, 2000, the Minister of Health, Mr. Litzman, and the Director General of the Ministry of Health, Mr. Bar-Siman Tov, appointed Prof. Roni Gamzo as the project leader who will lead the issue of nursing-home care during the epidemic. The letter of appointment did not confer any powers on the projector nor budgets. Gamzo has set up a unified headquarters called "Magen Avot VeAmot" which aims to include the work of the four offices under which geriatric institutions or institutions where elderly people of different ages live during the epidemic.

The headquarters headed by Gamzo regulated the work procedures during an outbreak at the institution and completely abolished the working principles of the Ministry of Health, regulated the manner of reporting, coping, evacuation of

patients, performing tests and interrupting the sequence of infections. In addition, at the request of the representatives of the families, Gamzo relented and on April 21 opened the nursing-homes for the outline of family visits, while maintaining the rules of distance and limiting the number of visitors according to the public health order.

With his charismatic personality, Gamzo managed to force rigid work rules on all ministries described in the Magen Fathers and Mothers headquarters program and by creating clear procedures for the staff members in the manner of staff work, meeting management and reporting. He also regulated the work of the laboratories in managing the system of tests from the nursing-homes.

In April, the founders of the association demanded that Gamzo allow visits to the nursing-homes and reconnect the tenants to their families (The-Association-of-Elderlies'-Families-in-Nursing-Houses, 2020). On April 21, Gamzo issued the visitation procedure. As part of this, the institutions must allow regular visits to public spaces in the open air in the format of a meeting of a family member / guardian, one with a tenant at a distance of 2 meters and wearing a mask for the visitor. The family member is not allowed to touch or approach the tenant. The procedure allowed institutions 3 main authorities:

- Determine the duration of the visit;
- Set the date of the visit;
- Determine the location of the visit.

The headquarters work was also accompanied by the IDF Home Front Command, which volunteered to assist in carrying out operations in frameworks such as: security, disinfection, protection, training and disinfection for staff, transportation of medicines, equipment and food to the tenants (Horesh, Kapel Lev-Ari and Hasson-Ohayon, 2020). At the same time, Gamzo communicated directly with representatives of the families and residents of the nursing-homes through a dedicated forum set up by some members of the Knesset. The families felt that contrary to the abuse and policy of disregard outlined by the Ministry of Health towards the families and tenants in the nursing-homes, Gamzo allowed a direct and unfiltered dialogue to bring distress to an end. After two weeks, the chief of staff announced that he had been forced to resign and that he was willing to volunteer for another week to allow the Ministry of Health to find a replacement.

The Association of Elderlies Families in nursing-homes and the umbrella organizations of nursing-homes opposed an internal appointment of the Ministry of Health and formed a joint protest coalition that appealed to the Prime Minister to appoint an external projector. The Prime Minister acceded to the coalition's request and on May 7 appointed Prof. Nimrod Maimon, director of Internal Medicine Department at Soroka Hospital. This appointment has raised many questions about his ability and managerial ability to serve in such a complex role. Prior to his appointment, his ward served as a coronary ward II, a respiratory ward where patients with coronary heart disease were hospitalized.

Upon taking office, Maimon stated for the first three weeks that he was studying the position and was assisted by the Ministry of Health to provide answers to issues that needed professional attention. Under pressure from the Association of the Elderly Families in Nursing-homes and in view of the cumulative damage to the residents of the nursing-homes and the sheltered housing due to the disconnection from their families, Maimon was required to address the issue of visits and agreed to accept the extended visit procedure. This procedure is supposed to equalize the outline of visits to nursing-homes to hospitals where it is possible for family members to enter the hospital to dine the hospitalized family member with a limit of one visitor to two hospitalized patients. Without the need to maintain distance but full protection while enforcing protection procedures through security and Home Front Command enforcement (Clarfield *et al.*, 2020).

As the days passed, the families realized that the long separation from their loved ones was more harmful than protecting their loved ones and therefore demanded entry to the institutions to monitor what was happening there in order to prevent incidents of neglect and mental, physical and cognitive harm to their loved ones.

With the announcement of the implementation of the extended visit procedure on June 1, 2020 by Maimon, the Director General of the Ministry of Health, Bar-Siman-Tov, announced that day that he was freezing the procedure until further notice. This act highlights the lack of authority of the Chief of Staff to set rules according to the needs of the area. Hence the feeling that in fact the headquarters of the 'Fathers and Mothers' Centre constitutes a rubber stamp for the management of the Ministry of Health's policy when it is neutralized by authorities and can outline an independent policy. Later, with the nomination of the new Minister of Health, MK Yuli Edelstein, the matter was brought to his decision, but he decided not to intervene. At the time, the directors of the institutions realized that the guidelines of the Magen Avot and Mothers headquarters are only recommendation, and some decided to close the institutions. Some of the directors of the district health bureaus responded to the directors of the institutions and issued letters encouraging the closure of institutions for visits claiming that the families might endanger the tenants.

3.2. Corona and the Mortality in Nursing-Homes

The issue of mortality in nursing-homes was the trigger for the establishment of the general staff of out-of-home institutions, when in the First Wave Israel witnessed 55 percent mortality in nursing-homes. However, mortality data in nursing-homes are not consistently published and even their reliability is questionable due to the multiplicity of factors from which the information is pooled, and the lack of a single factor that collects the information, verifies, and processes its data. According to one source, the mortality rate among nursing-homes reached a peak not seen in the First Wave and is on an extreme upward

trend since the Second Wave. The data of the deceased in the association are concentrated on information coming from the families of the deceased, some of them from the hospitals, the burial society, the nursing-homes and from the publications of the Ministry of Health. The association performs a verification and cross-examination process for each deceased person and verifies his affiliation with the various geriatric institutions (The-Association-of-Elderlies'-Families-in-Nursing-Houses, 2020).

This contrasts with the publications presented by the Ministry of Health and the headquarters of the Nursing-homes, among which one can find deceased people from frameworks that are not nursing-homes, as well as from the community. In addition, there are sometimes duplications of institutions from which the number of deaths is reported. In the First Wave, the association reported 122 deaths, which constitute 44% of all deaths in the First Wave in Israel. In the Second Wave attributed to June 31, the association reports 684 deaths, which constitute 30% of all deaths in the Second Wave in Israel. The Total number deaths in nursing-homes: 806 deaths, which constitutes 32% of all deaths from Corona in Israel since the beginning of the period. The Shield of Fathers and Mothers reported however 125 deaths in the First Wave and 591 deaths in the Second Wave or a total of 716 deaths in nursing-homes (Bodas and Peleg, 2020). In a publication from October 2020, the headquarters stated that the total deaths in the two waves is 720. According to an interim report by the State Comptroller, the number of deaths in nursing-homes is 619 from the total national deaths from Covid-19 of 1710 on the day of its publication (Mevaker-Hamdina, 2020). Meanwhile, the Comptroller notes that "this is 36% of the deaths, although the elderly in nursing homes constitute less than 1% of the population. "Almost six times greater than their share of the senior citizen population and more than 40 times greater than their share of the general population" (Miller, 2020).

Covid-19 mortality is one of the main indicators used to monitor the effects of the corona virus and its consequences. While the number of patients and the number of patients is difficult, there have been claims of bloating. Among the general public, mortality is considered the most reliable criterion in assessing the situation regarding the spread of the virus. However, in view of the partial reliability of the PCR tests, there are claims to inflate the number of deaths from corona. According to Ministry of Health documents, there is no reference to the gaps between the positive test and the date of death. Classified as deceased Corona, these data are particularly problematic in light of the conclusion of the report of the Knesset Research and Information Centre regarding the death of Covid - 19 of June 7: "It should be noted that based on these data it cannot be determined whether Corona is the fundamental cause of death, i.e. whether it is the reason that led to the chain of events that led to death."

Therefore, the association recommends investigating each death and stating the diagnoses for the cause of death.

Table 1. Percentage of Deaths from Corona: comparison of the First and Second Wave

Days of Diagnosis	First Wave	Second Wave
2-4 days	50	5
4-8	30	5
8-14	15	30
14-21	5	30
21-45	0	30

Source: (Clalit Sick Fund, 2022)

From the Table 1, it can be seen in percentages that the date of death from the date of discovery of the virus among the 200 deaths examined was different between the different waves. Whereas in the First Wave the majority of deaths occurred within a few days in the Second Wave on the other hand most of the deaths occur after 14 days or more. The proposed reason for explaining the differences lies in a change in the policy of the Ministry of Health by Gamzo who founded the first headquarters of “Fathers and Mothers Shield” (Gamzo, 2020). Under the new policy the verified patients and especially the symptoms should be evacuated to the hospitals immediately. While the verified patients in the vast majority of the First Wave were left in institutions without proper treatment and arrived in critical condition at the hospitals.

Institutions' response to the epidemic in the First Wave:

The interviews show that during the First Wave, the directors of the institutions experienced severe feelings of uncertainty, and logistical difficulties. Despite the aid measures, many managers say they felt "being left alone in the battle" (Levkovich *et al.*, 2021).

Respondents to the survey note high satisfaction with the equipment provided in the first months of the outbreak, in which there was a significant shortage in the availability of protective equipment and the prices of the equipment increased. 82% of respondents cited protective equipment as a significant factor in coping with the pandemic. In particular, the amount of protective equipment provided, the supply of items that could not be purchased during the first months of the epidemic, and the inefficient procedure of delivery to the institution. 63% of the respondents noted favourably the contribution of the training given to the staff members to deal with the epidemic in the First Wave (Gal and Hertz, 2020).

The respondents favour the establishment of the Fathers and Mothers Shield headquarters and report that the headquarters' referral centre was an address for them. However, the respondents note that the multiplicity of procedures and the frequency of changes in the procedures set by the various bodies supervising the institutions have created confusion and complexity.

Managers noted in interviews and surveys the contribution of "arrow" teams that operated during the First Wave and enabled an increase in the institution's

manpower at the time of an outbreak and noted the importance of continuing to operate these teams to address situations of institutional isolation.

Managers whose institution is part of a network also favourably noted the support the network has given them throughout the period. Institutions are run in a corona routine and the uncertainty has diminished. However, many institutions face fundamental problems:

A. Financial distress - Many managers reported financial hardship because of increased operating costs. This is even though the Ministry of Health financially supports nursing-homes for patients who are funded by it. The Ministry of Welfare also aids institutions for the disabled for the patients it funded. However, no financial assistance is provided for the rest of the elders in the institutions.

B. Reducing manpower because of declining revenues increased the burden on the remaining staff. The directors of the institutions also fear a situation in which an outbreak in the institution will lead to extensive isolation of the staff and will not allow the institution to continue to function.

C. Shortage and cost of protective equipment - Managers report about the difficulty in obtaining some of the specifications of the protective equipment, although the availability of the equipment has increased. Even when the equipment is available, its cost is high and burdensome on the budget balance of the institution, despite the supply of equipment is provided by the Ministry of Health. Managers' report that dealing with equipment and protection is a major issue that they routinely deal with.

D. Significant impairment of the tenants' quality of life: The respondents to the survey note that reducing family visits, distance procedures and reducing activity in the institution affect the mental state of the tenants.

Transferring sick residents to designated wards in accordance with the "Fathers and Mothers Shield" guidelines was issued on April 17,2020, while a preference was given to removing sick residents outside the institutions to dedicated corona wards, to ensure an appropriate medical response (Gamzo, 2020). Most managers supported this policy and reported that it is not possible to allow positive tenants to stay within the nursing-homes due to the fear of infecting other tenants, lack of physical conditions, and lack of dedicated staff to care for the sick tenants.

Alongside this, the managers noted that tenants who fell ill in Corona and were taken out of the institution returned to a poor physical and cognitive condition. It is not possible however to determine whether the impact on the tenants stems from the illness, isolation or removal from the institution.

3.3. Infections in nursing-homes

In nursing homes, where the outbreak has occurred as well as the number verified, is a significant indication of the spread of the pandemic in these institutions. Therefore, Maimon was credited for adopting the position of the

families from the beginning of the pandemic as brought by its representatives, for immediate monitoring of all the staff members in the nursing-homes due to their being the main source for contagious. On July 17, the Ministry of Health published the latest snapshot on the status of outbreaks in nursing-homes and claimed that the number of institutions where outbreaks have occurred up to this date stood at 123.

Table 2. Percentage and number (in parenthesis) of hospitalized Covid-19 Patients based on Aged Group

Age	1 st Wave		2 nd Wave	
	Percentage and Number of Number	Days of Hospitalization	Percentage and Number of Number	Days of Hospitalization
80+	14% (360)	15	15% (1642)	10
70-80	14 (374)	19	15 (1690)	10
60-70	17 (454)	15	19 (1991)	9
50-60	15 (403)	11	15 (1612)	7
40-50	13 (332)	8	12 (1294)	5
20-40	21 (559)	6	18 (1959)	4
<20	5 (130)	6	6 (130)	3

Source: (Israeli-Ministry-of-Health, 2020, p. 9)

In the First Wave attributed to the months of March-May 31, 2020, 180 outbreaks occurred in about 100 nursing-homes. In the Second Wave attributed to the months of June-October 31, 2020, 515 outbreaks occurred in about 400 nursing-homes. 60% of the institutions in which there was an outbreak in the First Wave, returned to another outbreak in the Second Wave. Therefore, 74% of all geriatric institutions in Israel were contagious. Table 2 shows the percentage and number of Covid-19 patients based on age group and the number of days of hospitalization. One can notice that elderly people stayed longer in hospital in general and the hospitalization period was longer in the First Wave than in the Second one, a thing that positively affected the death rate among the elderly age group.

Since the beginning of July the number of verified patients, the institutions in which the outbreak has occurred and the number of deaths, are on the rise. On July 13, Maimon applied the weekly sampling procedure to the staff members in all geriatric institutions.

The increase in the number of those infected in the Second Wave, compared to the number of those infected in the First Wave, was lower in comparison to the entire community: As of the end of September, the number of those infected in institutions declined, and that despite the significant increase in the number of infections; this figure may suggest that the preventive measures taken have somewhat reduced infection in nursing-homes compared to the community.

Despite this, it is not clear that the plan reduced the number of infections in institutions or affected the number of deaths. 30% of all infected institutions a rolling outbreak occurred, i.e., one that started with a small number of infected and the increased to dozens of infected within a few weeks without the ability to interrupt the infection chain quickly.

The reasons for creating a rolling eruption are as follows:

- Failure to observe defence and disinfection procedures by staff despite the outbreak due to lack of on-site training.
- Lack of protective equipment and disinfectants.
- Verified test results that arrive after 3 days or more from the date of taking the test.
- Exhausted tenants are contagious who move within the wards without maintaining distance and in the inability to understand what is required of them due to their cognitive limitations.
- Amputation chain attachment is more complex than just using amputation tests. It is necessary to combine efforts and means such as:
- Introduction of regular supervisory bodies to enforce procedures as is the case in hospitals
- Dividing the debilitated wards into capsules
- Tightening control over receiving results from laboratories within up to 24 hours.
- Increasing awareness and awareness among staff about how to deal with an outbreak
- Assisting the director of the nursing-home to manage the event.
- Sending volunteering teams to reinforce crew members.

Sampling in institutions with the outbreak of the pandemic: The Ministry of Health objected to allowing tests to be assigned to asymptomatic residents. But under public pressure it began to assign tests to institutions where an outbreak occurred and to tenants and staff who were in the verified vicinity. With the establishment of the “Magen Fathers and Mothers” Headquarters by Gamzo, the policy for sampling for all institutions was outlined on a priority basis and with a daily allocation of approximately 3,000 tests per day.

After the data accumulated according to which the main cause of infection in the institutions is the staff members, and with the demand of the families' representatives to carry out tests for the infectious agents, Maimon applied the weekly sampling program to the staff members, which was implemented on July 13.

The State Comptroller noted in the Interim Report that following a conversation with the audit team from the State Comptroller's Office in June 2020, the Director of “Fathers and Mothers Shield” estimated that early detection of carriers would reduce cases of infection in institutions. Maimon increased the number of daily samples from 3,000 to 6,000 on average, and as the days passed,

he asked the Minister for a higher daily allocation (Mevaker-Hamdina, 2020). The State Comptroller further noted that the average daily number of samples currently stands at 7400. However, he stressed that “Fathers and Mothers Shield” does not ensure that all employees in the institutions that come into contact with the tenants are inspected and does not have a picture of the situation (Gamzo, 2020). Given that it could not identify problems or barriers that impede the implementation of the testing policy, it rendered information for the purpose of creating an action plan or response irrelevant.

Thus, in August and September more than 60,000 inspections were assigned to the nursing-homes even though the total number of workers in these frameworks stands at only 7,000. Therefore, the association recommends outlining a clear sampling policy based on criteria for assigning tests to each framework according to the reference scenario.

At the end of three and a half months of activity of the sampling program, all that remains is to declare its failure as a stand-alone, with the existing goal of reducing the number of exposures to the virus. Most of the failure is due to the lack of reference in the plan to close the existing breach of protection in nursing-homes, which stems from teams that do not adhere to the rules of protection. Therefore, it was obligatory to continue to add to the program standards of supervision and discipline of the staff in a format of 24/7, such as that found in hospitals.

3.4. Damage to prolonged closure in nursing-homes

On March 12, 2020, at the beginning of the outbreak of the corona plague in Israel, the Ministry of Health imposed a complete closure on nursing-homes to protect the residents there from infection. As the days went by and despite the closure, it became clear to practitioners that the main, if not the only, contagious group of residents of the geriatric and nursing homes institutions are the staff employed at the place who enter and leave the institutions into the community and back.

Also, when the institutions for family visits were opened on April 21, by Gamzo, Chief of Staff of “Fathers and Mothers Shield”, in a limited format of visits at a distance of 2 meters between visitors and tenants, visiting a family member for up to half an hour, once a week for up to 10 days on average, revealed the dramatic damage of this closure (Gamzo, 2020).

Reports of these damages following the prevention of family members entering institutions, especially in the nursing wards, continued to rise as the days go by and in the absence of a change in policy.

The master plan of the Magen Fathers and Mothers staff highlighted a chapter on maintaining the mental resilience of the residents of the institutions. In practice, the Ministry of Health has not established any resilience program for tenants or staff in institutions under its responsibility.

Conduct of the Geriatric Medical Centre designated for the treatment of Corona patients:

Gamzo established the outline of the Geriatric Medical Centre to enable treatment practice appropriate to the population of nursing-home residents as well as to prevent flooding of hospitals. 25% of complaints indicate that they have difficulty contacting a geriatric medical centre or receiving continuous information about their loved ones. 30% of complaints indicated that they have been notified of dehydration cases from which their loved ones suffer. 10% indicated sharp weight loss probably due to lack of sufficient manpower as well as due to low entry of caregivers into the wards. Most of the time the patients are left alone in the ward. 15% report the formation of infections that are an outgrowth of pressure ulcer formation and dehydration leading to acute urinary tract infections. An additional 10% indicate a lack of suitability for the department. Exhausted patients are treated in a ward with nursing characteristics. A reality that humiliates them and causes them physical, mental and cognitive deterioration.

In practice, no dedicated and independent wards have been established at the various geriatric medical centres, despite the planning in the Magen's master plan. Corona patients are taken to the various geriatric medical centres without geographical consideration from the tenant's permanent residency and are not selectable. Family members are not allowed to enter a geriatric medical centre, which reduces the degree of supervision over the manner of treatment and the condition of the patient there (Gal and Hertz, 2020). And their ability to communicate with family members is limited or eliminated all depending on the hospitalized status. An example of the possibility of entering the corona wards is held at Hadassah Hospital in Jerusalem, where the hospital's director general initiated the outline of visits to the corona wards, understanding that the families' meeting with the patients is a life-saving factor.

On July 30, 2020 the Chief of Staff published the "Garden in Your Sector" program, which received extensive media coverage, according to which the Ministry of Health changed its policy regarding the evacuation of elderly Corona patients from nursing-homes and geriatric centres. Under the new policy the patients will be treated within special corona wards within the nursing-homes and will not be referred to hospitals as was customary up to that time.

The purpose of the stated program was to protect the elderly from cognitive impairment due to the traumatic transition to another institution and unfamiliar environment as well as to prevent infection from the hospitals. Likewise, another goal was created to prevent the flooding of hospitals in nursing-home residents as much as possible, in addition to the number of beds in the various geriatric medical centres.

In practice, only 15% of all institutions were found to meet the criteria for the ability to keep patients in an institution. And so, another promise was found

barren from the content while the public believes that the residents of the verified nursing-homes remain in their institution.

4. THE SECOND WAVE

Conduct of visits during the second general closure from September 18 to October 2: After a stubborn struggle by the Association of Elderlies' Families vis-à-vis the Ministry of Health and the Knesset Law and Justice Committee in preparation for issuing the second closure regulations for Israel Head of the Geriatrics Division, Dr. Orit Lexer. A detailed letter requiring the directors of geriatric institutions (nursing-homes under a license from the Ministry of Health) to hold visits in the existing format (The-Association-of-Elderlies'-Families-in-Nursing-Houses, 2020).

The fear is that seasonal flu patients will be hospitalized or isolated with Corona vertebrae and thus helpless people who are not Corona patients will infect the Corona and die due to their morbidity conditions and aggravation (Saban *et al.*, 2021). In addition, no specific plan was announced regarding the conduct of staff and institutions during the winter in terms of monitoring symptoms, how to deal with them, allocating dedicated tests, isolating potential infectors, providing local care to potential infectors and how to defend themselves. Referral of suspected infected to the emergency room, preparation of hospitals and their treatment of seasonal flu patients. And how they returned to the institution for further treatment.

The protection of the elderly population, with an emphasis on adults staying in institutions, is at the core of the policy of dealing with the corona plague.

The percentage of those infected in inpatient care institutions, institutions for the mentally debilitated and in nursing-homes of the Ministry of Welfare is 5 times higher compared to the percentage of the elderly who became infected in the community. However, the increase in infection in these institutions in the Second Wave is somewhat lower compared to the increase in infection in the community.

Further, the amount of sampling assigned to nursing houses teams is exceptional in scope and the effectiveness of sampling in preventing infection in these institutions is estimated to be low. Therefore, it was advisable to reduce the sampling of sheltered housing teams and focus the sampling on the staffs of the nursing-homes and institutions for the mentally debilitated, where the risk of infection by a staff member is significantly higher.

During the Second Wave, the operation focused mainly on instructing the directors of the institutions to deal with outbreaks and continued support for the mental resilience of the residents of the institutions.

5. CONCLUSIONS

This study presents the prevailed situation in core issues and activities of the tenants protection in nursing homes and shows data that points to a link between

infection of staff members and elderly tenants. There is a high mortality rates among elderly people in nursing homes which is caused by a high infection rate among the staff members. Thus, the infection of staff members is the causes of death among the residents of nursing homes. The study also provides a list of the damages suffered by the occupants of the nursing homes due to flaws in the management of the crisis and the disconnect between the elderly residents and their family members. Finally, the articles show data on the tenants' neglect due to their disconnection from their family members during the period of the pandemic.

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DIGITALIZATION IN THE CONSTRUCTION SECTOR. MAIN STRATEGIES AND POLICIES IN THE EUROPEAN UNION

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Abstract

The construction industry is one of the most important economic sectors in the European Union, having a significant strategic role as it offers solutions in the areas of infrastructure, construction, and water or energy supply. Since more than a decade, this type of activities experiences major transformations, while digitalization along with the implementation of digital technologies started to play a central role. In this industry, the path has already been set, and concepts such as sustainable building, energy performance, and circularity have become essential. Toward achieving these dimensions, digitalization represents a valuable asset that can lead to efficiency, process improvement, and better management of business functions. The purpose of this paper lays in identifying the main strategies and policies which exist within the European Union regarding digitalization and the use of digital technologies, and the results being achieved in this field. Basing on the systematic literature review, identifying and grouping the main strategies and policies that exist within the construction sector reveal the EU's commitment to digitization, this trend being at the same time an opportunity for investors and innovation companies.

Keywords *construction sector; digitalization; strategies; policies.*

JEL Classification: L74, D22, O33

1. INTRODUCTION

A key pillar of the EU Economy with an annual turnover of almost 1700 billion euros in 2020 (Statista, 2022), contributing with about 9% to the European GDP and providing over 18 million direct jobs (European Commission, 2020b) is the construction sector. This industry acts as a link between all the industries and economies playing in the same time a major role in terms of social, environmental and climate impact (European Construction Sector Observatory, 2021).

The construction process is a complex one and implies a multitude of activities and resources, which need to be coordinated. The presence of over 3 million active companies of whom over 95 % small and medium enterprises

(European Construction Industry Federation, 2020) in the construction market presents a structurally weak character of this industry which in time led to a series of challenges regarding productivity, limited capacity of innovation or communication (Bellochi and Travaglini, 2021).

One of the main potential changers of the construction industry is the digitalization, who started to play an important role through its informational technologies, respectively through their integration in the construction industry. Therefore, on the long term it could offer proper solutions to the above-mentioned challenges.

In the EU's industry, the fourth industrial revolution known as Industry 4.0 has become more and more powerful in the last passing decade. The focus is on the use of computers and physical cybernetic systems for more efficient products and more automated processes (Boyes *et al.*, 2018). Unlike the first 3 industrial revolutions, which were triggered by problems related to steam, electricity, and electronics or process automation, Industry 4.0 has its roots in 2011 in the context of the development of the German economy. It is based on the autonomous communication of systems with each other, in a direct way, without human interference in a decentralized way, thus aiming at efficiency, productivity, safety or transparency (Boyes *et al.*, 2018).

The construction industry took advantage of the benefits of Industry 4.0, and the increasing use of information technology, along with the implementation of digitization and process automation at all stages of the value chain, to drive its own revolution called Construction 4.0 (Foracel *et al.*, 2020). This paradigm shift implies not just the solely use of one or more specific new technologies, but the complete and comprehensive transformation of all the processes and project management steps inside the construction companies through the use of technology (Dallasega, Rauch and Linde, 2018).

The European Union has already projected the construction's sector path in form of five main directions: sustainable competitiveness, energy efficiency, renovation of buildings, circular waste and economy, development of abilities and research (European Commission, 2012). For achieving better traction on this path, digitalization could be the key and the public authorities, the catalyst.

By implementing various policies and tools to accelerate the acquisition of digital technologies, governments have a key role to play in stimulating the digitalization in Europe. It needs to be specified that in order to achieve high efficiency, digitalization must be embraced by all actors involved in the value chain of construction as well private as also public entities (European Construction Sector Observatory, 2021).

The European Commission has noticed the great potential of the informational technologies and starting with 2012, triggered several strategies and initiatives on the European Construction Market for helping this sector to convert into a digital one (European Construction Sector Observatory, 2021).

As a consequence the EU member states have started gradually adopting digital innovations, having Building Information Modelling as a pacemaker. The adoption process of the digital technologies lacks of homogeneity due to the different barriers, cultural, technological or political, it encountered (Brunello and Wruuck, 2019). Consequently, the politics adopted in the different member states for enhancing digitalization and its means vary and different approaches exist.

The purpose of the current work is to identify and discuss various existing policies as well as at a general level (European Policies in the whole European Union) as well as at a national level.

2. MATERIALS AND METHODS

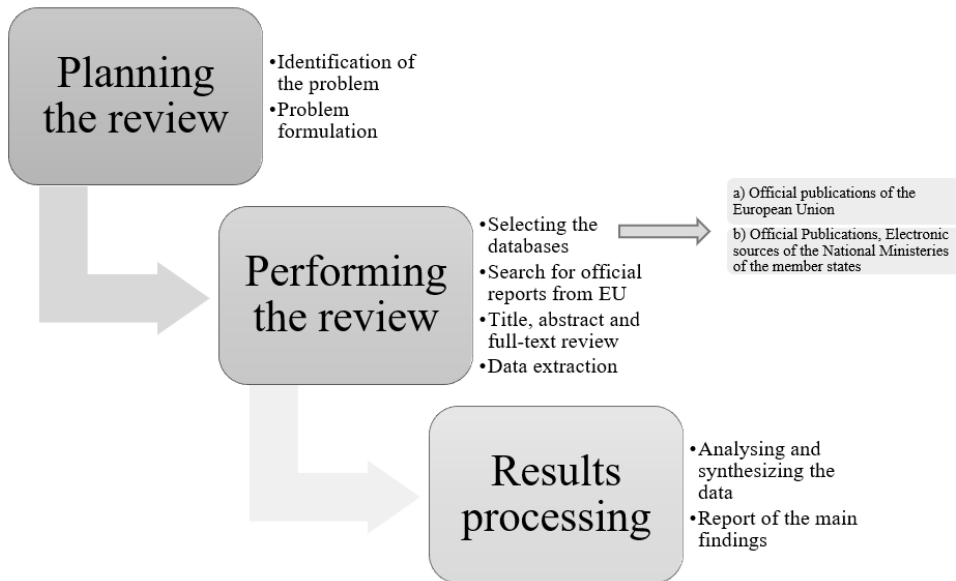
The data collected in this study address in the first instance the general European level, respectively the identification of the European policies which address digitalization and the use of digital technologies for all the member states. This is required in order to obtain a holistic view of the general digitalization frame of the construction sector. Afterwards, a national approach is required to observe the initiatives and the strategies which exist in each country, respectively their commitment on the digitalization path.

A fundamental source for the collection of the data is represented by the works of European Construction Sector Observatory which can be defined as an entity under COSME (Europe's programme for small and medium-sized enterprises – European Commission, 2022b) dedicated to carrying out regular analyses, monitoring market conditions and trends, and making comparative assessments of the construction sector in all of Europe.

Other data taken into consideration when analysing the current status of the national digitalization policies that exist comprise of the electronic sources and their information which could be found on the official portals of the different Building or Public Works ministries across each European member state.

A systematic literature review is the approach used for gathering and analysing the current data. Systematic literature review is a specific type of literature review, which based on a research question, tries to select, identify and synthesize all high quality data, which are relevant to the searched item (Okoli and Schabram, 2010). A graphical representation of the research design can be noticed in Figure 1, where the methodological steps were divided and described.

After identification of the problem, its formulation becomes imperative, namely the identification of the main policies and initiatives existing in the EU regarding digitalization in the European construction sector. At this point, the effective performing of the review begins where in a first step, the proper database is selected for searching the proper sources.



Source: (Okoli, 2015)

Figure 1. Research flowchart design

The selection of the databases is one important step because searching the appropriate resources is leading to useful and quality results. A false selection of the pool could lead to inconsistent and weak research findings.

When selecting the databases the research step was divided in 2 parts. Firstly, the official publications of the European Union, their official reports, strategies, current works and trend papers were searched. In a second step, the national Building and Construction Ministries official pages of the member states along with other similar sources of other public agencies as e.g. European Construction Industry Federation will be searched (without any searching strings or similar).

After searching the publications, the main works are selected and a title and abstract review takes place, followed by a full text analysis. The relevant documents will be selected and prepared for the data extraction.

3. RESULTS

3.1. Existing policies at European level

The governments represent key actors in assisting the construction sector with its digital transformation through its policies that they encourage which are meant to stimulate the adoption of the digital technologies, of the digital practices and of the business models. It is important to be noted that in order to have a high

efficiency, the digitalization must be embraced by all the attendees of the construction sector, both public and private entities.

After searching the databases of the EU regarding digitalization in the construction sector, a rich number of valuable sources had been found. The objectives of the European Commission are clear and target to consolidate the internal market conditions where digitalization plays a central role. Helping the construction sector digitalize and automatize by supporting innovation and the implementation of the different technologies as BIM in the public sector represents one of the main points which the European building industry should reach (European Commission, 2022a).

Table 1 offers a main view of the findings, where the different European policies and strategies regarding digitalization of the construction sector were identified.

Table 1. Main European digitalization policies or strategies

European policies/strategies	Document type	Date
Construction 2020 strategy	Communication from the Commission to the European Parliament and the Council Strategy for the sustainable competitiveness of the construction sector and its enterprises	31.07.2012
DIRECTIVE 2014/24/EU regarding public procurement	Directive 2014/24/EU of the European Parliament and of the Council	26.04.2014
Handbook for the introduction of Building Information Modelling by European Public Sector	Set of strategic actions	06.07.2017
DIRECTIVE (EU) 2018/844 amending directive 2010/31 on the energy performance of buildings	Directive 2018/844/EU of the European Parliament and of the Council amending Directive 2010/31/EU and Directive 2012/27/EU	30.05.2018
Shaping Europe’s digital future	Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the regions	19.02.2020
Circular Economy Principles for Building Design	Information and Recommendations	21.02.2020
Views on Construction 2020 and Beyond	Trend and Recommendations	08.04.2020
A Renovation Wave for Europe – greening our buildings, creating jobs, improving lives	Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the regions	14.10.2020

Source: own representation

The Construction 2020 strategy through its action plan “Strategy for the sustainable competitiveness of the construction sector and its enterprises”

(European Commission, 2012) has its focus in enhancing sustainable competitiveness and the adaptation of the industry to the new existing challenges. To realise the above-mentioned purposes, innovation along with learning and adoption of the existing technologies represent key points as it is clearly stated: “main interest of construction enterprises is to integrate available external technological developments into their activities”. The strategy was set on 10 years and through the medium to long time measures which need to be implemented, digitalization was mentioned. Technology-oriented activities should be combined with socio-economic research into market-based and demand-side instruments (training, public procurement, standardization, insurance, etc.) in order to accelerate the transition from research to exploitation of innovative solutions.

The directive 2014/24/EU (European Parliament and the Council of the European Union, 2014) on public procurement which is repealing the directive 2004/18/EC regarding Building Information Modelling (BIM) in the public procurement is quite straightforward and advises all the member states to use specific electronic instruments as BIM for granting the public works contracts. In the same time, the electronic means of communication becomes compulsory as well as the document management: “the obligation to use electronic means at all stages of the public procurement procedure”. The importance of information and communications technologies is recalled as to be of high value and “particularly necessary”, especially in the case of no ordinary buildings.

The Handbook for the introduction of Building Information Modelling by the European Public Sector (EU BIM Taskgroup, 2017) represents a pioneering work for building a common framework for the introduction of BIM in the public procurement process. This handbook identifies BIM as being the centre of the digital transformation of the building sector and underlines the role of the governments and public procurers in Europe. It contains a set of strategic recommendations which aim the introduction of the BIM technologies in the public procurement as part of a national strategy or policy. Four strategic recommendations are made as: establishing the public leadership, communication vision, building a collaborative framework and growing industry adoption and capacity where for each of them the action plan is set. The implementation level recommendation explains the actions which need to be taken by the public procurers to introduce a common performance level at the European scale.

The 2018/844/EU (European Parliament and the Council of the European Union, 2018) directive amends 2010/31/EU directive on the energy performance of buildings and 2021/27/EU on energy efficiency. It contains a long-term renovation strategy where each member state shall develop its own renovation plan for converging to energy efficient and decarbonised building stock. This should encompass “an overview of the national initiatives to promote smart technologies and well connected buildings”. Also, for digitalizing the construction sector the deployment of communication networks, smart homes and digital solutions in the

built environment is highly required (European Construction Sector Observatory, 2021). This directive promotes the use of the different digital technologies and it goes one step further towards digitalization through introduction of the digital building logbooks, supporting investments in the construction sectors through digital hubs and by supporting digital transformation.

Shaping Europe's digital future (European Commission, 2020c) represents a communication of the European Commission to the European Parliament which firstly identify the role and potential of the digital technologies, along with their benefits and positive outcomes. The document is divided in three parts and states the current status of the industry where Europe needs to invest more to develop strategic capacities for developing the usage of the digital solutions at the interoperability level. The international dimension is approached, where Europe is a global player which should act as a model and leader when it comes to digital. A set of key actions is proposed containing a set of strategies as "A global digital cooperation strategy", "A digital for Development Hub" or "A strategy for standardisation which will allow for the deployment of the interoperable technologies" and many others (European Commission, 2020c). This document is relevant for the whole industry (of whom the construction industry represents a significant part) because of its high valuable content and was therefore included in this current research.

Circular Economy – Principles for Building Design (European Commission, 2020a) is a valuable document for the European building industry which has the aim of informing the support actors involved in the construction value chain. At the same time, it provides clear principles and recommendations for using the circular design steps in the building design. The macro objective is represented by the resource efficiency optimization and circular material life cycles. The target groups are complex and regarding the building users, facility managers and owners, adaptability is mentioned which should help minimise the financial costs of use through adequate means. Here BIM and the Buildings passports are mentioned and required for supporting transfer information and efficient cost management. For the group of contractors and builders, the recommendation regarding deconstruction facilitation was found relevant for the industry's direction towards digitalization, namely the support for BIM uptake so that a future building deconstruction, recycling, reuse or similar could be realised. The role of the local authorities and governments is a vital one because they regulate the whole framework. For this specific group, the promoting of systematic data collection in an organized and structured manner is necessary respectively, the implementation of the new business models. Through the tools which can be taken into account on long-term BIM and its central role is directly mentioned.

An impressive and valuable work is represented by the Views on Construction 2020 (European Commission, 2020d) which is a trend and recommendation work. The role of digitalization is a very important one and it is

seen as a tool for boosting the international competitiveness which can in the same time lower the costs and increase the productivity. It is straightforward and suggests that more concrete regulatory actions are required when dealing with the current challenges as sustainability or digitisation. The next necessary political framework is described and a holistic approach of the whole building industry is required. Through the priorities which exist, the digitisation of the design, planning and management and the digital single market are stated. The future possible direction of the EU actions had been also described.

A renovation wave for Europe treats with delivering faster and deeper renovations for better building and with tackling the energy poverty. This document recommends a series of key principles and a strategies for fostering building renovation and to address the environmental challenges. Its aim lies in reducing the poverty in the EU and in improving the quality of life for people living in buildings. Through its objectives, the fostering of digitalisation is necessary and is clearly stated: “creating a digital society” or “spurring digitalization and creating employment”. Through the key principles for building renovations towards 2030 and 2050, the “tackling of the twin challenges of the green and digital transitions” are mentioned through the implementation of the smart buildings which can be a useful asset in the direction of efficient production.

3.2. Existing policies at each national level

The digitalization degree and the implementation and adoption of the digital technologies vary across Europe. Despite several policies and strategies that had been spotted at a general European level, member’s states national levels lack homogeneity in regard to each other due to items regarding the different organization of the industrial sectors and of the construction sector, different public administration systems or society development problems as lack of knowledge, individual hesitance or acceptance of technology (Aripin, Zawawi and Zulhabri, 2019).

In terms of digitalisation of each member state’s construction sector, a valuable source is represented by the analytical report of the ECSO (European Construction Sector Observatory, 2021), who performed a four-pillar research: a desktop research with academia, construction sector associations and authorities; interviews with EU policy officers, EU construction associations and major construction companies; a survey of the national authorities and construction associations; and google analytics for finding the level of awareness in regard to digital technologies. The findings divide the digitalization strategies in two categories:

- Horizontal digitalization strategies which target the digitalization of the entire country or an entire economy. These types of strategies not target exclusively the construction sector. This industry may or may not be in the targeted group;

- Vertical digitalization strategies which target directly the national construction sector.

Table 2. Main European digitalization policies or strategies for each member state

Member state	Horizontal strategies/policies without Construction sector	Horizontal strategies/policies including Construction sector	Vertical strategy/policy with main target on Construction sector	Name of the strategy
Austria		•		„City of Tomorrow”
Belgium	•			„Digital Belgium and Digital Wallonia”
Bulgaria		•		„Digital Transformation of Bulgaria for the period 2020-2030”
Croatia		•		„e-Croatia”
Cyprus		•		„Restart 2016-2020”
Czech Rep.		•		„BIM Strategy by Ministry of Industry and Trade”
Denmark		•		„Strategy for Denmark’s Digital Growth”
Estonia			•	„Estonia 2020”/”Digital Agenda”/ „Estonia 2030+”/”ENMAK”
Finland			•	“Long-term strategy for mobilising investment in the renovation of the national stock of residential and commercial buildings, both public and private”
France			•	„Le Plan BIM 2022”
Germany			•	„Road Map for Digital Design and Construction”
Greece			•	„Digital Construction and BIM in Greece”
Hungary	•			„National digitalization strategy”
Ireland			•	„Roadmap to digital transition”
Italy	•			„Repubblica Digitale”
Latvia		•		„Roadmap for Bim Implementation”
Lithuania			•	„Digital Construction/ Skaitmenie statyba”
Luxembourg			•	„BIM application guide”
Malta	•			„Malta digital strategy 2014-2020”
Netherlands	•			„Dutch digitalisation strategy”
Poland	•			„Poland digitalisation strategy”
Portugal	•			„Industria 4.0”

Member state	Horizontal strategies/policies without Construction sector	Horizontal strategies/policies including Construction sector	Vertical strategy/policy with main target on Construction sector	Name of the strategy
Romania	•			„National strategy on the digital agenda Romania 2020”
Slovakia	•			„2030 Digital transformation strategy for Slovakia”
Slovenia		•		„Digital Government Review of Slovenia-Leading the digitalization of the public sector”
Spain			•	„Espana digital 2025”
Sweden			•	„Smart built Environemnt-a Strategic environment Programme”

Source: (European Construction Sector Observatory, 2021)

All these policies, both horizontal and vertical, include a solid strategy, a well-established action plan over time and various financial instruments needed for the digital transition. With these constituent elements, a holistic approach of the national governments can be felt when it comes to digitizing the construction sector (European Construction Sector Observatory, 2021).

When looking at Table 2, it can be noticed that 10 member states of the EU have vertical policies or strategies exclusively for the construction sector. A number of 8 other states possess horizontal strategies or policies for digitalizing and automating several areas of the industry, the construction industry being also in the targeted group, while a number 9 states have only general digitalization strategies, the building industry being not included in the target group.

4. DISCUSSION

In Europe, governments and public authorities play a crucial role in promoting the digitalization of the construction industry by means of different instruments intended to increase the uptake of digital technologies within the industry (Sategna, Meinero and Volonta, 2019). Digitalization of the entire sector and its successes depend on the actions which are taken by the public part due to the fact that public procurement represents one of the industry’s main clients.

In terms of regulations, standardization and funding the above-mentioned entities are also fundamental players in the digitalization process of the construction industry. Through new regulations and standards and through financing programs which support research and innovation, tax breaks on investments, research and development expenditure they can support the transformation of the industry on the digitalization path (Sategna, Meinero and

Volonta, 2019). It is essential for the construction industry and public authorities to work together and develop policies and strategies that are harmonized to maximize the impact of public support and the efficiency of resources (Brunello and Wruuck, 2019).

A rich number of policies, strategies and recommendation works had been found at the general European level depicting the preoccupation of the EU for digitalization. The digitalization and implementation degree of the digital technologies record different levels and various approaches can be found in each of the member states regarding digital transition. After analysing the strategies and policies, several important findings can be listed as follows (1) Building Information Modelling plays a crucial role in the digitalization process, being one of the main pacemakers in the construction industry; (2) Sustainability, resource and energy efficiency, improved competitiveness represent important objectives which can be achieved by up taking of the digital technologies; (3) Renovation of the old buildings represents one of the main priorities of the European Building sector and a decent way to tackle this item is through digitalization; (4) Two main approaches were spotted at the national level of the member states: the horizontal strategies and the vertical strategies; (5) The majority of the member states have digital strategies and policies who target the construction industry.

“The directive 2014/24/EU” and “The Handbook for the introduction of Building Information Modelling” recommend introducing BIM in the public procurement because this innovative technology represents the centre of the digital transformations of the building sector. The Handbook is the result of a pan-European collaboration of public sectors across 21 countries and consists of a set of strategic actions for the construction sector’s performance, namely through driving value and innovation (EU BIM Taskgroup, 2017). Being seen as a “strategic tool to deliver cost savings, productivity and operations efficiencies” BIM represent the central part of the transformation process and needs to be implemented in the public procurement process.

“The Construction 2020” strategy concentrates on improving competitiveness and the internal market conditions through adaptation of the industry to the new challenges, while “Circular Economy” has its purpose in the resource efficiency optimization, respectively in creating a circular material life cycle. “Views on Construction 2020” is focused on boosting the productivity and along with the other above-mentioned policies underline continuously the same fact that digitalization and the up taking of the digital technologies must be done and can lead to sustainability and efficiency.

To the renovation of the existing structures two documents are addressed: “A renovation wave for Europe” and the “directive 2018/844/EU” which deals with the energy efficiency and performance of the buildings. The European directive contains a long-term strategy for renovation where each member states is advised to develop a plan for converging to energy efficiency and decarbonised

environment. The “Renovation Wave for Europe” targets the greening of the buildings and addresses the environmental challenges. This can be obtained only through fostering of the digitalization and through supporting the digital transition.

“Shaping Europe’s digital future” underlines the key role of the European Union who must act as a leader in terms of digitalization and a set of key actions is proposed as a global digital cooperation strategy, creating of the development hubs and a standardisation strategy. It has a high valuable content identifying the potential of the digital technologies.

Inside the digitalization of each EU member state’s construction sector two approaches had been meet. The horizontal ones are complex digitalization policies who target either a variety of sectors or areas and which may or may not include the construction industry. The vertical ones address exclusively the building industry by aiming the digitalization of the whole sector, the integration and adoption of the digital technologies and the fostering of innovation (European Construction Sector Observatory, 2021).

At national levels, 16 out 27 of the EU member states opted for either a horizontal strategy that includes the construction sector or a vertical complex strategy. This depicts a general positive level of trust that exists in each country towards digitalization and use, adoption and implementation of the digital existing strategies. Countries as Germany, France, Spain or Sweden concentrated their policies directly and exclusively on the construction sector while Austria, Denmark or Czech Republic targeted complex industry areas where the building industry was also included.

5. CONCLUSIONS

The aim of the current work is to provide an overview of the approaches of the EU and of the member states in regard to digitalization, their position and their support for the construction industry’s transition in the digital direction.

After performing a systematic literature review through the official publications of the EU, respectively of the different construction, public works or building ministries, the main findings suggest a high interest of the EU in regard to digitalization and support of the digital technologies.

A consistent number of policies and strategies had been found who underline the commitment and preoccupation of the European states and of the whole Union towards digitalization. The construction 2020 plan contains a set of strategic actions which need to be implemented for facing the existing challenges in the construction industry. Digitalization is presented as a viable solution and the uptake of digital technologies must be done at a high rate so that the industry can take advantage of them.

Directives as 2014/24/EU regarding public procurement advises strongly to use electronic instruments as BIM for granting the public construction works,

introducing and obliging the using of electronic means of communication and document management. In this matter, in 2017 the Handbook for the introduction of BIM by the European Public sector is created which contains a set of strategic measures with the purpose of introducing BIM in public procurement in Europe.

Other relevant policies and strategies found are represented by the 2018/844/EU directive, Shaping Europe’s digital future, Circular Economy-principles for building design, Views on Construction 2020 or a Renovation wave for Europe. These documents focus on the importance of the digitalization and its potential of transforming the whole construction industry, containing recommendations, action plans and strategic moves which need to be taken.

At national levels, horizontal and vertical strategies represent the approaches taken by the member states. There is a lack of homogeneity, which is up to a point normal, depending on the development levels, organizational forms of the construction sector and of the institutions, as well as mentality and technology exposure.

Several European countries opted for vertical digitalization strategies aiming the construction sector or horizontal strategies which target broader areas containing also the building industry. The positive aspect is that 60 % of the European states have implemented strategies for digitalizing their national construction sectors which contain complex tools for financing and support.

The collaboration between the public and private sector represents an essential aspect for digitalization of the construction industry and the governments along with the public authorities play a crucial role through their actions and policies.

The current work can serve as a guideline for the public and private entities regarding the digital strategies and policies which exist up to this point in terms of digitalization and adoption of the informational technologies in the European construction sector.

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COVID19 PANDEMIC AND PUBLIC PROCUREMENT IN ROMANIA

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Abstract

The public procurement system has suffered major challenges caused by the Corona crisis caused by Covid19, which has exacerbated existing problems. All state institutions, from town halls to hospitals and schools have been caught unawares by the current pandemic unprepared with the necessary equipment. Faced with an unforeseen and extreme emergency, the European Commission and national governments have suspended the provisions of national legislation in the field, trying to make it much easier to purchase equipment. Pandemic COVID19 has created an exceptional situation regarding the procurement of products, services and works, provided by both the Directive 2014/24/EU on public procurement and public procurement laws (Law 98/2016 on public procurement and Law 99/2016 on sectoral procurement). In other words, in case of unforeseen events or when the goods, services or works can be provided only by a certain operator, the "classic" public procurement procedures, procedures that involve both the publication in SEAP of a participation notice and different deadlines and documentations does not apply. This article analyses the changes from the public procurement sector in the period 2020 from Romania. Following the analysis, a series of practices used by public institutions during the pandemic period are identified: in order to reduce the risk of spreading the virus, public institutions have issued their own regulations on how to carry out telecommuting activities, as well as the necessary hygiene measures and restrictions; for public institutions that did not have additional responsibilities during the state of emergency, the provision of funds for procurement for staff protection was provided within the approved budget; as a rule, additional budgetary funds were made, mainly from savings made on other categories of non-essential expenditures.

Keywords: *pandemic crisis; public procurement; public funds.*

JEL Classification: H11, H12, H51

1. INTRODUCTION

The COVID19 pandemic appeared in Romania at the beginning of 2020, in March. The state of emergency was declared in the country by the president by issuing decree no. 195/2020 on March 16, 2022. Faced with the pandemic, the public authorities tried to make a centralized purchase of medical products in accordance with the provisions of Law no.98/2016 regarding public procurement through a certain type of negotiation procedure without prior publication. Although

these centralized procurement methods were partially tried in terms of essential medical products to combat the COVID19 pandemic, Romania had major deficiencies in the supply of medical goods. The declaration of the state of medical emergency led to each contracting authority using the simplified procurement procedures for the acquisition of medical emergency goods. To combat the COVID19 pandemic and only during it, the National Agency for Public Procurement has allowed public institutions to directly purchase the materials and equipment needed to deal with the pandemic. In times of emergency, the relaxation of the existing legislative framework in the field of public procurement and the granting of greater autonomy to public institutions increases the efficiency of the process, but at the same time generates a significant risk of corruption (Agenția Națională pentru Achiziții Publice – ANAP, 2021).

Representing an important sector that is strongly regulated in terms of the way a state's public expenditures are made, public procurement must ensure a proper balance between fair and transparent competition, in conditions of price quality (Decarolis and Palumbo, 2015). Specialized literature shows that in Romania in 2019, the share of public procurement in GDP was approximately 7.75%. The spending of important sums by the Romanian public administration through public procurement shows the importance of the analysis carried out in this article. Due to the large volume of sums spent, the technical and legal complexity and the almost non-transparent process of establishing spending decisions, the field of public procurement in Romania is subject to corruption risks (Mironov and Zhuravskaya, 2016). In the case of exceptional situations when extremely large sums are spent in a short period, these risks can be amplified exponentially, due to the easier ways to hide the phenomenon of corruption. The COVID19 pandemic required a quick response to protect the health and life of citizens, involving important public procurements carried out in a very short period, which can generate a lack of transparency, fairness and efficiency (Bosio *et al.*, 2022).

In the matter of public procurement, corruption involves the conscious allocation of contracts and public sums for the benefit of certain participants and the disregard of others by distorting the principles of transparent, open, and fair competition for all actors involved in the process (Coviello, Guglielmo and Spagnolo, 2018.). In other words, according to a study by the World Bank, in the field of public procurement, corruption involves directing the public contract to a certain favoured bidder at the expense of the others, by avoiding or manipulating the competition (World Bank, 2020).

The COVID 19 state of emergency has generated two major challenges for public institutions in Romania. The first challenge refers to the fact that the public authorities in the field of health (hospitals) were able to increase without limit the expenses for the supply of articles corresponding to the fight against the pandemic, which were missing to a very large extent. The second challenge was determined

by the relaxation of regulations at the European and national level, especially the ex-ante controls related to the manifestation of the risk of corruption, to allow faster commercial operations. The combination of the two challenges, the large amounts of money distributed and the relaxation of the conditions for awarding contracts can generate opportunities to exploit the public procurement system by manifesting the phenomenon of corruption. Thus, the relaxation of the regulatory framework during the emergency during the pandemic, will have a negative impact on public procurement processes. However, it should be borne in mind that the more relaxed situations for public procurement were only achieved for certain goods and services related to COVID19, which makes the related corruption risk manifest only in certain markets.

The main changes in the field of public procurement legislation in Romania, taken during the state of emergency caused by the COVID19 pandemic, are presented in table 1. The changes made were manifested both in the purchase of infrastructure works and especially in the case of the purchase of necessary equipment. However, the COVID19 pandemic has also generated a good thing, especially for the healthcare system that was previously poorly funded: the acceleration and realization of the necessary purchases for the proper functioning of the hospital units in the context of the additional pressure generated.

Table 1. Legislative changes in public procurement legislation during the COVID19 pandemic

Procedure type	The correct procedure during the alert state	Correct non-urgent procedure
Direct purchase	For products and services: Correct if: The contract is relevant in the context of COVID. The value of the contract is LOWER than 135,060 lei Incorrect if: The contract is irrelevant in the context of COVID The value of the contract is greater than 135,060 lei For works: Correct if: The contract is relevant in the context of COVID. The value of the contract is LESS than 450,200 lei Incorrect if: The contract is irrelevant in the context of COVID. The value of the contract is greater than 450,200 lei	For products and services: Correct if the value of the contract is LESS than 135,060 lei (30,000 euros) For works: Correct if the value of the contract is LESS than 450,200 lei (90,000 euros)
Open auction	Correct if: The contract is relevant in the context of COVID	Correct if the value of the contract is GREATER than (obligation to hold an open tender) • 25,013,925 lei (5,000,000 euros), for public procurement contracts / works framework agreements

Procedure type	The correct procedure during the alert state	Correct non-urgent procedure
		<ul style="list-style-type: none"> • 1,000,557 lei (200,000euros), for public procurement contracts / framework agreements for products and services awarded by the county council, the local council
Negotiation without prior publication	<p>Correct if: The contract is relevant in the context of COVID</p> <p>Incorrect if: The contract is not relevant in the context of COVID</p>	Correct if the rules of the law are met
own procedure	<p>Correct if: The contract is relevant in the context of COVID</p> <p>Incorrect if: The contract is not relevant in the context of COVID</p>	Correct if the object of the contract complies with Annex 2 of the law
simplified procedure	<p>Correct if: The contract is relevant in the context of COVID</p> <p>Incorrect if: The contract is not relevant in the context of COVID</p> <p>The value of the contract is HIGHER than 25,013,925 lei (5,000,000euros), for public procurement contracts / works framework agreements 649,895 lei (125,000euros), for public procurement contracts / framework agreements for products and services 1,000,557 lei (200,000euros), for public procurement contracts / framework agreements for products and services awarded by the county council, the local council, the General Council of Bucharest, as well as by the public institutions subordinated to them</p>	<p>Correct if the value of the contract is LESS than:</p> <ul style="list-style-type: none"> • 25,013,925 lei (5,000,000euros), for public procurement contracts / works framework agreements 649,895 lei (125,000euros), for public procurement contracts / framework agreements for products and services • 1,000,557 lei, for public procurement contracts / framework agreements for products and services awarded by the county council, the local council, the General Council of Bucharest, as well as by the public institutions subordinated to them

Source: Decree no. 195/16.03.2020; Directive 2014/24/UE; Law no. 98/2016; Law no. 99/2016

The analysis of public procurement methods in Romania during the COVID19 pandemic is interesting from a double perspective: firstly, due to the emergence of public procurement risks in emergency situations, and secondly, the methods of corruption in a strict regulatory regime such as that of public procurement. Thus, starting from these considerations, the present study aims to answer a series of research hypotheses: the change in public procurement processes during the pandemic compared to the previous situation; the change in the behaviour of public authorities during the medical emergency compared to the previous situation.

To carry out the analysis during the state of emergency caused by the pandemic in Romania, data from three official sources available to the public were used: the Romanian government portal (Data.gov), from the Collaborative Informatics

System for a high-performance environment for running Public Procurement in Romania (SICAP) and TED (the online version of the supplement to the Official EU Journal, dedicated to public procurement in Europe).

2. ANALYSIS OF PUBLIC PROCUREMENT IN COVID19 TIME

Starting from the previously mentioned data, collected from the three government databases available to the public, we will proceed to the analysis of the phenomenon of the public procurement process in Romania between March 1, 2020, and January 1, 2021 (Abdou *et al.*, 2022). Table number 1 shows the main contractors and participating companies. As can be seen at the national level, the most activities were manifested on the data.gov and E-licitatie.ro sites with a number of 99,465 and 1,147,332 operations. In addition, at the level of the European Union, 490,451 operations related to Romania were carried out. From the point of view of the contracting authorities, it can be observed that there are a number of 23,380 public institutions, which used either the national public procurement systems (7,010 data.gov and 13,665 e-licitatie.ro), or the European ones (2,706 ted.eu). From the point of view of suppliers of goods and services, a number of 20,151 used data.gov, 38,968 e-licitatie.ro and 13,415 ted.eu to participate in the procurement process (ANAP, 2021).

Table 2. Number of authorities and suppliers in public procurement process

Source	Observations	Authority	Suppliers
data.gov	99,465	7,010	20,151
E-licitatie.ro	1,147,332	13,665	38,968
TED	490,451	2,706	13,415
Total	1,737,248	23,380	72,534

Source: Abdou *et al.* (2022) and Agenția Națională pentru Achiziții Publice – ANAP (2021)

From the point of view of the activities for which public procurement was carried out during the pandemic, according to the CPV code of goods and services, the main activity is construction (59.8 billion euros). The medical sector is in 2nd place with a total of 14.9 billion euros, for transport equipment to be in 3rd place with 4.86 billion euros. For all these contracts, the majority is represented by the supply of goods in a proportion of 76%, followed by works (13.1%) and services (10.9%) (ANAP, 2021).

Table 3. Value of public procurement according to CPV code

Activity	Amounts (billions of Euros)
Construction	59.8
Medical equipment	14.9
Transport equipment	4.86
Environmental services	3.56
Petroleum products	3.50

Source: Abdou *et al.* (2022) and ANAP (2021)

Next, we will analyse the list of products necessary to combat the COVID19 pandemic by means of the products indicated by both European legislation (ted.eu) and the national one (Emergency Ordinance no. 11/2020). The range of medical products is extremely varied, starting from complex (ventilators and monitors for the respiratory system) to simple (disposable gloves). The results of the statistical analysis show that from the point of view of public procurement methods, the majority of contracts were through direct procurement (864 contracts), in second place was open auction (214 contracts), then negotiation without prior publication of a notice of participation (158 contracts) and finally the simplified procedure (88 contracts). It should be noted that for a series of contracts, probably due to the speed of acquisition, no procedure used for public procurement is provided. Table 4 shows the main methods of public procurement (ANAP, 2021).

Table 4. The main methods of public procurement in time of pandemic

Procedure type	Total number of contracts	Total value of contracts	Number of relevant COVID contracts	Value of relevant COVID contracts	Percentage Number of relevant COVID contracts	Percentage Value of relevant COVID contracts
Own procedure	10	7,807,373	10	7,807,373	100%	100%
Negotiation without prior publication	158	249,539,165	140	239,145,792	89%	96%
Open auction	214	229,258,754	177	35,249,721	83%	15%
Direct purchase	864	491,868,667	645	299,649,441	75%	61%
Unspecified	63	410,694,007	27	126,581,254	43%	31%
Simplified procedure	88	280,800,869	12	2,971,600	14%	1%
Total	1,397	1,669,968,835	1,011	711,405,181		

Source: Abdou *et al.* (2022) and ANAP (2021)

Analysing the majority of contracts and their relevance for combating the pandemic, it can be seen that the overwhelming majority (with percentages between 75%-89%) corresponded to the mentioned purpose. From the point of view of the funds used, more than 50% of the public procurement amounts were directed to other sectors, than the medical sector with small proportions at open auction (15%), unspecified procedure (31%) and simplified procedure (1%). In terms of the number of contracts, most were awarded through direct purchase methods, with a number of 864 (75%). Most of the contracts that were not related to the COVID19 pandemic were contracted through direct purchase, where many construction/road maintenance works, installations, renovations were carried out, where the removal of the maximum threshold led to a substantial increase in their number (Abdou *et al.*, 2022).

With regard to the categories of products contracted through public procurement procedures during the state of emergency related to the COVID 19 pandemic, we created table 5. Depending on the object of the contract, the following types of products and services were analysed: medical products, cleaning products, accommodation insurance, food insurance, cleaning services, accommodation and meal insurance, works products, administrative, miscellaneous, transport insurance, works, works services (ANAP, 2021).

Table 5. Categories of products contracted through public procurement procedures during the state of emergency related to the COVID 19 pandemic

Subject of the contract	Total number of contracts	Total value of contracts	Number of relevant COVID contracts	Value of relevant COVID contracts	Percentage Number of relevant COVID contracts	Percentage Value of relevant COVID contracts
N/A	5	523,839	N/A	N/A	N/A	N/A
Cleaning products	185	26,802,964	185	26,802,964	100%	100%
Accommodation insurance	90	29,217,759	90	29,217,759	100%	100%
Food insurance	43	11,373,008	43	11,373,008	100%	100%
Cleaning services	15	52,184,240	15	52,184,240	100%	100%
Medical	619	332,685,859	619	332,685,859	100%	100%
Accommodation and food insurance	12	4,039,634	9	3,822,932	75%	95%
Works products	3	455,042	2	321,914	67%	71%
Administrativ	141	417,827,377	26	245,183,478	18%	59%
Construction	79	168,216,064	13	1,700,332	16%	1%
Transport insurance	12	3,341,377	1	60,000	8%	2%
Miscellaneous	147	541,770,654	7	8,010,695	5%	1%
Works services	46	81,531,016	1	42,000	2%	0%
Total	1,397	1,669,968,833	1,011	711,405,181	72%	43%

Source: Abdou *et al.* (2022) and ANAP (2021)

The analysis of the range of products, services and works purchased during the state of emergency shows that most of the contracts awarded during the state of emergency were relevant to the intended purpose, combating the COVID-19 pandemic. Of these, 961 referred to six of the most relevant categories: medical products, cleaning products, accommodation insurance, food insurance, accommodation and meal insurance and cleaning services. These categories have a degree of relevance between 100% - 75%. Most relevant contracts concern medical products (619). The next category with the most relevant contracts (185) is that of cleaning products, followed by the provision of accommodation for quarantined persons (90). All of these were considered relevant in the context of fighting the pandemic and have a degree of relevance of 100%. Most of the irrelevant contracts in the context of the pandemic are related to products and services that refer to the operation of public institutions, with over 50% of the funds spent during the state of emergency not being directed to combating the pandemic (Abdou *et al.*, 2022).

Regarding the public institutions involved in the procurement process related to the COVID 19 pandemic, we have carried out an analysis, the results of which are presented in table 6.

Table 6. Public institutions involved in the procurement process related to the COVID 19 pandemic

Public institution	Total number of contracts	Number of relevant COVID contracts	Total contract value	Value of relevant contracts COVID	Percentage of relevant COVID contracts
Hospitals	510	507	57,579,372	57,328,695	99%
Municipality halls	416	318	295,672,196	196,678,220	76%
City Halls	37	17	69,471,496	15,517,715	46%
Ministries	100	43	798,370,117	323,649,578	43%
State companies	191	81	225,949,166	26,518,409	42%
County Councils	117	41	133,204,635	8,197,813	35%
County halls	26	4	6,341,841	134,740	15%

Source: Abdou *et al.* (2022) and ANAP (2021)

Analysing the previous table, we can see that hospitals and town halls awarded the most relevant contracts (825) with an average relevance of 88% and a value of 254 million lei; the most valuable contracts (100) were awarded by the ministries (approximately 800 million lei), these having a relevance of 43%; the rest of the entities awarded a total of 471 contracts with an average relevance of 36%, with a value of 374 million lei; from the perspective of the entities, approximately 40% of the value of the awarded contracts was spent on products, services and purchases relevant in the context of the pandemic. Regarding the

transparency of the award procedures used during the state of emergency, the contracting authorities rather, used non-transparent procedures to award contracts relevant to the fight against the COVID-19 pandemic (see Table 7). This behaviour is understandable in the context in which they had to urgently purchase a multitude of products, services and works in a volatile context. In addition, the change in legislative norms facilitated the use of these types of procedures (Abdou *et al.*, 2022).

Table 7. Transparency of the award procedures in public procurement used during the state of emergency

Procedure type	Total number of contracts	Percentage of contracts awarded non-transparently
Total number of contracts	1,397	100%
N/A	63	5%
Totally transparent procedures	313	22%
Total non-transparent procedures	1,021	73%
Total relevant non-transparent COVID contract	784	77%
Total irrelevant non-transparent COVID contract	232	23%
N/A	5	0%
Totally irrelevant problematic COVID contracts (incorrect assignment procedure during status emergency)	68	29%

Source: Abdou *et al.* (2022) and ANAP (2021)

Thus, out of 1,397 contracts analysed, 73% (1,021) were awarded through non-transparent procedures. Of the latter, 77% (784) of the contracts considered to be relevant were awarded through this type of procedure. In contrast, 23% (232) of contracts deemed irrelevant were awarded non-transparently during the state of emergency. Moreover, of the 232, 29% (68 contracts) are problematic, since the procedure used is not justified if the threshold (for direct purchases) and/or the rules (negotiation without prior publication of a tender notice) are taken into account (ANAP, 2021).

3. CONCLUSIONS

Procurement during the state of emergency was largely correct, although institutional priorities varied widely. During this period, there was no common pattern between the purchases of public institutions; they varied between sanitary materials, construction works or legislative services. Comparing authorities of the same type, we find that the way in which each authority defined its priorities is very different, even if the authorities had the same tasks. While some authorities purchased mainly disinfectant products, others purchased protective equipment (masks, gloves), and others purchased accommodation and meals for quarantined persons. However, most of the acquisitions analysed were relevant for the purpose

pursued: combating the COVID-19 pandemic, representing protective equipment, medical products, disinfectants, quarantine services, etc. Most of these acquisitions were carried out through procedures considered rather non-transparent. These were legal, both in relation to the crisis and in relation to the value of most contracts, representing direct purchases. Many purchases were made based on the SICAP electronic catalogue, even for products and services needed to respond to the COVID-19 pandemic, and even if they were allowed not to use this tool during a state of emergency, given both the pandemic situation, as well as the value of the purchases, for which the purchase could be applied without the use of the electronic catalogue. This choice of contracting strategy shows caution in making purchases, even during a state of emergency.

There is no focus on purchasing products needed to respond immediately to COVID-19 from a small number of companies. On the contrary, for the most important of the acquisitions - the highest value purchases, respectively the acquisitions to ensure the institutionalized quarantine, the local authorities at all levels preferred local economic agents, these being usually local road transport companies for medical staff and pensions, or local hotels and restaurants that provide accommodation and catering services for quarantined persons.

On the other hand, 50% of the funds spent during the state of emergency were not directed towards combating the pandemic. Thus, 43% (711 million lei) of the value of all awarded contracts (amounting to 1.7 billion lei) analysed through the built database was spent on relevant products, services and works in the context of the pandemic. This is also explained by the fact that, as previously pointed out, some of the contracting authorities submitted all the contracts awarded during the period under review, although this was not the subject of the request. Also, most of the relevant contracts were awarded through a fair procedure during the state of emergency. Thus, of the 1,011 relevant contracts, approximately 97% (984) were correctly awarded. Moreover, most irrelevant contracts incorrectly awarded in both scenarios (emergency and non-emergency) used procedures that were considered to be non-transparent. The contracting authorities used direct procurement (50), NFPPAP (16) and the simplified procedure (16) to incorrectly award a total of 82 contracts. The results of this effort were relevant to the fact that, although the transparency and value for money of public procurement deteriorated, the majority of the contracts analysed were correctly awarded and directed towards combating the pandemic. However, the issue of precarious administrative capacity and excessive bureaucratic burdens must once again raise the alarm over the state's readiness to deal effectively and efficiently with not only the next waves of the pandemic, as well as any other type of natural or man-made disaster.

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JUSTIFICATION OF INVESTMENT DECISIONS USING TECHNICAL AND FUNDAMENTAL ANALYSIS – A CASE STUDY APPROACH

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Abstract

Financial analysis represents a powerful tool which, in the hands of the investors, can reduce the risks they are exposed to and, at the same time, increase the return on their investments. The analyst can opt between the two main pillars of financial analysis, technical and fundamental analysis, or use them both (harnessing their full potential as complements rather than substitutes). In this context, the current paper aims to determine an investment opportunity in the stock market, using, as case studies, the stocks of two companies that are well known giants in the financial industry: JPM (JPMorgan Chase & Co.) and HSBC (HSBC Holdings plc.). After performing the technical and fundamental analysis, we concluded that both stocks are currently worth to invest in. The study revealed that the stocks are undervalued and that there is a good opportunity to take a buy position in the immediate future. Indicators, such as Bollinger Bands and Relative Strength Index, together with the identified chart formations, confirm that both stocks are oversold, and respectively, undervalued. The results generated by the technical analysis are confirmed by some fundamental analysis indicators, which reveal a good financial condition of the companies. Thus, considering the average investor's risk profile, the decision to buy should be taken consciously, within a margin of 10% of his/her available funds. The current paper contributes to the existing literature on technical and fundamental analysis with a sound case study and a critical perspective.

Keywords: *financial analysis; technical indicators; fundamental analysis; stock market; risk; investment behaviour.*

JEL Classification: E22, G11, G12

1. INTRODUCTION

The main topic of this paper consists in justifying an investment decision in the stock market, the place where millions of investors buy and sell securities on a daily basis (Howells and Bain, 2007). It is on the stock market where stocks or

equity as well as other financial instruments of public listed companies are traded, where the price of this instruments is termed stock price. We strongly believe that the topic is highly relevant and important in the field of financial investments. In order to obtain positive returns on their investments, it is highly recommended that investors should know the key market trends, the psychology and behaviour of other market participants.

Financial analysis is an area of particular interest to any stock market investor and can provide him/her with useful information about the trend of price movement or financial situation of the company he/she wants to invest in. Stock market trading itself carries a certain level of risk, which must be appropriately assessed by the investor and maintained at the lowest level possible. To reduce the uncertainty investors are exposed to, they use forecasting tools, also known as financial indicators and models. In this context, the two pillars of the financial analysis that this paper focuses on, these also being the most debated ones in the literature (Dunne, 2015; Gyan, 2015; Ahmadi *et al.*, 2018), are: *technical* and *fundamental analysis*. Another strand of the financial literature points to a third approach for stock market prediction, namely: *technology* (machine learning) methods (Dunne, 2015). The developments in machine learning have enabled researchers to automate stock market prediction based on unstructured data, which in some cases has reported higher prediction accuracy (Nti, Adekoya and Weyori, 2020).

On the one hand, the technical analysis represents a set of tools, indicators and models which are used in the process of studying the price behaviour of an asset. The information obtained as an output of this type of analysis is used in forecasting the evolution of the stock price. This type of analysis can be applied to all types of assets traded on any open market in the world. Technical analysis is based on a very important concept: the free market. In this market, the price level is established by the interaction between demand and supply in real time. Metaphorically speaking, technical analysis represents the process of monitoring the real-time “battle” between buyers (demand) and sellers (supply).

On the other hand, the fundamental analysis is the process of examining the widely available public information of a company, with the purpose of forecasting the estimated value of its stock. Financial reports published by the company are relevant sources of information for this type of analysis (Asquith and Weiss, 2019). Basically, and metaphorically speaking, the fundamental analysis studies the “healthiness” of a company, considering factors such as: company management, status of the employees, macroeconomics, the general state of the economy and social structure, terrestrial and climatic circumstances like unnatural or natural disasters and political data, and so forth. A real challenge is posed by the difficulty in automation of fundamental analysis, this main due to the unstructured nature of fundamental factors.

In this context, the paper aims to highlight the importance of the technical and fundamental analysis, and, at the same time, to bring forward and make use of the most important indicators and models employed when analysing stocks. Our intention is to contribute to the existing literature on technical and fundamental analysis with a sound case study and a critical perspective. We selected two well know financial holdings, considering our risk profile, the availability of data and personal preferences (HSBC and JPM). JPMorgan is an investment bank with the largest market capitalization in the USA and HSBC is the second largest banking institution on the European continent.

2. BRIEF LITERATURE REVIEW

An important source of information for our analysis was provided by the CFA Institute (2021a, 2021b) and CMT Association (2016). The ‘technical analysis’ concept has several definitions, some of which are quite similar. We found it relevant to focus on the definition provided by Czubatinski and Schlotmann (2019), which states that technical analysis represents the totality of models, graphs, indicators and techniques with the help of which the evolution of a price of a financial asset can be forecasted. Technical analysis is a form of analysis based on recognizing patterns of investors’ behaviour in financial markets (Rockefeller, 2020). Basically, the historical stock prices are identified and pre-processed, and appropriate indicators are calculated and fed into the predictive model (Wei, Chen and Ho, 2011; Gaius, 2015; Su and Cheng, 2016). Of course, this study cannot be performed without pointing out the most important concepts and theories. In our analysis, we used some of these concepts, in particular: Dow Theory, Elliot Wave Theory, Chart Formations, Trend, Support and Resistance lines, and finally, the main indicators, such as Relative Strength Index, Stochastic Oscillator, Bollinger Bands, Moving Averages, Fibonacci Retracements (Dormeider, 2011). These technical indicators as well as other well-known indicators used in technical analysis are extensively discussed in the works of Anbalagan and Maheswari (2014), Bisoi and Dash (2014), and others.

There is an entire strand of literature dedicated to explaining and detailing the technical analysis, starting with the series of editorials published by Charles Dow in the Wall Street Journal between 1900 and 1902 (where the focus is on recognition of the potential for past prices to predict future equity values). Leaving aside the multitude of research papers dedicated to the topic (which does not fall under the scope of the current paper), two types of technical analysis are consistently documented as important in predicting prices and returns: *lagged price* and *momentum* (Bettman, Sault and Schultz, 2009).

On the other hand, the fundamental analysis is seen as a vital part of the financial analysis where investors target longer time horizons. The fundamental analysis was introduced for the first time in the literature in Graham and Dodd’s paper “Security Analysis”, published in 1934. This work is considered by many

the cornerstone of the fundamental analysis. Through this research, authors warned investors about the danger of reliance on using only quantitative factors in investment decisions. As a conclusion, they came with a recommendation that investment decisions should be made after a broad fundamental analysis of the financial instrument.

The studies that followed after detail the relationship between share price and fundamental factors. One very well know example in this regard is the Gordon and Shapiro's (1956) Dividend Discount Model. This became one of the most widely cited models in modern finance theory, and also provided the foundation for voluminous subsequent research. Following Gordon and Shapiro's (1956) work is Ohlson (1995), who formulates a model expressing price as a linear function of book value per share, earnings per share and a vector of other value-relevant information (Bettman, Sault and Schultz, 2009). Moving further on, Dechow, Hutton and Sloan (1999) augment a two-factor model similar to that tested by Collins, Maydew and Weiss (1997) with a forecasted consensus earnings measure.

Although the data used by the fundamental analyst are usually unstructured (this posing a difficult challenge), some works have proven to be a good predictor of stock price movement (see, for example, Zhang, Fuehres and Gloor, 2011; Ballings *et al.*, 2015; Liu *et al.*, 2015; Tsai and Wang, 2017; Zhang *et al.*, 2018).

3. DATA AND METHODOLOGY

Since this study is based on a wide range of financial data and statements of the companies, the framework of this research paper will be more analytical and descriptive (Fairhurst, 2015). Firstly, we selected time periods used for both, fundamental and technical analysis. Thus, a time horizon of five years was considered to be relevant, from January 2017 to April 2022 for technical analysis and from January 2017 to December 2021 for fundamental analysis.

The data used for the technical analysis regards the historical closing price at the end of each trading day for both stocks for the period mentioned above (on NYSE). The historical data was downloaded from WSJ Markets, for both JPM and HSBC stocks. Naturally, the research was divided in two main parts: technical analysis and fundamental analysis. In each part, we will employ a set of indicators and models of analysis.

3.1 Technical analysis

The technical analysis begins with a figure showing the price movements during the selected time horizon (Figure 1).

Analysing Figure 1, the main price trends can be determined relatively easily. As it can be seen, there are several uptrends, followed either by sideways movements or by descendent trends (Prechter, Frost and Collins, 2005). The largest downtrend of this period can be seen at the beginning of the COVID-19 pandemic,

in March-April 2020. After this huge decline in price, JPM stock experienced a strong uptrend, returning to a pre-pandemic price in about a year, and some months later reached a new peak price.



Source: authors’ calculation based on historical stock price data

Figure 1. Graphic of JPM stock price movement (2017-2022)



Source: TradingView

Figure 2. Double Top Formation on price chart (JPM stock)

In Figure 2 we identified a trend reversal chart pattern, Double Top, which is shaped as the letter “M” (Fisher, 2003). The trend reversal is also confirmed by the Relative Strength Index (RSI), which was getting close to 70. Once the RSI reached this level, the stock price started to decline. We also used the Fibonacci Retracements, which is a powerful instrument in identifying points where the trend will most likely reverse (Boroden, 2008). This instrument is generated by the TradingView platform, in a downtrend, marking 100% level with Swing High and 0% level with Swing Low (Brown, 2008). As Figure 2 clearly shows, in February 2022 there was a correction movement around the 62% level. Another correction movement occurred at important Fibonacci level of 38%.

Figure 3 represent the evolution of the HSBC stock price. At a first glance, the HSBC stock is less volatile than JPM. In 2020, at the beginning of COVID-19 pandemic, the HSBC stock price followed a market downtrend, which was nonetheless expected by the investors. This stock recorded a decline in price, but it did not fall as much as the JPM stock did.



Source: authors' calculation based on historical stock price data

Figure 3. Graphic of HSBC stock price movement, (2017-2022)

In Figure 4, we highlighted a chart formation which confirms a trend reversal, Head and Shoulders (Brooks, 2009). This formation marked the end of the upward trend recorded until that moment (Bulkowski, 2005). The reversal of the trend is also confirmed by the RSI indicator, which exceeded the 80 threshold.



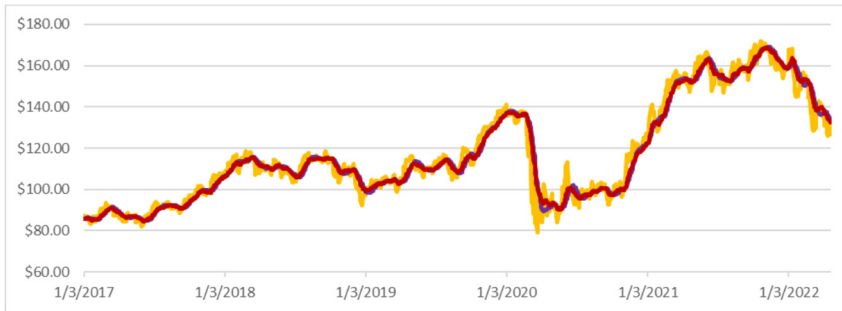
Source: TradingView

Figure 4. Head and Shoulders Formation on price chart (HSBC stock)

Next, some of the most significant technical analysis indicators will be presented, namely: Moving Averages, Bollinger Bands, Stochastic Oscillator, Relative Strength Index (Bulkowski, 2008).

A. Moving Averages

This indicator is a momentum indicator, which tries to predict stock market trends by a comparison between short and long-term trends. In the subsequent two figures, the red line represents the exponential moving averages, which is more accurate than the simple moving average (Elder, 2002).



Source: authors' calculation based on historical stock price data

Figure 5. 20 days Moving Averages: simple and exponential (JPM stock)

In Figure 5 we can see that during the analyzed period, the simple moving average, as well as the exponential moving average are going downward, confirming the general price trend identified earlier. In the March 2021-March 2022 period we can notice that the stock price is above the level of the moving average; thus, we expect that the stock will maintain and continue an upward trend (Connors and Radtke, 2013). Since March 2022, both moving averages are above the closing price, which confirms the reversal of the previous upward trend. The simple moving average is also used in generating the next indicator, the Bollinger Bands.



Source: authors' calculation based on historical stock price data

Figure 6. 20 days Moving Averages: simple and exponential (HSBC stock)

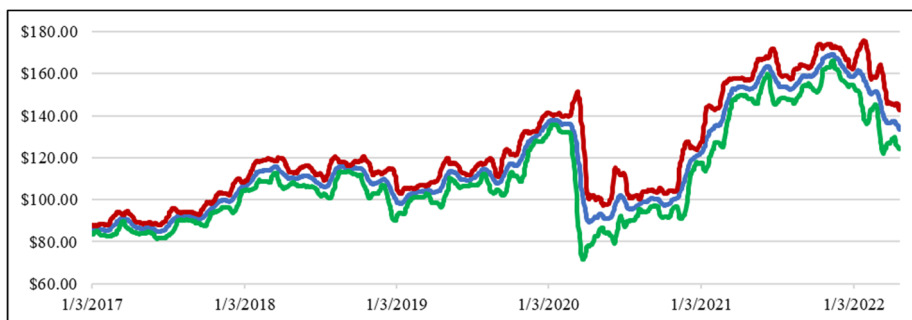
Figure 6 represents the moving averages indicator for the second stock, HSBC. At a first glance, we can see that price volatility is much lower compared

to the JPM stock. Also, the same trend-setting rule as in previous figure, can be seen in this chart. Thus, in the period from March 2018 to March 2021, there is a downward trend, which is confirmed by the fact that the price values are located below the simple as well as the exponential moving averages.

B. Bollinger Bands

The next indicator refers to the Bollinger Bands, which was created by an American financial analyst, John Bollinger, with the purpose of serving as a means of trend forecasting. The indicator consists of 3 separate bands: lower band, upper band, and the middle band, which is also, a simple moving average.

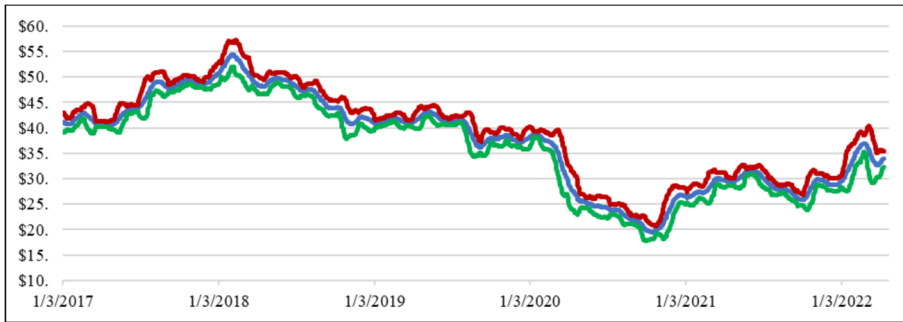
Bollinger Bands is an important indicator of volatility (Bollinger, 2001). It is depicted in Figure 7 for the first company and has 3 bands. We can see that there is a period of consolidation, from the beginning of 2018 until the end of 2019. During this period, stock price movements are relatively sideways, and the slope of the simple moving average remains at a low level. This situation is considered as a signal of future high volatility of price (Brooks, 2012). As it can be seen in Figure 7, high volatility anticipation was confirmed, so that, in March 2021, with the onset of the pandemic crisis, JPMorgan's share price fell sharply. This was followed by a relative period of consolidation, and then, a rapid increase. With regard to the latest movements, given that the price volatility is decreasing, we are witnessing a period of consolidation, before another possible rise in volatility.



Source: authors' calculation based on historical stock price data

Figure 7. Bollinger Bands (JPM stock)

Figure 8 illustrates the Bollinger Bands indicator for the second stock, HSBC. From this graph we can see that the volatility of the stock price is generally low. On the chart there are no significant portions of band expansion, and the current period shows very small price fluctuations.



Source: authors’ calculation based on historical stock price data

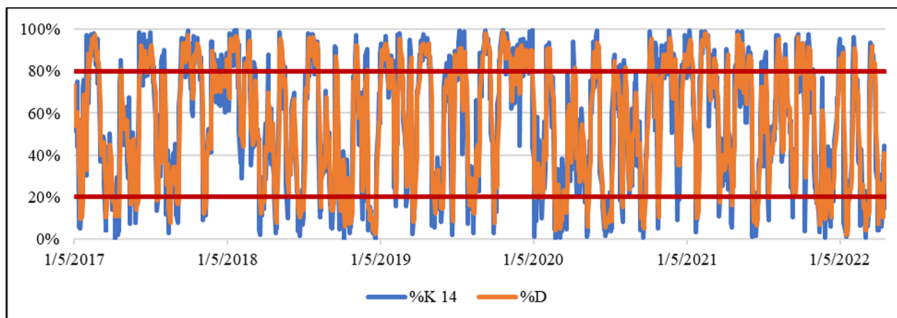
Figure 8. Bollinger Bands (HSBC stock)

C. Stochastic Oscillator

The third indicator used in this analysis is called the Stochastic Oscillator. It was developed in the 1950s and, due to its versatile nature, remains one of the most popular technical indicators used in stock trading today.

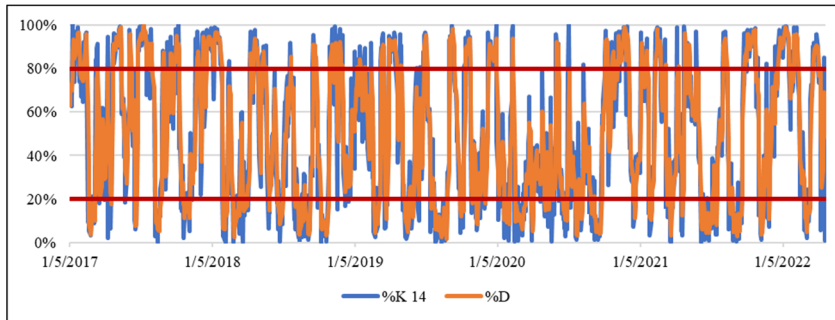
The Stochastic Oscillator is a momentum indicator that compares a specific closing price of a stock or another financial asset with its price range (high-low range) over a period. For the Stochastic Oscillator two levels are important: 20% and 80%. Level of 20% indicates an undervalued stock, as in our case, while the 80% level indicates an overvalued one. The main idea of this indicator is that, it could signal an actual movement just before it happens (given that the momentum precedes the price).

Figure 9 depicts the graphic illustration of the Stochastic Oscillator for the JPM stock. The current level of the Stochastic Oscillator indicator is less than 20, which tells us that the stock is oversold and, respectively, undervalued. Using this indicator, alongside other indicators, such as the Bollinger Bands and the RSI, we should be able to confirm or not, an investment opportunity.



Source: authors’ calculation based on historical stock price data

Figure 9. Stochastic Oscillator (JPM stock)



Source: authors' calculation based on historical stock price data

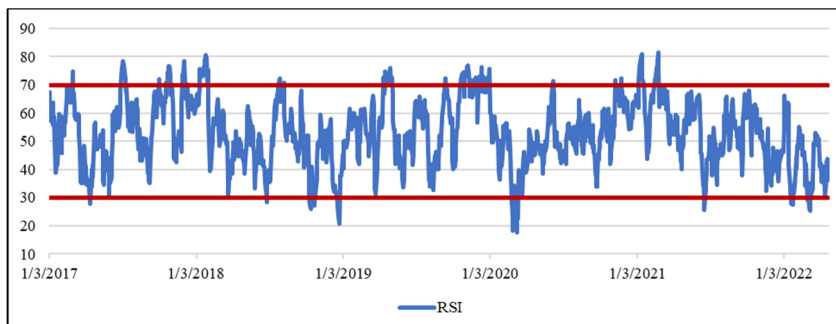
Figure 10. Stochastic Oscillator (HSBC stock)

For the next stock, HSBC, the Stochastic Oscillator is represented in Figure 10. The situation is quite similar, as in case of JPM. The current value of this indicator is close to 20%, which indicates that the stock is undervalued.

D. Relative Strength Index

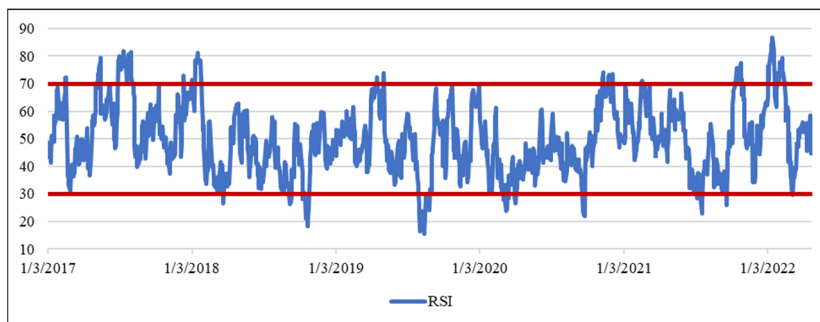
The Relative Strength Index is another indicator often used in technical analysis. As in the case of the Stochastic Oscillator, RSI is also a momentum indicator, which provides information on whether a stock is overbought or underbought (Aziz, 2018). Two of these situations are analyzed depending on how fast its price has advanced relative to the normal situation of sustained price movement.

The Relative Strength Index for the JPM stock is represented in Figure 11. We can notice that in the period October 2019-February 2020 the stock price had an upward trend, and all the values of the RSI indicator were above level 30, going closer and closer to level 70. Contrary, in the period March-May 2020, the stock price was moving downwards, a movement caused by the pandemic crisis, the RSI indicator moving below 50 towards 30, or even less.



Source: authors' calculation based on historical stock price data

Figure 11. Relative Strength Index (JPM stock)



Source: authors’ calculation based on historical stock price data

Figure 12. Relative Strength Index (HSBC stock)

Figure 12 illustrates the RSI indicator for the HSBC stock. In April 2022, this indicator recorded a value of 45, and continues a downtrend. This means that the share’s price will continue to decline as the RSI will get closer to 30; then, a reversal of the price direction is expected to occur. That moment is considered the best time to buy HSBC shares.

3.2 Fundamental analysis

A proper fundamental analysis will enable us to determine the “financial health” of a company. This is done by calculating and interpreting a series of financial ratios. The focus will be on a few indicators of profitability, liquidity and indebtedness, namely: rates of return, financial rates on liquidity, leverage and credit worthiness, and price multipliers. The indicators are determined using the openly accessible facts about the stock, concerning the economy, its industry, and the firm itself. Some of the most important ratios are also discussed in Renu and Christie (2018).

Table 1. Price multipliers (JPM stock)

Indicator	2017	2018	2019	2020	2021
EPS (Earnings per share)	\$ 7.14	\$ 9.91	\$ 11.81	\$ 9.55	\$ 16.42
P/E (Price/Earnings)	14.99	9.85	11.80	13.30	9.65
P/B (Price/Book Value)	1.60	1.39	1.83	1.55	1.80
P/S (Price/Sales)	3.64	2.93	3.72	3.23	3.83
P/CF (Price/CashFlow)	9.12	-2.10	28.35	1.47	2.19

Source: authors’ processing based on balance sheets and P&L accounts

The most important price multipliers are calculated for the JPM stock and presented in Table 1, as follows:

- **EPS** (Earnings per Share) is probably the most important one since it provides the profitability indication of a company (it can be determined by

dividing the firm's net income with its whole number of remaining stocks). During the analysed period, this ratio is constantly increasing. This means that JPMorgan is making bigger and bigger earnings from year to year.

- **P/E** (Price to Earnings) is an indicator used to determine if the stock is undervalued or overvalued (it basically estimates the relative attractiveness of a firm's current stock price compared to the firm's per-share earnings) (CFA Institute, 2021). In the case of JPM stock, we can say that in 2017, 2019 and 2020 it is reasonably valued, with a P/E between 10-15 (Damodaran, 2003). In 2018 and 2021, the shares are slightly undervalued, having a value between 5 and 10.

- **P/B** (Price to Book value) is also a very valuable evaluation metric which compares the stock's fundamental value with the share price (it determines if a stock is underestimated or overestimated) (Damodaran, 2012). In the case of JPM, this indicator has relatively constant values, which are slightly higher than 1. This means that stock price is slightly overvalued compared to the company book value.

- **P/S** (Price to Sales) is a special indicator for an investor as it ascertains if a share price of a stock depicts stock's value (Douglas, 2000). An investment is considered attractive if the value of this ratio is higher. A refer point is considered the level of 1.55, which is P/S ratio for S&P 500 index.

- **P/CF** (Price to Cash flow) is the last price multiplier analysed in this paper. It shows us the years when company made an investment, or generated huge revenues. For example, in 2018, JPMorgan made big investments in running the financial holding.

Table 2. Price multipliers (HSBC stock)

Indicator	2017	2018	2019	2020	2021
EPS (Earnings per share)	\$ 2.96	\$ 3.76	\$ 2.15	\$ 1.51	\$ 3.62
P/E (Price/Earnings)	17.45	10.94	18.17	17.20	8.33
P/B (Price/Book Value)	1.09	0.88	0.86	0.53	0.70
P/S (Price/Sales)	4.03	3.06	2.82	2.08	2.47
P/CF (Price/CashFlow)	3.30	-15.20	8.25	0.60	1.16

Source: authors' processing based on balance sheets and P&L accounts

In Table 2, we presented the values of price multipliers for the second stock, HSBC:

- **EPS** like in the case of JPM, presents a relatively constant value. The maximum earnings per share was recorded in 2018, when it reached the level of \$3.76. The following two years recorded a slight decrease of this indicator, due to the decrease in the company's profits, with a significant increase in 2021.

- **P/E** in case of HSBC highlight that in three years out of five, the stock price was slightly overvalued, because P/E was higher than 15. In 2018 and 2021,

the values of P/E ratio are under the level of 15, which means they are valued at their fair price (Cooper, 2004).

- **P/B** in the case of the HSBC share records lower values than 1 for almost the entire period under review, which is a strong signal of a good investment.
- **P/S** is in a continue decreasing, caused by the share price fall, which is also a good signal to buy (Burns and Burns, 2015).
- **P/CF** as the case of JPM has positive and negative values. In 2018 company made big investments and their cashflow recorded negative values, but one year later, company generated higher revenues.

Table 3 depicts the main ratios of financial performance for both companies. Three main indicators were analyzed.

Table 3. Yields ratios for JPM and HSBC stocks

Indicator	2017	2018	2019	2020	2021
<i>JPMorgan Chase & Co.</i>					
ROA	0.96%	1.24%	1.36%	0.86%	1.29%
ROE	9.56%	12.66%	13.94%	10.43%	16.43%
Rate of profit	24.27%	29.78%	31.48%	24.29%	39.73%
<i>HSBC Holdings plc.</i>					
ROA	0.47%	0.59%	0.32%	0.20%	0.50%
ROE	6.00%	7.73%	4.52%	2.98%	7.11%
Rate of profit	23.09%	27.94%	15.52%	12.09%	29.65%

Source: authors' processing based on balance sheets and P&L accounts

The three main indicators of financial performance presented in Table 3 reveal the following:

- **ROA** (Return on Assets) is an indicator of how a company's assets are managed and it reveals how profitable a company is, relative to its total resources or assets (Fridson and Alvarez, 2011). A higher indicator means that the company is doing well, and it can turn its assets into revenues. The level of this ratio for JPMorgan Chase & Co. is around 1% and remained relatively constant during the whole period. The maximum value was 1.36% in 2019, and the lowest was recorded in 2020, 0.86%, due to the crisis caused by the COVID-19 pandemic. In the case of HSBC, ROA is a little bit lower, around the level of 0.5%, with a significant lower ratio in 2020. It was caused by both, pandemic crisis and increasing in assets value. Both companies invested a lot in 2019, and this made ROA to be lower a year later.
- **ROE** (Return on equity) reveals the extent to which a shareholder's capital or equity is used in generating revenues (Damodaran, 2014). A small ROE implies that the shareholder's funds were not used properly. Both companies have a good ROE ratio, but in comparison, JPMorgan is a clearly winner.

- **Net Profit Ratio or Margin** is a very important indicator, and at the same time, easy to understand. It shows us how efficient is the company, according to its revenues and costs for generating those revenues. Both banks recorded similar profit rates, however, some differences being registered in 2020 due to the decrease in profits recorded by both banks.

Table 4. Liquidity ratios for JPM and HSBC stocks

Indicator	2017	2018	2019	2020	2021
JPMorgan Chase & Co.					
Current Ratio	1.015	0.997	0.916	0.856	0.876
Cash Ratio	0.219	0.135	0.125	0.188	0.236
HSBC Holdings plc.					
Current Ratio	0.912	0.911	0.899	0.880	0.905
Cash Ratio	0.096	0.084	0.076	0.138	0.176

Source: authors' processing based on balance sheets and P&L accounts

Table 4 includes two liquidity ratios that are significant in the process of fundamental analysis. Thus, bellow we explained the values of this ratios:

- **Current Ratio** is the simplest liquidity ratio. If we speak about JPMorgan, current ratio has values slightly lower than 1, which means that this company has no significant liquidity problems. The changes in the current rate, in case of HSBC, are smaller, which means a greater stability and quite the same acceptable level of liquidity.

- **Cash Ratio** is another important measure of company's liquidity. It can bring a more detailed view to an investor, than current ratio, and is more sensitive (Buffett and Clark, 2008). In case of JPM, this ratio is within acceptable limits to be considered a good investment, according to fundamental analysis. Cash ratio, in case of HSBC is less stable throughout the analysis.

Table 5. Indebtedness ratios for JPM and HSBC stocks

Indicator	2017	2018	2019	2020	2021
JPMorgan Chase & Co.					
Debt Ratio	0.899	0.902	0.903	0.917	0.921
Debt to Equity (D/E)	8.908	9.224	9.283	11.116	11.728
HSBC Holdings plc.					
Debt Ratio	0.922	0.924	0.929	0.931	0.930
Debt to Equity (D/E)	11.744	12.169	13.092	13.557	13.304

Source: authors' processing based on balance sheets and P&L accounts

The last part of the fundamental analysis is dedicated to indebtedness ratios. In Table 5, we selected two of the most representative indicators, as follows:

- **Debt Ratio** is the main and simplest indicator which is used in analysis of a company's debt situation. JPMorgan has a debt ratio of less than 1, which means that a significant part of the company's assets is financed by the equity. The debt ratio is constant throughout the analysis period for HSBC, so that the variations are minimal and insignificant. This can be interpreted by an analyst as a signal of the company's stability.

- **Debt to Equity** is another important indicator and it analyses the company's indebtedness in relation to the equity. Analysing the data from the balance sheets, we found out that this ratio is increasing every year, which means that the company is using more and more borrowed capital and that its share in the bank's funding resources is increasing.

4. CONCLUSIONS

As it was already mentioned in introduction, any investment activity involves a certain degree of risk, which should be known and assumed by the investor. Any investment strategy, no matter how well-founded and safe it may seem to be, involves some risk. This must be constantly remembered when performing any kind of analysis.

The stock market is nothing more than the place where supply meets demand with regard to financial instruments, and the way prices are formed in the market does not always correspond to reality. Sometimes, the perceived financial value of a company in which the investment is doesn't always reflect its fair value. This happens mostly because of investor's behaviour. Given their human nature, investors sometimes tend to act irrationally. Therefore, it is a common situation for a security to have over or under pricing. People also tend to have a herd behaviour, when it comes to investing in stock market. Keeping this in mind will substantially ease the effort made by an investor in the analysis process. Many patterns have been created and used by technical analysts in order to predict future price movements as accurately as possible. Moreover, a good investment decision cannot be made unless the investor uses both methods of financial analysis. A very simple and intuitive example that confirms this is the calculation of the P/E price multiple, which tells us whether the stock price is higher or lower than its intrinsic value. By knowing these details, an investor can make the decision either to sell the share or to buy it.

A useful recommendation for potential investors in the stock market is to study carefully the market signals. It is important to mention that there is no certain algorithm to achieve investments with consistently positive returns. Thus, equity investment needs to be based on a huge variety of indicators and financial rates available to each potential investor. Another recommendation, resulted from the comparative study of these two types of analysis, is to use a combination of technical and fundamental analysis. Bettman, Sault and Schultz, (2009) also recognize their potential as complements rather than substitutes. Given the fact

that there are investors who deny the importance of either technical or fundamental analysis, this carries quite huge risks.

Making the right investment decision at the appropriate time is an activity that requires a lot of knowledge about financial analysis techniques and procedures, as well as good control of emotions and understanding psychology of other market participants. Justifying the investment decision is a complex algorithm, which if handled professionally, can bring higher returns compared to the traditional form of capital gains, such as bank deposits or treasury bonds.

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THE INFLUENCE OF THE COVID-19 PANDEMIC ON THE RESILIENCE OF COMPANIES. A BIBLIOMETRIC ANALYSIS

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Abstract

The ability of companies to adapt to unfavorable situations in a relatively short time refers to organizational resilience. A resilient organization must withstand shocks, adapt, and have transformative capacity. Resilience is an important issue in different fields, and organizational resilience is a concept, which has become at the forefront of national and international research, over the years, especially during the period transversed by the COVID 19 pandemic. This paper thus aims to contribute to the debates that take place on the topic of organizational resilience, through the bibliometric and visual analysis carried out on research in the direction of organizational resilience, collected from the WoS Core Collection database, from the last two years. Thus, the central objective of the paper starts from the question: What is the general trend of publishing research on organizational resilience in the world in a pandemic context? Through the use of the bibliometric method and visualization software for knowledge mapping, emerging trends in resilience research and organizational resilience under different aspects have been presented. The Covid 19 pandemic represents a vector both for companies that will maintain their business model and rely on economic growth, but also for those companies that will not survive.

Keywords: *resilience; organizational resilience; bibliometric analysis; COVID 19.*

JEL Classification: C12, M21, M48, N20

1. INTRODUCTION

In the current pandemic context, generated by COVID-19, where unexpected events are ubiquitous, organizations face an unprecedented, uncertain business environment, and can sometimes be exposed to external disruptions that are difficult to anticipate or prepare for (Williams and Shepherd, 2016; Duchek, Raetzke and Scheuch, 2020; Liu *et al.*, 2021). Over time, all the unfortunate events generated by external disturbances, such as pandemic diseases, natural disasters, political unrest, terrorist attacks and economic and financial instability have had unpredictable effects on organizational sustainability and competitiveness, setting up that state of uncertainty inside organization or even organizational disintegration (Bhamra, Dani and Burnard, 2011; Ouedraogo and Boyer, 2012; Kim, 2020; Chen, Xie and Liu, 2021). These situations have led to efforts to better understand how resilient individuals, organizations and nations might cope with these external disturbances and how they can recover from adversity (Williams *et al.*, 2017; Anwar, Coviello and Rouziou, 2021). Many of the international studies on organizational resilience in crisis situations, both theoretically and practically, have argued that organizations should pay more attention to fostering organizational resilience. Thus, resilience can explain how organizations survive and thrive in the face of turbulence, helping them to be sustainable and improve their ability to withstand, adapt to environmental changes and of course maintain or to achieve a long-term sustained competitive advantage (de Oliveira Teixeira and Werther, 2013; Markman and Venzin, 2014; Ortiz-de-Mandojana and Bansal, 2016; Karunarathna *et al.*, 2020; Hillmann, 2021).

Starting from the main objective of the paper to present the general trend of publishing research on resilience and organizational resilience in the world during the period crossed by the COVID 19 pandemic, the scientific and methodological approach will consider, on the one hand, the analysis of the specialized literature from the last two years, found on the Web of Science (WoS) platform, and on the other hand the investigation of these concepts based on the network and frequency statistics visualized.

Analyzing the specialized literature, we can note that previous studies have focused, on the one hand, on the content of the connotations of organizational resilience, influencing factors and action mechanisms (Chen, Liu and Zhou, 2021), and on the other hand part, and how businesses become or remain resilient through a post-crisis analysis, focusing on the ability of companies in various industries to cope with the shock of restrictions due to the COVID-19 pandemic and the short-term responses of companies to restrictions (Neise, Verfürth and Franz, 2021).

2. LITERATURE REVIEW

The multidisciplinary of the concept of resilience from various fields, starts from certain unique characteristics conferred by dimensions, properties and

objectives, but which present the same roots and basic connotations (Xue, Wang and Yang, 2018). The concept of resilience has many meanings: it represents the ability of a system to maintain or quickly return to the desired functional state (normal or initial state) following a disturbance (Lozupone *et al.* 2012); the ability to adapt to the new state or change for a new situation (Walker and Salt 2012; Strigini, 2012); the capacity to rapidly transform systems that limit current or future adaptive capacity (Meerow, Newell and Stults, 2016); adaptability and survivability of systems (McDaniels *et al.*, 2008).

The concept of resilience emerged in the late 1960s and early 1970s in the field of physics, later developed in the mid-1980s in other fields, such as ecology, psychology and sociology, to describe the key characteristics of complex dynamic systems (Chen, Xie and Liu, 2021), and later entered the spheres of strategic management, being introduced in the late 1990s and in the organizational field.

An analysis of resilience in the context of organizational research was first carried out by Wildavsky (1988), and later studies focused on post-disaster resilience research (Paton and Johnston, 2001; Rose, 2006; McManus *et al.*, 2007; Kantur and Say, 2012) and crisis management (Manyena, 2006).

In strategic management, resilience is presented as adaptive adaptation (Lengnick-Hall and Beck, 2005), respectively the way of organizational adaptation to environmental changes by taking intentional steps to regain adaptation to a new external balance and new circumstances (Hillmann, 2021).

Organizational resilience is illustrated in empirical studies by identifying the characteristics that make systems resilient and through which organizations develop and leverage their endowments to be able to interact with adverse disruptions (Williams *et al.*, 2017). Through the main feature of ensuring capability, organizational resilience represents the ability of an organization to maintain its functions and quickly recover from adversity by mobilizing and acquiring the necessary resources (Hillmann, 2021). When an organization faces unexpected adversity, organizational resilience becomes vital (Linnenluecke, 2017; Williams *et al.*, 2017, Doern, Williams and Vorley, 2019). Virtually all of these studies present organizational resilience as an effective means of coping with crises.

The organization considered resilient is based on the possession of resources, such as human resources in the organization and relational resources, generated by communication, coordination and relationships within the organization (Gittell, 2008; Lengnick-Hall, Beck and Lengnick-Hall, 2011; Williams *et al.*, 2017; Rodríguez-Sánchez *et al.*, 2019; Anwar, Coviello and Rouziou, 2021) that can be harnessed to survive, adapt and respond to adversity (Grant, 1991; Chandler and Hanks, 1994; Sutcliffe and Vogus, 2003; Bonanno *et al.*, 2010; Hillmann, 2021).

With the global impact of COVID-19, improving efficiency, social coordination and the allocation of resources determined by digitization, through digital technologies (artificial intelligence, big data, cloud computing, blockchain)

have been particularly important for the recovery and recovery of organizations, becoming an integral mechanism for innovation and sustainable development (Vial, 2019; Zhang, Long and von Schaeuwen, 2021).

3. METHODOLOGY

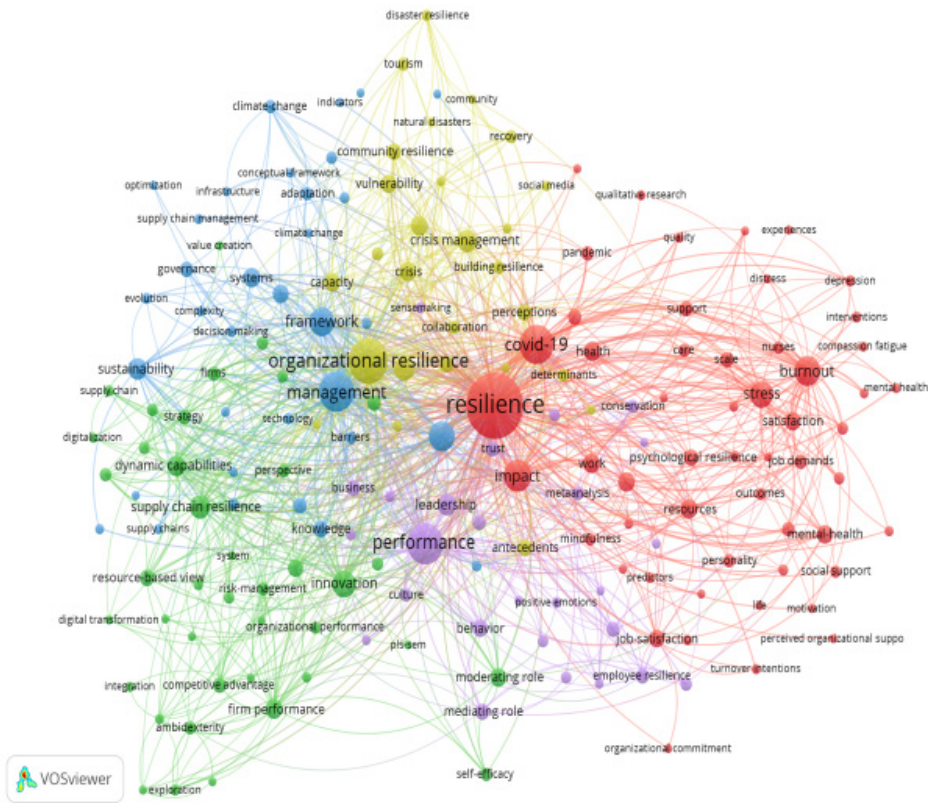
In this part of the work, the use of the VOSviewer software was used to map a keyword co-occurrence analysis map to present the distribution of topics of interest in organizational resilience research. Keyword frequency analysis is usually used to present the research strengths of a certain field, and according to the many categories of keywords, it can be seen that the keyword co-occurrence map made by VOSviewer has the advantages of grouping clear and legible of them. Clusters of "keywords" and correlations between those keywords can thus be used to provide a range of pertinent information on the underlying content of an article, helping researchers to follow trends in the development of research topics in the various phases of resilience research.

By resorting to the analysis of the specialized literature offered by the Web of Science (WoS) platform on organizational resilience, from the period 2021-2022, in order to be able to follow the works that have been published and that are related to the current pandemic context generated by COVID-19, it was possible states that the research results regarding the analyzed topic are relatively abundant, being quite dispersed. It is known that WoS is the most frequently used database for bibliometric analysis in different academic fields, and an analysis of the results for the period 2001-2020 led to a collection of 2,149 articles that addressed the topic of "organizational resilience", and at the level years 2021 and 2022, the number of articles resulted was 673, a considerable number compared to the other years, as there is currently a great interest in this subject.

In network analysis, keywords represent the core content of the publications that form these clusters (Tao *et al.*, 2020). The lines between the elements that will be distinguished represent the links created, respectively the strength of their correlation (Danvila-del-Valle, Estévez-Mendoza and Lara, 2019), and the distance between two keywords indicates the relationship between the keywords in terms of links or co-occurrence relationships. The colors of the keywords indicate the cluster they belong to, and the size of the sphere represents the number of their occurrences. Thus, more frequently used keywords are represented with larger circles and character fonts (Vosner *et al.*, 2016), with nodes of the same color representing the same grouping attribute. One of the main advantages of the co-occurrence mapping analysis of concepts in the body of knowledge, using the authors' keywords and the full count method, allows researchers to improve their ability to understand the results (Corrales-Estrada *et al.*, 2021).

4. RESULTS

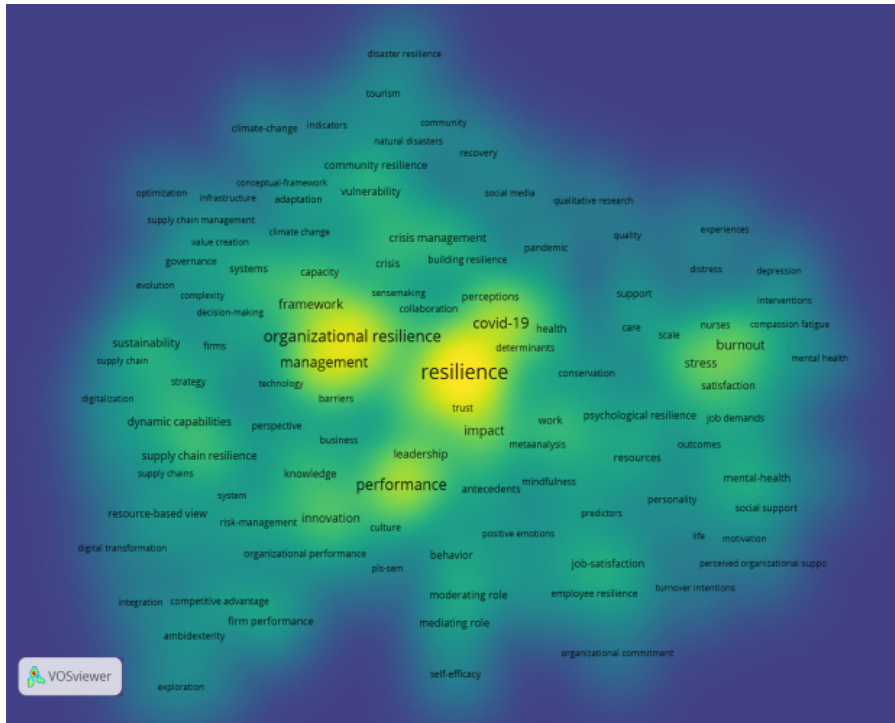
For our study, the keywords with the most occurrences are: *resilience* with 222 occurrences, followed by *organizational resilience* with 105 occurrences, *performance* 86 occurrences, *management* 83 occurrences, *Covid-19* with 76 occurrences, and *impact* with 53 occurrences, *risk* with 29 occurrences, *crisis management* with 26 occurrences, *sustainability* with 25 occurrences, *psychological resilience* with 14 occurrences and *pandemic* with 11 occurrences. At the same time, in addition to the fact that it has the most occurrences, the word *resilience* fixed in the middle of the map, indicates the major importance that this concept has for the other research themes, having similar connections with all the other words. Keyword-based co-occurrence (Figure 1) can be highlighted, both in the network map view and in the density map with the reflection of the most relevant term (Figure 2).



Source: developed by the authors using VOSviewer software

Figure 1. Co-occurrence map based on terms related to organizational resilience

For a clearer representation of the strengths of the research from the period of analysis considered in the field of organizational resilience, it can be seen from Figure 1, the grouping of high-frequency words in this field and obtaining the mapping of clusters, through the 5 distinct clusters.



Source: developed by the authors using VOSviewer software

Figure 2. Density map based on the most relevant terms associated with organizational resilience

Positioning the term resilience as a central figure, the creation of such maps is useful to know the research tendencies of the authors and presents the main interactions between the most frequent terms and the existing clusters.

In VOSviewer, the minimum of occurrences of a keyword was set at five of the 2638 keywords found, representing the threshold of keyword frequency statistics, to have a broader view of the research field (Gaviria-Marin, Merigó and Baier-Fuentes, 2019). Thus, the first 181 terms that reached the established threshold and are related to the keywords were selected.

Analyzing these maps, five distinct clusters were identified with a significant number of important topics reflected in different colors. The most important topics in each group are presented below.

The first cluster, governed by the concept of "resilience" and indicated by the color red, contains 54 terms, and the most relevant topics of this cluster are related to keywords such as: „ability”, „behaviors”, „burnout”, „consequences”, „covid-19”, „pandemic”, „health”, „health-care”, „impact”, „intervention”, „life”, „mental-health”, „mindfulness”, „psychological resilience”. This cluster shows the evolution from the perspective of characterization, action and support of resilience, focusing on the relationship between resilience and health.

The second green cluster is related around the terms „supply chain resilience” and „innovation” which has 40 concepts that refer to: „dynamic capabilities”, „moderating role”, „big data analytics”, „capabilities”, „competitive advantage”, „corporate social-responsability”, „digital transformation”, „digitalization”, „financial performance”, „firm performance”, „information-technologiey”, „knowledge management”, „resource-based view” „logistics”, „management-practices”, „organizational culture”, „organizational performance”, „resource-based view”, „risk-management”, „strategy”, „value creation”.

This cluster highlights the relationship between resilience and management practices in organizations, taking into account that corporate social responsibility strategies stimulate innovation and, at the same time, maintain competitive advantage. The investigation of the adoption of innovation was studied by Ates and Bititci (2011), who propose that the change management capacity represents an indicator of organizational resilience. Resilience has been defined as a rather generic quality and has been linked to a set of dynamic capabilities (Hillmann, 2021).

The understanding of resilience based on capabilities and logic based on resources (resource-based view) implies that the capabilities and resources that lead to a competitive advantage are heterogeneous among firms and do not present large commonalities among firms (Barney, 2001).

Resilience understood as a process thus includes the development of several types of capabilities (Limnios *et al.*, 2014). On the other hand, organizational needs for management practices aligned with company strategies support sustainability (Paulraj, 2011; Mihalciuc and Grosu, 2020) and how they lead to innovation and dynamic capabilities (Pacheco, Alves and Liboni, 2018). Knowledge management (Chiabrishvili and Zaim, 2018) and information technology are related to firm performance (Su and Linderman, 2016).

We can appreciate that the theme of *innovation* is an emerging one, in today's competitive environment, innovation being extremely important for the well-being of any organization. They want to maximize their existing innovation capabilities to achieve organizational resilience, but at the same time they are also concerned about the effects of digital transformation due to its complexity and uncertainty that could disrupt existing processes and structures, making it difficult to assess the consequences of digital transformation (Zhang, Long and von Schaewen, 2021).

Cluster three identified by the color blue and burdened by terms such as: „management”, „sustainability”, „supply chain management” and „the framework

of *organizational resilience*” covers 34 items, having as important topics „*adaptation*”, „*barriers*”, „*climate change*”, „*conceptual-framework*”, „*decision-making*”, „*future*”, „*governance*”, „*indicators*”, „*infrastructure*”, „*knowledge*”, „*management*”, „*models*”, „*optimization*”, „*reliability*”, „*resilience engineering*”, „*risk assessment*”, „*sustainable development*”, „*systems*”, „*technology*”, „*transformation*”.

Different disciplines influence the understanding of resilience in business and management. Also, from the cluster analysis, we also observe how resilience also interacts with supply chains (Bui *et al.*, 2021, Shekarian and Parast, 2021). It is appreciated that sustainability in the supply chain is becoming more and more difficult to achieve, due to the uncertainty created by unwanted disruption events such as economic and political crises, terrorist attacks, earthquakes, natural phenomena, war situations and pandemics. When these undesirable situations occur with a sufficiently high severity and frequency, firms face higher levels of risk (Bonanno *et al.*, 2011; Ivanov *et al.*, 2016; Dubey *et al.*, 2019; Fattahi, Govindan and Keyvanshokoo, 2020).

„*Reziliența organizațională*” centers the fourth light green group, being characterized by 27 items, namely: „*antecedents*”, „*building resilience*”, „*capacity*”, „*communication*”, „*community resilience*”, „*crisis*”, „*crisis management*”, „*determinants*”, „*disaster*”, „*economic-crisis*”, „*financial resilience*”, „*perception*”, „*recovery*”, „*risk*”, „*social media*”, „*strategies*”, „*tourism*”, „*uncertainty*”, „*vulnerability*”, etc.

Organizational resilience is approached in some works from the perspective of capacity, namely: as a dynamic and flexible organizational capacity derived from the ability to predict, as a capacity to survive, adapt, cope and of course as a learning capacity that organizations presents as a response to crises (Ma, Xiao and Yin, 2018; Duchek, Raetze and Scheuch, 2020).

Managers perceive that organizational resilience can be increased through adequate crisis and continuity management (Herbane, 2013). The sudden rise of the pandemic generated by COVID-19, with a substantial negative impact on the global economy in a relatively short period of time, produces a significant impact on possible and effective responses adopted by organizations in such crisis situations (Hillmann, 2021). A resilient organization accepts disasters that occur and resolves issues quickly by having contingency plans in place (Zhang and Qi, 2021).

Cluster 5 colored purple includes 26 items related to the "*performance*" item, the topics of interest studied in this cluster on the theme of organizational resilience addressing the fields of organizational behavior and strategic management (Chen, Liu and Zhou, 2021). Thus, it can be seen that the research related to this cluster is mainly focused on aspects such as: „*behavior*”, „*business*”, „*change*”, „*commitment*”, „*conservation*”, „*construct*”, „*context*”, „*culture*”, „*emotion*”, „*employee resilience*”, „*entrepreneurship*”, „*flexibility*”, „*leadership*”, „*mediating role*”, „*metaanalysis*”,

„organizational learning”, „pozitive emotion”, „psychological safety”, „team resilience”, „transformational leader”, „trust”, „work engagement”, etc.

Organizational resilience is perceived as a performance indicator that focuses on business performance being closely related to the life cycle stage of the company (Kiuchi and Shireman, 1999), the organization having to additionally control business continuity and develop performance indicators (Strong, 2010). From a behavioral science perspective, social capital plays an important role in increasing community resilience (Aldrich and Meyer, 2015). From this perspective, organizational behavior resilience refers to the process of restoring organizational performance after disruption (Comfort, 1994) and the ability to shift resources to a new steady state (Paton and Johnston, 2001). Behaviors related to identity management, reintegration, improvisational coping and emotional work are those that can be adopted by organizations (Ishak and Williams, 2018). Evolutions of organizational and entrepreneurial practices towards sustainable practices can be identified in this cluster (Herrera-Cano, 2016). Resilience has been embraced by positive psychologists as a prime example of what is right and good in people (Luthans, Vogelgesang and Lester, 2016). Also, a relaxed organizational climate is more beneficial to good organizational performance, and a resilient organizational culture is conducive to shaping a sense of community among organizational members, which can help organizations survive crises (Chen, Liu and Zhou, 2021).



Source: developed by the authors using VOSviewer software

Figure 3. Map based on WoS data on keyword co-occurrence over the past two years

A distinct highlight of the keyword co-occurrence of the papers from these two years under analysis, using a fractional counting method, is shown in Figure 3, where an overlay view of the keyword co-occurrences is displayed. The size of the node reflects the frequency, while the color of the node represents the time period of publication.

The keyword co-occurrence analysis of organizational resilience research shows that according to the frequency of keywords, the most discussed topics in the researched field focus on organizational resilience and resilience in any system, which will otherwise represent an important means of coping crises. From Figure 2 information can be extracted regarding the time distribution of the occurrence of keywords in the selected publications and the intensity of the concepts used within these publications.

5. CONCLUSIONS

Organizational resilience is a holistic and complex concept, being related to profitability in turbulent environments, sustainable development and competitive advantage and understood as a construction of risk awareness traits, a preference for cooperation, which will lead to the balancing of organizational structures. All these characteristics will be necessary for an organization to be able to face and resist the interference of various risks and to ensure its survival and development in a turbulent and changing environment.

By identifying and analyzing the influencing factors of organizational resilience, organizations will be able to better understand how to deal with the crisis and direct their direction towards improving organizational resilience.

It can be seen from the co-citation analysis performed on the basis of the specialized literature and the high-frequency analysis of the keyword grouping, that through this study the neuralgic themes found in the research of organizational resilience were presented. The research base of organizational resilience is divided within the study undertaken on the following research pillars: „*supply chain resilience*”, „*inovation*”, „*capabilities*”, „*management*”, „*sustainability*”, „*supply chain management*”, „*the framework of organizational resilience*”, „*covid-19*”, „*covid-19 pandemic*”, „*performance*”.

Through the bibliometric analysis carried out, it was possible to bring certain interesting grouping results in terms and research themes of the authors on the concept of organizational resilience from the period under analysis 2021-2022.

We can conclude, appreciating the fact that the analysis of the specialized international literature on organizational resilience has largely contributed to the selection of the most relevant studies that influenced our research, through which it was possible to ascertain that the research results on the analyzed topic are relatively abundant, being also quite dispersed on different fields of analysis.

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AN OVERVIEW ON THE TREATMENT OF UKRAINIAN REFUGEES AND THE ROMANIAN EXAMPLE OF GOOD PRACTICES

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Abstract

Since the aggression of Russian Federation in Ukraine, Europe experiences an influx of refugees coming from the neighbouring State. The response of private persons, non-governmental organizations, civil society and the Romanian government were prompt and oriented towards giving effect to the idea of international protection that vulnerable persons such as those applying for the status of refugee should benefit from. In order to put in place an effective framework of protection, the Government of Romania not only permitted access into the Romanian territory, but also adopted special legislation on temporary protection, in accordance with the measures undertaken by the European Union. The aim of this paper, on the one side, is to analyse the specific rules of International Law applicable to refugees, implications for the States and on the other, to emphasise the reasons for which the response coming from the Romanian authorities and society is an example of good practices.

Keywords: *influx of refugees; temporary protection; solidarity; European Union.*

JEL Classification: K33, K37, K38

1. INTRODUCTION

Refugees are vulnerable persons seeking protection of other States (Moldovan, 2019). Unfortunately, influx of refugees in time of armed conflicts is not an unusual phenomenon and puts to the test the capacity to promptly respond from the other States, international community and private parties all together. Thus, the influx of refugees fleeing from Ukraine after the Russian invasion in February 2022 is testing the unity and solidarity of Europe and all European Union institutions and its Member States. The numbers and statistics are very dynamic and in constant change and the present paper will refer to different moments and data made available by international organisations with the purpose to highlight the severity of the humanitarian crisis.

According to the data of the United Nations High Commissioner for Refugees (UNHCR), on 19 July there were 5,988,696 refugees across Europe and 3,709,329 refugees from Ukraine registered for Temporary Protection or similar national protection schemes in Europe (UNHCR, 2022a). Overall, nearly 12.8

million people are estimated to have been displaced in Ukraine, most of whom have not left the country, 7.7 million people are internally displaced as a result of the conflict- equivalent to 17.5 percent of the entire population of Ukraine, according with the International Organization for Migration (UNHCR, 2022a; IOM, 2022).

An analysis of the treatment set by the European Union is not possible outside the general legal status established by rules of Public International Law. In the first part, the paper will analyse the notion of refugee in Public International Law, the specific features and the main rights applicable to the vulnerable persons qualifying as refugees. A second part will analyse the features of the Temporary Protection Directive, one of the most controversial legislative acts of the European Union, which was been activated for the first time on 3 March 2022, although it was adopted in 2001 and Europe has experienced several refugee influx crises since then. It was a historic agreement reached by the Home Affairs Ministers. Differences between the legal status of International Law and the Temporary Protection Directive will also be unfolded in order to clarify that the two are not synonym and present specific conditions and features.

Like the other European States, Romania responded promptly and efficiently to the needs of the Ukrainians fleeing their home because of the war and started giving effect to the temporary protection.

2. LEGAL STATUS OF REFUGEES UNDER INTERNATIONAL LAW

2.1 Definition of a refugee in International Law

The fundamental international binding legal instrument is represented by the 1951 UN Geneva Convention relating to the status of refugees, which is considered the core legal instrument (“Magna Carta”) of international refugee law.

It defines the notion of refugee and sets obligations for Member States entered into force in April 1954, it was amended by the 1967 Additional Protocol, and currently has 146 States parties (United Nations Treaty Collection, Convention relating to the Status of Refugees).

According to Article 1 of the 1951 UN Convention, a refugee is a person who is unable or unwilling to return to his country of origin “owning a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion”.

The significant element of refugee's legal status is that they lack protection of their own country, being in an intolerable situation and the refuse of providing protection for them could have severe or even deadly consequences (Moldovan, 2016).

Some categories of persons are excluded from the provisions of the 1951 Convention: persons who have committed crimes against peace, a war crime,

crimes against humanity or a serious non-political crime outside the country of refuge (Moldovan, 2019).

The definition given by the Geneva Convention is not exhaustive, there are some important gaps, one of which is that the Convention does not explicitly provide this sort of international protection in case of an armed conflict. Therefore, the legal status of refugees provided by the 1951 Geneva Convention is completed by general rules of international law, human rights law and international humanitarian law, especially the Convention (IV) relative to the Protection of Civilian Persons in Time of War and the 1977 additional Protocol. The Convention does apply to persons persecuted because of their opposition to government's acts (Moldovan, 2016).

One important question concerning the status of refugees is who protects them, in order to avoid all the negative consequences, they may be exposed to. Host governments are primarily responsible for protecting refugees, hence the 146 parties to the Convention and/or the Protocol are obliged to carry out the provisions. Furthermore, The UN Refugee Agency (UNHCR) maintains a 'watching brief' and intervenes if necessary to ensure *bona fide* refugees are granted asylum and are not forcibly returned to countries where their lives may be in danger. The Agency seeks ways to help refugees restart their lives, either through local integration, voluntary return to their homeland or, if that is not possible, through resettlement in 'third' countries (Moldovan, 2019).

The protection mentioned by the 1951 Convention means that the hosting States must ensure basic rights for refugees and must provide protection and assistance to refugees based on the principles of non-discrimination, non-penalization, and non-refoulement (Moldovan, 2019). We must emphasize that the Convention does not provide automatic or permanent protection and that refugees have the correlative obligation to respect the laws and regulation of the hosting State.

The mechanism of international protection for refugees relies on the principle of global solidarity and responsibility sharing (Fitzpatrick, 2000), which is mentioned in the Preamble of the 1951 Convention "the grant of asylum may place unduly heavy burdens on certain countries, and that a satisfactory solution of a problem of which the United Nations has recognized the international scope and nature cannot therefore be achieved without international cooperation".

International law of refugees also includes other international legal instruments, adopted in different regions of the globe and addressing the specific problems related to refugees' protections in those regions, such as the African Convention and the Cartagena Declaration.

The African Convention the Convention Governing Specific Aspects of Refugee Problems in Africa was adopted in 1969 within the Organization of African Unity (OAU, 1969). It added more objective consideration to the definition given by the UN 1951 Convention and is referring to refugees as any

person compelled to leave his/her country owing to external aggression, occupation, foreign domination or events seriously disturbing public order in either part or the whole of his country of origin or nationality. It is the most extensive definition given to the notion of refugees.

On the American continent, the *Cartagena Declaration* adopted by Latin America governments in 1984 added a more objectively consideration to the definition from the 1951 Convention and includes persons who flee their countries “because their lives, safety or freedom have been threatened by generalized violence, foreign aggression, internal conflicts, massive violation of human rights or other circumstances which have seriously disturbed public order” (Cartagena Declaration on Refugees, 1984).

2.2 Legal status of refugees in the European Union law

At the level of the European Union, in respect of refugees’ legal status, the role of the 1951 Geneva Convention and the 1967 Additional Protocol was recognized for ensuring the protection of refugees and asylum seekers, both through the adoption of specific regulations, as well as through court decisions.

All Member States of the European Union are parties to the Geneva Convention, the four Conventions from Geneva from 1949, which constitutes the foundation of international humanitarian law, including the IV Convention regarding the protection of the civilian population, thus, legal international obligations are incumbent upon them.

The Charter of Fundamental Rights of the European Union (*Charter of Fundamental Rights of the European Union, 2012*), which is a legal binding instrument, regulates the right to asylum in its Article 18, which reads as follows:

“The right to asylum shall be guaranteed with due respect for the rules of the Geneva Convention of 28 July 1951 and the Protocol of 31 January 1967 relating to the status of refugees and in accordance with the Treaty on European Union and the Treaty on the Functioning of the European Union (hereinafter referred to as ‘the Treaties’).”

Therefore, the main legal instruments previously mentioned represent the common standard in this field to which some special acts and regulations were adopted. The European Union has been working since 1999 to create a Common European Asylum System and improving the normative framework, intended to be based on the application of the provisions of the 1951 Geneva Convention.

Dublin III Regulation (Regulation (EU) no. 604/2013, OJL 180, 29.6.2013, pp. 31–59), determined the Member State responsible for examining the asylum application, improved protection of the asylum seekers in the process of establishing the state responsible for analysing the application and clarified the rules applicable to relations between states. It also created a system of detection of early problems in national asylum or reception systems and analysis of the causes before it turns into a full-blown crisis.

Regulation (EU) no. 603/20131 (OJ L 180, 29.6.2013, pp. 1–30) establishes the "Eurodac" system, with the aim of contributing to the determination of the responsible Member State, under Regulation (EU) no. 604/2013, with the examination of an application for international protection presented in a state member by a national of a third country or by a stateless person. Also, establishes the conditions under which dactyloscopic data can be requested to be compared with those stored in the central system, by the authorities of the member states and by Europol.

Along with these regulations, the procedures for granting refugee and asylum seeker status in the European Union are regulated by other acts: Directive 2011/95/EU (OJ L 337, 20.12.2011, pp. 9–26), Directive 2013/32/EU on common procedures for granting and withdrawing international protection (OJ L 180, 29.6.2013, pp. 60–95) that aims to establish common procedures for granting and withdrawing international protection in which decisions on asylum requests are taken after the fairer and faster procedures, in the sense of Directive 2011/95/EU. The directive applies to all requests for international protection submitted on the territory of the member states, including at the border, in the territorial waters or in the transit areas of the member states, as well to withdrawal of international protection. Asylum seekers with special needs will receive support necessary to support their claim and increased protection will be granted to unaccompanied minors and victims of torture; Directive 2013/33/EU (OJ L 180, 29.6.2013), provides for the existence of material humane conditions for reception of asylum seekers (such as housing, access to health services and medication) and that the fundamental rights of the persons concerned must be fully respected and that detention is only applied as a measure of last resort.

3. TEMPORARY PROTECTION OF REFUGEES UNDER EUROPEAN UNION LAW

All the previous acts are well-known and applied as such within the European Union, but the framework is not complete without the mentioning of the Temporary Protection Directive (Council Directive 2001/55/EC), one of the most controversial European acts (Vitiello, 2022), adopted in 2001 and activated, in the sense of made immediately applicable, on 4 March 2022 for the first time. According to Article 1, the Directive is applicable in case of mass influx of displaced persons from third countries that are unable to return to their country of origin. The Directive contains several definitions, including the notion mass influx in the following wording: “arrival in the Community of a large number of displaced persons, who come from a specific country or geographical area, whether their arrival in the Community was spontaneous or aided, for example through an evacuation programme” (according to Article 2d).

Although the Temporary Directive was adopted after the conflicts in the former Yugoslavia, and Europe experienced several mass influxes of refugees due

to military conflicts outside Europe, such as Syria (Bidinger, 2015; Kaya, 2020) it was never triggered until this year.

On 2 March 2022, the Commission proposed the activation of the Temporary Directive (European Commission, 2022) and the Council unanimously adopted the decision on 4 March 2022 (Council Implementing Decision (EU) 2022/382 of 4 March 2022).

The exploration of the regulatory framework previously identified does not clarify what are the differences between the general framework of protection of refugees and this directive are, thus they need to be addressed.

In the sense of the 2001 Directive, temporary protection represents an exceptional measure to provide immediate and temporary protection in the event of a mass influx or imminent mass influx of displaced persons coming from third countries who are unable to return to their country of origin. The purpose of the Directive is to establish a supranational mechanism for collective responses in case of such situations.

The applicability of the Directive is triggered by a qualified majority of the Council, on a proposal from the Commission (according to its article 5). The purpose of the Temporary Directive is to grant a one-year residence permit issued by the Member States, which can be extended if the reasons for its establishment persist, according to article 4. This form of protection is to be distinguished from the international protection and the subsidiary protection provided by the 1951 Geneva Convention and entailed in the Common European Asylum System. Yet, both forms may be qualified as an expression of collective responsibility for international protection (Vitiello, 2022).

However, the idea of temporary protection is not an innovative one, as UNHCR created a framework in order to address mass influx of refugees and issued guidelines in order to ensure temporary protection in cases of mass influx of refugees, before the European Union (UNHCR, 2014). The concept, in various forms, dates to 1969, when the codification of the African Convention took place (Fitzpatrick, 2000).

Giving effect to the obligations entailed by the rules of refugee law can be a difficult task for the States and implies not only acknowledgment of the content of these rules but also real and concrete measures, a task that cannot be fully untangled from the legal boundaries and what can be considered possible all things considered. Mass influx of refugees, as other concepts and notions related to the international protection of refugees may not be defined in absolute terms and is subject to the resources of the host country (Kerber, 2002).

The Guidelines of the Council specifies the scope of the temporary protection. In accordance with the provisions of Article 2 (1) of the Council Decision, it is applicable to:

“(1) Ukrainian nationals residing in Ukraine who have been displaced on or after 24 February 2022 and their family members;

(2) Stateless persons, and nationals of third countries other than Ukraine, who benefitted from international protection or equivalent national protection in Ukraine before 24 February 2022 and who have been displaced from Ukraine on or after 24 February 2022, and their family members”.

Pursuant to Article 2(2) of the Council Decision, temporary protection as provided for in Directive 2011/55/EC or adequate protection under Member States’ national law shall apply to stateless persons and nationals of third countries other than Ukraine who can prove that they were legally residing in Ukraine before 24 February 2022 on the basis of a valid permanent residence permit issued in accordance with Ukrainian law, and who are unable to return in safe and durable conditions to their country [of origin] or region [within their country] of origin.

Article 27 of the Temporary Directive refers extensively to the cooperation between States for addressing the situation of vulnerable persons fleeing Ukraine (over 3 million people at the date of the Decision) and strongly related to these provisions, the Guidelines refer to the creation of a Solidarity Platform with the aim to operationalise cooperation between Member States:

“A ‘Solidarity Platform’ has been set up by the Commission with a view to coordinating the operational response among Member States as per Article 3(2) of the Council Decision. It will work alongside the EU Migration Preparedness and Crisis Management Network (the Blueprint) referred to in Article 3(1) of the Council Decision, taking account of situational information received in that Network. The Solidarity Platform will collect information and examine the needs identified in the Member States and coordinate the operational follow-up in response to these needs”

At the same time, the United Nations Agency initiated actions in order to efficiently respond to the challenges of the humanitarian crisis in Ukraine. The temporary protection system triggered within European Union is not an hermetic one, as Article 3 para 3 of the Temporary Directive specifies that the establishment, implementation and termination of this form of protection is subject to regular consultations with the Office of the United Nations High Commissioner for Refugees and other international relevant organisations, yet, it must be emphasized that these consultations do not represent a condition for the establishment of a temporary regime (Kerber, 2002).

4. UKRAINIAN REFUGEES AND THE REACTION OF ROMANIA

A great number of Ukrainian nationals fled their country because of the war, a part of them is hosted by neighbouring counties while others chose to move forward to other Member States of the European Union. Since February 2022, an important number of refugees arrived in Romania, either to stay or just as a transit zone for other countries. As of 16 September 2022, over 7 million refugees from Ukraine were recorded across Europe, over 4 million registered for Temporary Protection or similar national protection schemes in Europe (UNHCR, 2022b).

Romania was confronted with a large movement of persons from the neighbouring state and responded rapidly and efficiently. According to the data reported, as of 3 August 2022, more than 1.6 million refugees entered Romanian since the beginning of the war and as of 31 July 2022, 84,357 refugees chose to stay in Romania (OCHA Services, 2022). Approximately, 64,000 of them have obtained temporary protection to access national services, as of 14 September 2022 (UNCHR, 2022b).

In order to address the needs of the persons of Ukrainian nationality, Romania, through actions of the governmental authorities and private sector entities (non-lucrative associations, lawyers, even private persons individually) undertook an array of measures and humanitarian actions to help and assist Ukrainians during their stay in Romania. The response came from the entire society (with some minor exceptions coming from euro sceptical persons), it was fast, effective and individual-oriented.

For all levels of Government, Romania has instituted a clear decision-making and coordination structure to enable agencies with different law enforcement and operational responsibilities, to plan, coordinate and interact effectively on the field in response to the humanitarian crisis and provide assistance to refugees.

First one to be mentioned is the high-level decision-making Task-Force, established since the first day of the Russian invasion, under the coordination of the Prime Minister. Secondly, an operational Task Force, called the "Ukraine Commission", coordinated by the head of the Prime Minister's Office, was established to oversee the activities of the ministries involved in the management of the refugee flow in all areas of intervention. Thirdly, at the level of the Prime Minister's Chancellery, the Humanitarian Assistance Strategic Coordination Group was established, led by a State Counsellor, to ensure the strategic framework for humanitarian response and to facilitate cooperation between agencies and partners at the national, European and international.

Romanian authorities cooperated constantly with the European Union and the United Nations Office for Refugees, as it is the usual situation in such cases. Romania's response to the Ukrainian refugee crisis is structured on two levels of intervention: the first response is represented by the emergency assistance, and the second response, is represented by protection (Government Task Force, 2022).

Emergency assistance, the first form of response, represents the reaction and urgent intervention provided by Romania for the newly arrived refugees from Ukraine. The operations are led by the Department for Emergency Situations (DSU), within the Ministry of Internal Affairs.

They consist in the deployment of resources and capacities at the main border crossing points, provision of humanitarian transport, shelter emergency, food, basic healthcare, and this is not a limited list. Alongside this array of actions and efforts undertaken by the Department for Emergency Situations, numerous

legislative and administrative acts were issued by different ministries of the Government of Romania in order to cope with the needs of the refugees.

There was an intense cooperation between the government agencies and the local authorities, adapted to local needs. Romanian civil society in its entirety, private entities, non-governmental associations national and international, United Nations agencies, contributed fast and efficiently.

Granting protection, which is the second response, consist in a mechanism developed with the aim to ensure medium and long-term measures for assistance and inclusion for Ukrainian nationals who choose to live in Romania. In order to organize all appropriate measures, six working groups were established to develop measures and actions in sectorial action plans, in fields such as health, housing, job security, education, vulnerable people, children and young people. Close cooperation with UN agencies and civil society is a feature of this type of response as well. All measures were integrated into a National Action Plan, developed together with UNHCR, launched in July 2022.

Special platforms were developed by the Government together with civil society, to support Ukrainian nationals with information on their rights in Romania, such as www.dopomoha.ro, which includes a donation platform and an “Emergency Support” platform.

Romanian authorities have activated 2 European support mechanisms: the EASO Mechanism - Operational Protocol in Support of Asylum Procedures and the European Civil Protection Mechanism and organized a humanitarian HUB in Suceava, located near the border (Chancellery of the Prime Minister, 2022).

Special legislation was adopted in order to effectively give effect to the measures previously presented: the Government Decision 367/2002 regarding the establishment of conditions for ensuring temporary protection as well as for the modification and completion of normative acts in the field of foreigners (Government Decision no. 367 /2022) and the Government Emergency Ordinance no. 100 from June 29, 2022 regarding the approval and implementation of the National Plan of measures regarding the protection and inclusion of displaced persons from Ukraine, beneficiaries of temporary protection in Romania, as well as for the modification and completion of some normative acts (Government Emergency Ordinance no. 100 from June 29, 2022), being the first European country that adopted special legislative and administrative measures.

5. CONCLUSIONS

Efficient protection of persons fleeing their home country because of military conflicts represents a very difficult task. In order to address challenges of humanitarian assistance and protection in such situations, concrete, clear and coordinated efforts are needed.

European Union hasn't been a positive example in situations of mass influx of persons in search of protection. The existence of the Temporary Directive for

more than 20 years before its application is highly relevant and proves that humanitarian assistance, international protection under the form of asylum or refugee status is depending primarily on the legal framework, the will of States and European institutions weight very much in such a process. The reasons are not the subject of analysis in the present paper.

The rapid and coherent response from European Union, its members, coordinated with the UNCH and other international bodies is a positive example of how to handle such a challenging situation and apply the well-established rules on protection of vulnerable persons.

A neighbour of Ukraine, Romanian is hosting Ukrainian nationals and managed to successfully organise in order to provide for them humanitarian assistance and all the rights that they are entitled to, including access to education for children in their own language and access to legal counsel and assistance. Measures and actions like these need to be used as an example for other situations involving persons fleeing their home because of war that is threatening their life. The invasion of Ukraine is far from over and the presence of Ukrainian nationals in the European Union will continue, and the solidarity of Romanians and European Union must continue as well.

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BRIEF CONSIDERATIONS REGARDING THE USE OF THE FUNCTION IN FAVOUR OF CERTAIN PERSONS

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Abstract

The offence of conflict of interest has been amended to include the use of the function in favour of certain persons, and it is necessary to maintain the conflict of interest in the sphere of public services. This paper aims to highlight the particular elements of this incrimination that essentially distinguish it from the crime of abuse in office. Even if this regulation replaced the crime of conflict of interest, the preservation, in part, of the content of the old regulation demonstrates the seriousness of the situations in which the civil servant uses his function to obtain a material gain, gravity that justifies the distinct incrimination of these situations. A brief analysis of the judicial practice in this area is edifying in support of these arguments.

Keywords: *civil servant; material gain; abuse in office; conflict of interest; justifying cause.*

JEL Classification: K14

1. GENERAL CONSIDERATIONS ON THE NEED TO CRIMINALIZE THE USE OF THE FUNCTION TO FAVOUR CERTAIN PERSONS

Since they exercise functions of public interest and powers that can produce legal effects with regard to other persons, civil servants have the possibility of exercising their function abusively, in favour or to the detriment of other persons.

Therefore, in Title V of the Criminal Code called “Corruption and Service Offences”, the Romanian criminal legislature devoted an entire chapter to service offences, delimiting them from corruption offences, which differs from the old Code.

The behaviour of the civil servant in the exercise of the function has been carefully analyzed so that any violation of the law which, by its gravity, justifies the intervention of the criminal law, will be sanctioned in accordance with it. Thus, new offences have emerged such as the offence of usurpation of office which comes to fill a gap left by the abuse in office, there have been completions to or transformations of some rules in such a way that the requirement of the constitutionality of these rules can be observed. The offence of using a function to favour certain persons can be found in the last situation and consists in the following:

“(1) The act of the civil servant who, in the exercise of his duties, performed an act by which a material gain was obtained for himself, for his spouse, for a relative or for an affine up to the second degree inclusively, shall be punishable by imprisonment from one to 5 years and the prohibition of exercising the right to hold a public office for a period of 3 years.

(2) The provisions of par. (1) shall not apply in cases where the act or decision refers to the following situations:

- a) issuance, approval or adoption of normative acts;
- b) exercising a right recognized by law or fulfilling an obligation imposed by law, in compliance with the conditions and limits provided by it.” (Pursuant to art. 301 of the Criminal Code).

This regulation replaced the offence of conflict of interest which was declared unconstitutional (Constitutional Court, decision no. 603/6 October 2015, published in the Official Gazette no. 845 of 13 November 2015), showing that the norm lacks clarity, precision and predictability by referring to the notion of “commercial relations” which is no longer expressly defined in the legislation in force, which leads to a violation of the principle of legality of incrimination. In the version existing at the date of entry into force of the Criminal Code, the provisions of art. 301 regulated the offence of conflict of interest, as follows:

“(1) The act of the civil servant who, in the exercise of his duties, performed an act or participated in the making of a decision through which a material gain was obtained, directly or indirectly, for himself, for his spouse, for a relative or for an affine up to the second degree inclusively or for another person with whom he has been in business or work relations in the last 5 years or from whom he has benefited or benefits in any way, shall be punishable by imprisonment from one to 5 years and the prohibition of exercising the right to hold a public office.

(2) The provisions of par. (1) shall not apply in the case of issuance, approval or adoption of normative acts.”

This regulation has been replaced by the current regulation, also changing the marginal name of the legal text, into a name which, apparently, may seem more difficult, but, in reality, is much more suggestive and complies much better with the constitutive content of the offence.

Reality has highlighted that the performance by civil servants of an act through which a material gain was obtained for them, their spouses, a relative or an affine up to the second degree inclusively, has led to jeopardy to important social values such as the force, authority, prestige of public institutions, authorities where they work, their credibility in fulfilling their duties. The frequency of committing these acts has been noticed in reality, too, the acts being generated, on the one hand, by the subjectivism that characterizes any human being, and, on the other hand, by the temptation to which civil servants are exposed, that, by performing an official duty, they will obtain material gains for themselves or their close relatives.

This is the explanation for the name of the offence of “using the function to favour certain persons”, which turns out to be extremely suggestive of the constitutive content of the norm. The reconfiguration of its constitutive content following the unconstitutional declaration of the old regulation provides the norm with the necessary conditions of clarity so that its addressee knows how to adjust his conduct in relation to the incrimination norm.

As for the need to criminalize these acts by which civil servants, in the exercise of their official duties, use these duties to obtain some material gains and, at the same time, favour persons who are close to them, restrictively listed in the text of the law (spouse, relative, affine up to the second degree inclusively) it is obvious that this conduct contravenes the rules of normal conduct of service relations. The frequency and seriousness of these acts require their provision by the criminal law and their sanctioning.

In the literature (Diaconescu and Răducanu, 2017, p. 177), it has been stated that, although it is not obvious, we cannot deny the existence of a conflict between the general social interest, of placing the entire existence on such values, and that of the perpetrators, promoting their own interests or the interests of the persons restrictively established by law. Even if this regulation replaced the old offence of conflict of interest, the preservation, in part, of the content of the old regulation demonstrates the seriousness of the situations in which the civil servant uses his position to obtain a material gain, the seriousness that justifies and imposes the incrimination of these situations.

We can say that even in this situation we are in the presence of an abusive conduct of the civil servant and, since abuse in office is criminalized, a separate incrimination would no longer be justified. The difference between the two norms is, however, significant and, as we have previously stated, the legislature of the new Criminal Code paid attention to any detail that particularizes the conduct of the civil servant that exceeds the limits of the normal exercise of his duties and tried not to have lapses in the sanctioning of acts falling within the scope of the criminal offence.

Moreover, the incrimination of the act of abusive use of the function for sexual purposes (pursuant to the provisions of art. 299 “(1) The act of the civil servant who, in order to fulfil, not to fulfil, to expedite or delay the performance of an act regarding his official duties or in order to do an act contrary to these duties, claims or obtains favours of a sexual nature from a person directly or indirectly interested in the effects of that act of service shall be punishable by imprisonment from 6 months to 3 years and the prohibition of exercising the right to hold a public office or to exercise the profession or the activity in the execution of which the act was committed. (2) Claiming or obtaining favours of a sexual nature by a civil servant who makes use or takes advantage of a situation of authority or superiority over the victim, arising from the position held, shall be punishable by imprisonment from 3 months to 2 years or by fine and the

prohibition of exercising the right to hold a public office or to exercise the profession or the activity in the execution of which the act was committed.”) is another proof of the legislature’s attention in sanctioning various particular types of behaviour of the civil servant that contravene the law. In the case of this offence, too, the civil servant uses the position held to claim or obtain favours of a sexual nature from a person interested in the effects of an official act or over whom he has authority or superiority through the position held.

Obtaining benefits, either material or not (favours of a sexual nature), which do not legally derive from the exercise of the public office, but which are obtained through the use of the office, requires the drastic punishment of this behaviour in accordance with the criminal law in order to prevent and repress it.

The use of one’s position in order to obtain material gains combined with the favouring of certain persons are details that make the difference and particularize the offence in question, justifying its distinct incrimination.

2. THEORETICAL AND PRACTICAL ANALYSIS OF THE OFFENCE OF USING THE FUNCTION TO FAVOUR CERTAIN PERSONS

If, regarding the need to criminalize these acts, their seriousness is obvious, the social value that requires protection in the case of their commission is equally obvious. The authority, credibility, good performance of the work of public authorities, public institutions and even civil servants are prejudiced by the use of the function in order to favour certain persons and this is why the offence is regulated under the chapter “Service offences”. At the same time, we cannot deny the infringement of the legitimate rights and interests of the person who is harmed or prejudiced by using the function to favour some persons. Both social values make up the legal object of the offence and impose its sanctioning under criminal law.

The active subject is qualified, the law requires that he should have the status of civil servant, a quality that must also exist in the case of co-authors. In the case of the passive subject as well, we have to consider, first of all, the public authority, the public institution where the civil servant works, although the person whose legitimate rights and interests are affected by the conduct of the civil servant is also a secondary passive subject of the offence.

As for the material element of the offence, it can only be committed by the performance of an act by the civil servant. The performance of this act must be part of the civil servant’s official duties and must result in obtaining a material gain. One could discuss the improper nature of this material gain, but such a specification would narrow the field of incrimination of the act and would contravene the legal object protected by this incrimination. As shown in the decision of the Constitutional Court (Constitutional Court, decision no. 603/6 October 2015, point 14, published in the Official Gazette no. 845 of 13 November 2015), the use of one’s function to favour certain persons is not only aimed at “sanctioning situations in

which the legal norms that provide the basis and justification for obtaining material gains are violated, but also situations in which the impartial exercise of the civil servant's official duties could be affected".

The legislature limited the persons who can benefit from this material gain, so that the favouring of some persons by the conduct of the civil servant is obvious. The material gain can be obtained even by the civil servant or his spouse, a relative or affine up to the second degree inclusively.

It was established in the case-law (High Court of Cassation and Justice, decision no. 372/A/2019) that even if the gain is legit (obtained as a legal fee) and even if it is proved that the money paid to the lawyer, son of the director of the Forestry Office was at least equivalent to the services provided, even smaller than the real value of the respective services, the father is author of the offence of conflict of interest and the son is accomplice.

The legislator has choice to limit the category of persons that can be favored through the act accomplished by the civil servant to the spouse, a relative or an affine up to the second degree inclusively is no accident. Even if we could argue that other persons could be considered close to the public servant (godparents, friends and so on), the legislator aimed to preserve the clarity and the predictability of the law. Therefore, they included only those extremely close to the civil servant, part of the category of family and affine, those for whom the law provides a definition, even if the definition is found in the civil law.

The case-law stated that „the offence of using the public function to favorize some persons is identified when the civil servant has a personal interest influencing or creating the appearance to influence his capacity to legally fulfill of his duties. The private interests of the servant may include obtaining a gain for himself or his family or close relatives" (High Court of Cassation and Justice, decision no. 372/A/2019). It was also stated that „in order for the offence to exist it is not necessary that the idea of the personal gain would effectively influence the servant's process of the decision making, but it suffices to identify the possibility, the risk that the said interest could influence the decisions taken in the exercise of the function." (High Court of Cassation and Justice, decision no. 81/RC/2020).

The offence of using the function to favour certain persons is an offence of result depending on obtaining a material gain for the civil servant, the spouse, a relative or an affine up to the second degree inclusively. As stated in the doctrine (Diaconescu and Răducanu, 2017, p. 179; Rotaru, Trandafir and Cioclei, 2016, p. 298) the offence is an offence of result, not an offence of danger because the law implies that following the performance of an act, a gain is realized and in the absence of the said gain, there is no crime.

However, it was stated (Dobrinioiu and Neagu, 2012, p. 518) that we could talk about an offence of danger because the legislator considered the offence also through the state of danger caused to the social value protected by the law. Thus,

the offence is committed in the moment when the civil servant performed the respective act with the condition to attain the material gain for one of the persons expressly stated in the norm. The case law also insisted in underlining the danger of the offence stating that „achieving the material gain that conditions the existence of the offence does not affect its inclusion in the category of offences of danger, considering that is not relevant if the material gain obtained for the beneficiaries has or has not created a prejudice to the public institution that has employed the active subject of the offence nor depend on the creation of a possible discriminatory situation for the other people” High Court of Cassation and Justice, decision no. 81/RC/2020; Court of Appeal Cluj, decision no. 596/2020).

We appreciate that the legislator was extremely precise and clearly stated that the existence of the crime depends on obtaining the material gain, otherwise the offence would be inconsistent. How could we consider that one is favoured by the performance of an act by a civil servant if a material gain would not be in stake? Therefore, using the function to favour certain persons is an offence of result.

According to article 301 (2) a Criminal Code, the provisions of alin. 1 do not apply in case of issue, approval or adoption of normative acts. It mainly refers firstly to the Parliament, to the members of the Parliament, both the Chamber of Deputies and Senate, representative organ of the people and only legislative authority of the state (art. 61 Romanian Constitution).

3. OFFENCE OF USING A FUNCTION TO FAVOUR CERTAIN PERSONS. INTERFERENCES AND CONNEXIONS

Even the name of the offence suggests the existence of an abusive conduct of the civil servant, the scope of the act, of the norm being the use of the function to favour certain persons, exceeding the limits of the impartial exercise of the function. This is the reason that enhances us to state that there is a risk of confusion between the offence of abuse of office and the use of the function to favour certain persons.

The abuse in office (pursuant to the provisions of art. 297 alin. 1 abuzul în serviciu constă în ” The action of the civil servant who, while exercising their professional responsibilities, fails to implement an act or implements it faultily, thus causing damage or violating the legitimate rights or interests of a natural or a legal entity, shall be punishable by no less than 2 and no more than 7 years of imprisonment and the ban from exercising the right to hold a public office.”) also implies the performance of an act in the exercise of duties same as in the use of the function to favour certain persons. In the case of abuse of office, the essence is the faulty performance of duties or, to be more specific, breaking the law (Constitutional Court, decision no. 405/2016, published in the Official Gazette no. 517 of 8 July 2016), condition that is not imposed in the case of the civil servant obtaining a material gain trough legally performing the professional duties. On the other hand, we must underline that the definition of abuse of office does not

include the scope- favouring a person, condition that is found in article 301. The previous analysis highlights that the use of the public function to favour certain persons is not conditioned by causing a prejudice or by harming the interests or the rights of an individual or a moral person, but on the contrary, the offence exists even without these two aspects.

In the case when the public servant performs an act part of his duties, breaking the law and by this act favours a person obtaining a material gain, we must consider that the civil servant committed two offences, both abuse of office and the use function to favour certain persons (Antoniou *et al.*, 2016, p. 354).

As we can see, the legislator clearly defined the conduct of the civil servant using its function to favour some individuals, by establishing some conditions and requirements essentially distinguishing this offence from the abuse of office, to prevent confusion.

In the case when performing the professional duties favouring other persons the civil servant commits other actions that constitute separate offences, the civil servant will respond for all of them, the use of use of the function to favour certain persons being associated with the offence of forging official documents, material forgery, computer-related offences, the offence of deliberate deceit and others.

4. CONCLUSIONS

The case-law in the matter of use of the function to favour certain persons is rich, this being an expression of the real need to incriminate this line of conduct. The specific conditions stated to regulate this offence underline its existence and aim to ease its delimitation from other offences.

Concluding, even if one could argue that when the act performed by the servant is legal and the material gain obtained by the person in cause is not illicit and therefore the deed should not be punished, we can not deny the impact that this line of conduct has on the sound administration. The need to prevent this line of conduct and to punish these deeds claims for a distinct regulation of an offence that could reunite all the necessary requirements underlining that the civil servant should abstain from actions that could to favour him or his spouse, a relative or an affine up to the second degree inclusively

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THE RELATIONSHIP BETWEEN JOB SATISFACTION AND JOB CHARACTERISTICS OF OLDER WORKERS IN EUROPEAN ORGANIZATIONS. A PERSPECTIVE ON GENDER DIFFERENCES

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Abstract

This study aims to analyse the job satisfaction of older employees in Europe from the perspective of gender differences. The relationship between job satisfaction and various factors such as job characteristics, work environment, employees' characteristics is of interest for human resource management in successful organizations. Previous studies on gender gap paradox show that women are more satisfied than men, even when controlling for job and personal characteristics. However, this phenomenon varies in time and among countries. The effects of several determinant factors on job satisfaction are estimated using ordinal logistic regression model applied on data from the Survey of Health, Ageing and Retirement in Europe (SHARE). The comparative analysis by gender for ordered logistic regression estimations allows to identify several differences in assessing the impact of working environment on job satisfaction for men and women. The findings of this study are discussed both from a theoretical and a practical perspective.

Keywords: *job satisfaction; older workers; logistic regression; determinant factors; work environment.*

JEL Classification: C25, J16, J28, J81

1. INTRODUCTION

Job satisfaction is a complex concept that is influenced by various factors. The employees are satisfied with their job in dependence with job attributes, such as income, workplace environment, hierarchical level (Cavanagh, Kraiger and Henry, 2020; Culibrk *et al.*, 2018; Hurtado *et al.*, 2017), hours of work, multiple jobs (Kottwitz *et al.*, 2017), but also with sociodemographic characteristics, such as gender, race, and age (Laguna *et al.*, 2017; Koh, Shen and Lee, 2016).

Job satisfaction has a positive effect on employees' motivation to work, performance, productivity, and organizational commitment. Bakotić (2016) highlighted the positive effect of organisational performance on job satisfaction,

though with a weak intensity. However, if workers are not satisfied with their job, it is reflected in absenteeism, unpunctuality, complaints, theft, affecting negatively the job turnover (Carvajal and Popovici, 2018).

Recent studies had analysed job satisfaction in relation with the planning of and decision to retire or to continue working (Fernández-Muñoz and Topa, 2018).

Previous studies have estimated the influence of several dimensions of workplace perception on job satisfaction. Raab (2020) has identified that older workers' happiness in the job is influenced by the opportunities to develop new skills, receiving support in difficult situations, and recognition for their work. Older workers' degree of job satisfaction also depends on health and on self-perceived workplace attributes, mainly on job rewards.

Berde and Rigó (2019) have investigated the job satisfaction-age profile of German and Hungarian employees. The results show that Hungarian older workers seemed to be the least satisfied, both compared to their Hungarian younger colleagues or German workers. The difference between the Hungarian and German relative job satisfaction estimates was significant.

Plopeanu *et al.* (2021) have analysed the determinants of job satisfaction for Romanian employees over the age 50 or more using the SHARE-ERIC dataset (Wave 7). They have found that a good atmosphere at the workplace and the deserved recognition received for the work done are the most reliable predictors of career satisfaction.

Ahn and García (2004) studied Western Europeans' general job satisfaction and the satisfaction levels in several job domains. They found that elderly workers (over 66 years) had declared much higher satisfaction in all job domains. Also, female workers had showed higher pay satisfaction, and lower work hour satisfaction.

In this study we aim to estimate the relationship between job satisfaction and job characteristics of older workers. For this purpose, we observed several dimensions of workplace perception extracted from a rich set of variables from the SHARE database (Survey of Health, Aging, and Retirement in Europe). Also, in this database, job satisfaction is self-reported therefore it reflects a subjective perspective. Moreover, a set of control variables, such as socio-demographic characteristics have been considered.

We organize this paper as follows. Section 2 discusses the literature on gender differences in job satisfaction; Section 3 outlines the data and the method; Section 4 presents the main results; Section 5 concludes the main findings.

2. LITERATURE REVIEW ON GENDER DIFFERENCES IN JOB SATISFACTION

The scientific literature on job satisfaction often report that women workers are more satisfied with their job than their male counterparts. This finding is regarded as a paradox since female employees commonly earn lower income, have less

attractive jobs and are promoted less frequently than their male colleagues. (Clark, 1997; Sloane and Williams, 2000; Donohue and Heywood, 2004; Long, 2005; Bender, Donohue and Heywood, 2005; Bender and Heywood, 2006; Bilimoria *et al.* 2006; Kaiser, 2007; Hagan and Kay, 2007; García-Mainar, García-Martín and Montuenga, 2016; Pita and Torregrosa, 2021).

There are different reasons that explain this paradox. Carvajal and Popovici (2018) have underlined three plausible explanations: (1) woman's primary role in childcare and housekeeping: less pressure to succeed at work, higher job satisfaction; (2) woman's prospects on job outcomes: lower expectations, higher fulfilment; (3) woman's response to work issues is more internalised and more reflected by the work-family conflict.

Mason (1995) investigated the possible gender differences in job satisfaction for U.S. women and men in management from the perspective of socialization, structural, and social role theories. The results supported the structural and social theories and underlined that the sources of satisfaction at work do not differ between men and women.

Another noteworthy research (Hodson, 1989). had proved that there are few discrepancies between men and women in the determinants of job satisfaction in relation to job characteristics, family duties, and personal expectations.

Oshagbemi, T. (2000) showed that gender does not affect the job satisfaction of university teachers directly. However, the interaction effect of gender and rank was statistically significant. Overall, female academics at higher ranks namely, senior lecturers, readers and professors, were more satisfied with their jobs than male academics of comparable ranks.

Mora and Ferrer-i-Carbonell (2009) analyse the gender differences in job satisfaction reported by recent university graduates in Catalonia (Spain) They have identified five areas of job satisfaction: work content, promotion possibilities, earnings, applicability of acquired knowledge, and job security. The results highlight that young and highly educated women report a lower satisfaction with some aspects of their job. For two of the five job satisfaction domains, the lower reported level can be explained by differences in observable characteristics, notably wages and type of contract.

In contradiction to the paradox, Sabharwal and Corley (2009) found that female faculty members had lower levels of satisfaction when compared to their male counterparts. However, the difference became insignificant when controlling for demographic, institutional and career-related factors. Moreover, the satisfaction related behaviour is different by discipline. In the science and health fields, women were significantly more satisfied than men, while in the engineering and social science fields, the differences are not significant.

Sloane and Williams (2000) explained the gender differences in job satisfaction by self-selection of women into jobs with highly valued attributes.

Redmond and McGuinness (2020) studied job satisfaction using data for 28 EU countries and discovered that, on average, women are more satisfied than men, even when controlling for personal, job and family characteristics. Nevertheless, the gap becomes insignificant when including job preferences. The results outlined that women consider more important the work-life balance and the intrinsic attractiveness of the work.

The gender-gap paradox cannot be considered a general phenomenon since the gender discrepancy is decreasing over time and there are substantial differences across countries (Pita and Torregrosa, 2021).

As there is a vivid debate in literature concerning the possible gender differences in job satisfaction, we intend to verify the hypothesis that men and women perceptions on workplace environment are reflected in varying degree of job satisfaction.

3. DATA AND METHOD

3.1 Sample and variables

This study uses data from the Survey of Health, Aging and Retirement in Europe (SHARE). Interviews for wave 7 were conducted in 2017, and included data collection in 28 countries. Full coverage of the EU was achieved by including 8 new countries in SHARE Wave 7: Finland, Lithuania, Latvia, Slovakia, Romania, Bulgaria, Malta and Cyprus (Börsch-Supan, 2022).

The Wave 7 questionnaire contains a SHARELIFE questionnaire that focuses on people's life histories. It includes various areas of respondents' lives, such as partners, children, housing, work history, health and health care. The Work Quality (WQ) module collects information on work quality such as effort, demand, control and job circumstances in the respondent's past (Bergmann, Scherpenzeel and Börsch-Supan, 2019; Börsch-Supan, 2022).

In this study, the dependent variable measures the satisfaction with job through the following question (wq727_jobsatisf): *All things considered I was satisfied with my job as (job title). Would you say you strongly agree, agree, disagree or strongly disagree?*

The possible answer categories which relate to each other in an ordered way follow the coding: 1. *Strongly agree*, 2. *Agree*, 3. *Disagree*, 4. *Strongly disagree*.

An important set of workplace perception variables is considered for explaining job satisfaction. The responses are on a five points Likert scale, from 1. *Strongly agree* to 4. *Strongly disagree*.

The association between the explanatory variables and gender was tested (Table 1).

Table 1. Work perception variables with tests

Variable	Name	Pearson's chi-squared test statistic
My job as (<i>job title</i>) was physically demanding.	wq002_wqpdem	$\chi^2 (3) = 28.045$ Pr = 0.000
My immediate work environment was uncomfortable (for example, because of noise, heat, crowding).	wq003_wquncom	$\chi^2 (3) = 67.452$ Pr = 0.000
I was under constant time pressure due to a heavy workload.	wq004_wqtimpr	$\chi^2 (3) = 7.773$ Pr = 0.051
My work was emotionally demanding.	wq005_wqemdem	$\chi^2 (3) = 5.100$ Pr = 0.165
I was exposed to recurrent conflicts and disturbances.	wq006_wqconfl	$\chi^2 (3) = 40.966$ Pr = 0.000
I had very little freedom to decide how to do my work.	wq007_wqfred	$\chi^2 (3) = 5.549$ Pr = 0.136
I had an opportunity to develop new skills.	wq008_wqskill	$\chi^2 (3) = 96.243$ Pr = 0.000
I received the recognition I deserved for my work.	wq009_wqrecogn	$\chi^2 (3) = 9.677$ Pr = 0.022
Considering all my efforts and achievements, my salary was adequate.	wq010_wqsalry	$\chi^2 (3) = 70.632$ Pr = 0.000
I received adequate support in difficult situations.	wq011_wqsupprt	$\chi^2 (3) = 1.896$ Pr = 0.594
There was a good atmosphere between me and my colleagues.	wq012_wqatmos	$\chi^2 (3) = 5.751$ Pr = 0.124
In general, employees were treated fairly.	wq013_wqfair	$\chi^2 (3) = 1.161$ Pr = 0.762
The state took adequate measures to protect me from health hazards at the workplace.	wq014_wqrisk	$\chi^2 (3) = 7.950$ Pr = 0.047

Source: own calculations in Stata 17.0

The results show the significance of the differences between men and women by applying the Pearson's chi-squared test statistic. It is important to highlight significant differences in the perception of workplace environment between men and women.

Male workers agree in a higher proportion than their female colleagues that job was physically demanding, the work environment was uncomfortable, and they were exposed to recurrent conflicts and disturbances at work.

Moreover, male workers are more in favour than their female counterparts that job gave them the opportunity to develop new skills and that they received the right salary reflecting their effort and achievements at work.

Women disagree more than men that they had received the deserved recognition for their work. Also, female workers are less in favour of the opinion that state took measures to protect them from health hazards at the workplace.

In order to underline the influence of the explanatory variables, we considered a set of control variables such as age, income, marital status, and health status.

The summary statistics for the dependent variable and the control variables are presented for the overall sample and by groups according to gender variable (Table 2).

Table 2. Summary statistics with tests

Variable (categorical)	Frequency, n (Relative frequency, %)		
	Total	Male	Female
Job satisfaction			
<i>Strongly agree</i>	3,461 (48.74%)	1,411 (50.88%)	2,050 (47.37%)
<i>Agree</i>	3,046 (42.90%)	1,170 (42.19%)	1,876 (43.35%)
<i>Disagree</i>	472 (6.65%)	147 (5.30%)	325 (7.51%)
<i>Strongly disagree</i>	122 (1.72%)	45 (1.62%)	77 (1.78%)
Pearson's chi-squared test statistic	$\chi^2 (3) = 17.4525$ Pr = 0.001		
Health in general			
<i>Excellent</i>	263 (3.70%)	132 (4.76%)	131 (3.03%)
<i>Very good</i>	661 (9.31%)	314 (11.32%)	347 (8.02%)
<i>Good</i>	2,219 (31.25%)	932 (33.61%)	1,287 (29.74%)
<i>Fair</i>	2,605 (36.68%)	919 (33.14%)	1,686 (38.96%)
<i>Poor</i>	1,353 (19.05%)	476 (17.17%)	877 (20.26%)
Pearson's chi-squared test statistic	$\chi^2 (4) = 65.7577$ Pr = 0.000		
Marital status			
<i>Married and living together with spouse</i>	3,552 (50.02%)	1,773 (63.94%)	1,779 (41.10%)
<i>Registered partnership</i>	66 (0.93%)	36 (1.30%)	30 (0.69%)
<i>Married, living separated from spouse</i>	125 (1.76%)	62 (2.24%)	63 (1.46%)
<i>Never married</i>	315 (4.44%)	155 (5.99%)	160 (3.70%)
<i>Divorced</i>	597 (8.41%)	227 (8.19%)	370 (8.55%)
<i>Widowed</i>	2,446 (34.45%)	520 (18.75%)	1,926 (44.50%)
Pearson's chi-squared test statistic	$\chi^2 (5) = 527.8822$ Pr = 0.000		
Variable (numerical)	Mean (Std. Dev.)		
	Total	Male	Female
Age	69.90 (8.88)	69.5824 (8.694)	70.10698 (8.989)
Two-sample t test (equal variances)	t = -2.4298 df = 7099 Pr = 0.0151		
Income	15,285.25 (1,186,696)	1,491.663 (7,831.971)	24,122.96 (1,520,032)
Two-sample t test (unequal variances)	t = -0.9795 df = 4327.36 Pr = 0.3274		

Source: own calculations in Stata 17.0

The responses for the job satisfaction question show a higher percentage of male workers that are satisfied with job (93.07%) than female workers (90.72%). The gender differences are statistically significant for job satisfaction variable and for the control variables, except income.

In order to deal with some limitations of the data, we have excluded observations with missing values or unknown for job satisfaction and for the key variables of workplace perception or the control variables. For these variables, the values are missing at random, so no imputations have been necessary. The final sample consists of 7,101 persons. The female sample is 60.65% (4,328 persons) while male sample is 39.05% (2,773 persons).

3.2 Method

The econometric approach for assessing the effect of workplace perception on job satisfaction consists in estimating an ordinal logistic regression model. This model assesses the relationship between an ordinal response variable and several explanatory variables. Job satisfaction is an ordinal variable that is a categorical variable for which there is a clear ordering of the category levels (the degree of agreement with the survey question asking whether a worker is satisfied in his or her job). The explanatory variables are either continuous or categorical (Agresti, 2002).

The multinomial ordered logit model has the following specification (Liu, 2016; Ferrer-i Carbonell and Frijters, 2004).

$$\log\left(\frac{P(Y \leq j)}{P(Y > j)}\right) = \text{logit}(P(Y \leq j)) = \alpha_j - \beta_1 x_1 - \beta_2 x_2 - \dots - \beta_p x_p \quad (1)$$

where:

- Y is the categorical and ordered dependent variable;
- X_1, X_2, \dots, X_p are the independent variables (workplace perception variables and control variables).

The error term of this model follows a logistic distribution with the cumulative distribution function $F(z)$.

$$\varepsilon_i \sim F(z) = \frac{e^z}{1+e^z} \quad (2)$$

The ordered logit model has been estimated using STATA 17.0 software (www.stata.com).

The influence of the workplace perception variables on job satisfaction has been estimated independently for male and female workers in order to outline specific gender behaviour.

4. RESULTS

The estimations of the multinomial ordered logit model for the male respondents are presented in Table 3.

For men that agree that work was physically demanding, the odds of being more dissatisfied with job increases with 37.17%, holding constant all other variables.

Being emotionally involved at job augments the job satisfaction. More male workers disagree that job is emotionally demanded, more they are dissatisfied.

When *work had little freedom to decide* goes from “strongly agree” to “disagree”, the odds of *Job satisfaction* going down (from strongly agree=1 towards strongly disagree=4) are 0.61 times lower than the odds of *Job satisfaction* going up. Therefore, more freedom for decision at work implies a higher job satisfaction.

The influence of job quality dimensions (*wq008* → *wq014*), such as development of skills, recognition, adequate salary, adequate support, fair treatment, and reduced health risks is positive on job satisfaction (odds-ratios are greater than one).

For men that strongly disagree that *work allowed development of skills*, the odds of being more dissatisfied at job is 2.81 times that of persons that strongly agree with it, holding constant all other variables.

Less recognition at work for male respondents, higher dissatisfaction with their job.

Males’ satisfaction at job decreases when their health declines. Thus, for persons whose health status is fair, the odds of being more dissatisfied at job is 2.46 times that of men with an excellent health, holding constant all other variables.

Marital status of is not significant for predicting job satisfaction among male workers.

Table 3. Ordered logistic regression estimations for male sample

Independent variable	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Age	0.9816	0.0052	-3.52	0.000	0.9716	0.9918
Income	1.0000	0.0000	-0.87	0.384	1.0000	1.0000
Health						
<i>Very good</i>	1.9182	0.4740	2.64	0.008	1.1818	3.1134
<i>Good</i>	1.8726	0.4215	2.79	0.005	1.2046	2.9111
<i>Fair</i>	2.4599	0.5550	3.99	0.000	1.5808	3.8278
<i>Poor</i>	2.4074	0.5681	3.72	0.000	1.5159	3.8232
Marital status						
<i>Reg. part.</i>	0.8312	0.3220	-0.48	0.633	0.3890	1.7761
<i>Mar., liv.sep.</i>	0.9485	0.2693	-0.19	0.852	0.5438	1.6545
<i>Nev. mar.</i>	1.4109	0.2510	1.94	0.053	0.9956	1.9995

EUROPEAN ADMINISTRATIVE AREA – INTEGRATION AND RESILIENCE DYNAMICS

Independent variable	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
<i>Divorced</i>	1.0139	0.1572	0.09	0.929	0.7482	1.3739
<i>Widowed</i>	1.0410	0.1183	0.35	0.724	0.8332	1.3006
Work was physically demanding (wq002)						
<i>Agree</i>	1.3717	0.1521	2.85	0.004	1.1038	1.7046
<i>Disagree</i>	0.8833	0.1140	-0.96	0.336	0.6858	1.1375
<i>Strongly disagree</i>	0.8656	0.1633	-0.77	0.444	0.5981	1.2528
Work was uncomfortable (wq003)						
<i>Agree</i>	0.8793	0.1137	-0.99	0.320	0.6824	1.1330
<i>Disagree</i>	0.8486	0.1164	-1.20	0.232	0.6485	1.1104
<i>Strongly disagree</i>	0.6832	0.1207	-2.16	0.031	0.4832	0.9659
Work had heavy time pressure (wq004)						
<i>Agree</i>	0.9342	0.1228	-0.52	0.605	0.7220	1.2088
<i>Disagree</i>	0.8334	0.1179	-1.29	0.197	0.6316	1.0995
<i>Strongly disagree</i>	0.6312	0.1296	-2.24	0.025	0.4220	0.9440
Work was emotionally demanding (wq005)						
<i>Agree</i>	1.3815	0.1914	2.33	0.020	1.0530	1.8125
<i>Disagree</i>	1.5124	0.2211	2.83	0.005	1.1356	2.0144
<i>Strongly disagree</i>	1.6196	0.2829	2.76	0.006	1.1500	2.2808
Work involved conflicts (wq006)						
<i>Agree</i>	0.8579	0.1670	-0.79	0.431	0.5857	1.2566
<i>Disagree</i>	0.8616	0.1661	-0.77	0.440	0.5904	1.2573
<i>Strongly disagree</i>	0.7553	0.1547	-1.37	0.171	0.5057	1.1283
Work had little freedom to decide (wq007)						
<i>Agree</i>	0.7940	0.1136	-1.61	0.107	0.5998	1.0510
<i>Disagree</i>	0.6079	0.0870	-3.48	0.001	0.4592	0.8048
<i>Strongly disagree</i>	0.6142	0.0982	-3.05	0.002	0.4489	0.8402
Work allowed development of skills (wq008)						
<i>Agree</i>	1.6528	0.2047	4.06	0.000	1.2966	2.1069
<i>Disagree</i>	2.1460	0.3096	5.29	0.000	1.6174	2.8472
<i>Strongly disagree</i>	2.8114	0.5334	5.45	0.000	1.9383	4.0777
Work gave recognition (wq009)						
<i>Agree</i>	1.6468	0.2153	3.82	0.000	1.2746	2.1277
<i>Disagree</i>	2.5574	0.4084	5.88	0.000	1.8701	3.4973
<i>Strongly disagree</i>	3.0349	0.7322	4.60	0.000	1.8914	4.8698
Work had adequate salary (wq010)						
<i>Agree</i>	1.2354	0.1864	1.40	0.161	0.9192	1.6604
<i>Disagree</i>	1.6482	0.2712	3.04	0.002	1.1939	2.2754
<i>Strongly disagree</i>	1.5049	0.3224	1.91	0.056	0.9888	2.2902
Work had adequate support (wq011)						
<i>Agree</i>	1.1772	0.1769	1.09	0.278	0.8768	1.5804
<i>Disagree</i>	1.6284	0.2812	2.82	0.005	1.1608	2.2843
<i>Strongly disagree</i>	1.4424	0.3397	1.56	0.120	0.9092	2.2885

Independent variable	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]		
Work atmosphere (wq012)							
<i>Agree</i>	1.4212	0.1498	3.34	0.001	1.1560	1.7472	
<i>Disagree</i>	1.9556	0.4312	3.04	0.002	1.2693	3.0129	
<i>Strongly disagree</i>	3.3997	1.5443	2.69	0.007	1.3957	8.2811	
Work employees treated fair (wq013)							
<i>Agree</i>	1.3035	0.1751	1.97	0.048	1.0018	1.6961	
<i>Disagree</i>	1.6962	0.2939	3.05	0.002	1.2078	2.3822	
<i>Strongly disagree</i>	2.0267	0.6356	2.25	0.024	1.0961	3.7475	
Work health risk reduced (wq014)							
<i>Agree</i>	1.2719	0.1718	1.78	0.075	0.9761	1.6574	
<i>Disagree</i>	2.0392	0.3209	4.53	0.000	1.4980	2.7759	
<i>Strongly disagree</i>	2.0462	0.4119	3.56	0.000	1.3792	3.0359	
Number of obs.						2773	
LR chi2(50)						870.45	
Prob > chi2						0.000	
Log likelihood						-2040.3893	
Pseudo R2						0.1758	

Source: own calculations in Stata 17.0

The outcomes for female sample are presented in Table 4.

For persons that strongly disagree that work was physically demanding, the odds of being more dissatisfied with job decreases with 28.57%, holding constant all other variables.

More people disagree that work was uncomfortable, less they are dissatisfied with their job. For female persons that strongly disagree that work was uncomfortable, the odds of being more dissatisfied at job decreases with 46.67% comparing to female persons strongly agreeing that work was uncomfortable.

More female people disagree with job quality dimensions (*wq008* → *wq014*), such as development of skills, recognition, adequate salary, adequate support, fair treatment, and reduced health risks, more they are dissatisfied at job. For this set of predictors, all odds-ratios are greater than one, therefore, job satisfaction increases as the degree of agreement with work quality factors increases. Consequently, increasing job support, development, and security will increase job satisfaction.

For persons that strongly disagree that *work allowed development of skills*, the odds of being more dissatisfied at job is 3.65 times that of persons that strongly agree with it, holding constant all other variables.

When *work gave recognition* goes from “strongly agree” to “agree”, the odds of *Job satisfaction* going down (from strongly agree=1 towards strongly disagree=4) are 1.68 times higher than the odds of *Job satisfaction* going up.

Table 4. Ordered logistic regression estimations for female sample

Independent variable	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Age	0.9901	0.0041	-2.43	0.015	0.9821	0.9981
Income	1.0000	0.0000	0.17	0.863	1.0000	1.0000
Health						
<i>Very good</i>	1.3439	0.3404	1.17	0.243	0.8180	2.2078
<i>Good</i>	1.5544	0.3600	1.9	0.057	0.9872	2.4474
<i>Fair</i>	1.7774	0.4090	2.5	0.012	1.1321	2.7903
<i>Poor</i>	1.9555	0.4618	2.84	0.005	1.2310	3.1065
Marital status						
<i>Reg. part.</i>	1.5892	0.6028	1.22	0.222	0.7557	3.3423
<i>Mar., liv.sep.</i>	1.0355	0.2856	0.13	0.899	0.6031	1.7778
<i>Nev. mar.</i>	1.3173	0.2342	1.55	0.121	0.9298	1.8663
<i>Divorced</i>	1.0857	0.1353	0.66	0.509	0.8504	1.3860
<i>Widowed</i>	1.2785	0.0992	3.17	0.002	1.0982	1.4885
Work was physically demanding (wq002)						
<i>Agree</i>	1.1697	0.1088	1.69	0.092	0.9748	1.4036
<i>Disagree</i>	0.9044	0.0933	-0.97	0.33	0.7388	1.1071
<i>Strongly disagree</i>	0.7143	0.1024	-2.35	0.019	0.5393	0.9462
Work was uncomfortable (wq003)						
<i>Agree</i>	1.0219	0.1135	0.19	0.846	0.8220	1.2703
<i>Disagree</i>	0.7937	0.0911	-2.01	0.044	0.6338	0.9938
<i>Strongly disagree</i>	0.5333	0.0754	-4.44	0.000	0.4042	0.7036
Work had heavy time pressure (wq004)						
<i>Agree</i>	0.9060	0.0999	-0.9	0.371	0.7300	1.1245
<i>Disagree</i>	0.8741	0.1054	-1.12	0.264	0.6902	1.1071
<i>Strongly disagree</i>	0.9000	0.1494	-0.63	0.526	0.6500	1.2461
Work was emotionally demanding (wq005)						
<i>Agree</i>	1.3119	0.1439	2.47	0.013	1.0580	1.6266
<i>Disagree</i>	1.2976	0.1489	2.27	0.023	1.0362	1.6249
<i>Strongly disagree</i>	1.1408	0.1661	0.9	0.366	0.8576	1.5175
Work involved conflicts (wq006)						
<i>Agree</i>	1.0014	0.1776	0.01	0.994	0.7073	1.4177
<i>Disagree</i>	0.9580	0.1642	-0.25	0.802	0.6846	1.3405
<i>Strongly disagree</i>	0.9086	0.1637	-0.53	0.595	0.6383	1.2935
Work had little freedom to decide (wq007)						
<i>Agree</i>	0.9885	0.1107	-0.1	0.918	0.7936	1.2312
<i>Disagree</i>	0.8979	0.1008	-0.96	0.338	0.7205	1.1190
<i>Strongly disagree</i>	0.6917	0.0912	-2.8	0.005	0.5343	0.8956
Work allowed development of skills (wq008)						
<i>Agree</i>	1.8447	0.2062	5.48	0.000	1.4817	2.2966
<i>Disagree</i>	2.4637	0.2974	7.47	0.000	1.9446	3.1213
<i>Strongly disagree</i>	3.6525	0.5200	9.1	0.000	2.7632	4.8281

Independent variable	Odds Ratio	Std. Err.	z	P>z	[95% Conf. Interval]	
Work gave recognition (wq009)						
<i>Agree</i>	1.6791	0.1731	5.03	0.000	1.3719	2.0551
<i>Disagree</i>	2.3250	0.2873	6.83	0.000	1.8249	2.9621
<i>Strongly disagree</i>	2.7737	0.5135	5.51	0.000	1.9296	3.9870
Work had adequate salary (wq010)						
<i>Agree</i>	1.2781	0.1748	1.79	0.073	0.9775	1.6711
<i>Disagree</i>	1.9917	0.2815	4.88	0.000	1.5098	2.6273
<i>Strongly disagree</i>	2.5578	0.4234	5.67	0.000	1.8491	3.5381
Work had adequate support (wq011)						
<i>Agree</i>	1.2552	0.1553	1.84	0.066	0.9850	1.5995
<i>Disagree</i>	1.3536	0.1916	2.14	0.032	1.0257	1.7865
<i>Strongly disagree</i>	1.6287	0.3163	2.51	0.012	1.1131	2.3831
Work atmosphere (wq012)						
<i>Agree</i>	1.5109	0.1269	4.91	0.000	1.2816	1.7812
<i>Disagree</i>	1.6113	0.2662	2.89	0.004	1.1656	2.2275
<i>Strongly disagree</i>	1.9340	0.6186	2.06	0.039	1.0332	3.6202
Work employees treated fair (wq013)						
<i>Agree</i>	1.6976	0.1807	4.97	0.000	1.3780	2.0914
<i>Disagree</i>	2.3651	0.3229	6.3	0.000	1.8098	3.0908
<i>Strongly disagree</i>	2.1049	0.5066	3.09	0.002	1.3133	3.3736
Work health risk reduced (wq014)						
<i>Agree</i>	1.5585	0.1729	4	0.000	1.2540	1.9370
<i>Disagree</i>	1.8832	0.2378	5.01	0.000	1.4703	2.4119
<i>Strongly disagree</i>	1.8276	0.2803	3.93	0.000	1.3531	2.4684
Number of obs.						4328
LR chi2(50)						1567.79
Prob > chi2						0.0000
Log likelihood						-3271.5838
Pseudo R2						0.1933

Source: own calculations in Stata 17.0

Females' satisfaction at job decreases when their health is importantly deteriorated. Thus, for persons whose health status is poor, the odds of being more dissatisfied at job is 1.95 times that of persons with an excellent health, holding constant all other variables.

For people that are widowed, the odds of being more dissatisfied at job is 1.28 times that of persons that are married.

For every year increase in person's age, the odds of being less satisfied at job decreases 1%, holding constant all other variables.

5. CONCLUSIONS

This study aimed to analyse the job satisfaction of older employees in Europe from the perspective of gender differences. We considered a dataset on older workers from 28 European countries from the Survey of Health, Ageing and Retirement in Europe (SHARE).

The results conclude a higher level of job satisfaction for older male workers than for older female workers. The influence of workplace perception variables has been tested independently for men and women samples, in order to explain the gender gap in job satisfaction.

The comparative analysis by gender for ordered logistic regression estimations allows to draw some conclusions on the differences in assessing the impact of working environment on job satisfaction for men and women.

The poor quality of their immediate work environment (noise, heat, crowding) is significant in explaining job dissatisfaction only for female respondents.

Salary is a more important predictor for job satisfaction for female workers than for male workers.

Larger values of odds-ratios for female sample for the importance of skills development at job show that women are more satisfied with job when they have the opportunity to develop new abilities than their male counterparts.

The health status has a smaller influence on job satisfaction for female sample than for male sample. However, marital status is a significant predictor of job satisfaction only for female workers.

In conclusion, workplace perception is an important predictor for older workers' satisfaction with job. The job characteristics that concern the ability to develop new skills, the recognition received at work, fair treatment are especially important, both for men and women. Moreover, health plays an important role next to workplace perceptions in determining the degree of job satisfaction.

The European organizations should consider the importance of workplace perception factors in order to increase job satisfaction of older workers. By creating an adequate environment for their employees, companies could increase the motivation of older workers, their desire to remain employed, and their job satisfaction with positive consequences for business outcomes.

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A QUALITATIVE STUDY OF THE YOUNG BUYERS' MOBILE SHOPPING BEHAVIOR. AN EXPLORATION OF THE ADOPTION FACTORS, IMPULSE BUYING AND ENVIRONMENTAL AWARENESS

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Abstract

The purpose of the study is to investigate the mobile shopping buying behavior. The research follows three objectives: (1) to investigate the factors associated with adoption of mobile commerce among young buyers; (2) to understand the role of impulse buying in mobile commerce; (3) to explore the connection between mobile shopping and customers' awareness of the need to protect the environment. The sample consisted of 25 young buyers who usually order different products using the mobile phone. As a research methodology, we used the qualitative research, conducting online in-depth interviews, based on an interview guide, with open-ended questions. Some important themes were identified, regarding the factors affecting the mobile commerce preference, such as: trust, social influence, enjoyment seeking and bargain hunting. The impulsive buying is familiar

to young buyers, who describe the reasons for this behavior. Regarding the sustainability theme, this is not a major concern for the mobile shoppers but they usually reuse the packages they receive with the order.

Keywords: *mobile shopping; social influence; enjoyment seeking; impulse buying; sustainability.*

JEL Classification: M31

1. INTRODUCTION

The use of mobile devices, such as tablets or mobile phones, to purchase goods and services is labelled as mobile shopping (Wu and Hisa, 2004; Ozok and Wei, 2010; Hillman *et al.*, 2012; Wong *et al.*, 2012; Chen, 2013; Agrebi and Jallais, 2015; Yang, 2010).

As mobile devices highly penetrated individuals' lifestyle, mobile commerce, also labelled as m-commerce, is presently a very popular online shopping channel (Wu and Wang, 2005; Huang, Korfiatis and Chang, 2018). In this context, customer retention is the key for higher sales, as desired by mobile retailers (Chopdar and Balakrishnan, 2020).

The purpose of this research is to investigate the mobile shopping buying behaviour. The research follows three objectives: (1) to investigate the factors associated with adoption of mobile commerce among young buyers; (2) to understand the role of impulse buying in mobile commerce; (3) to explore the connection between mobile shopping and customers' awareness of the need to protect the environment.

Data was collected based on qualitative research, conducting online in-depth interviews, based on an interview guide, with open-ended questions.

We started by presenting the main m-shopping factor adoption in the previous literature, setting the framework for the qualitative research we present in this study. The results were interpreted based on main topics addressed in the literature.

2. LITERATURE REVIEW

As mobile device penetration is dominating our lifestyle with high record usage (Marriott, Williams and Dwivedi, 2017), researchers continuously investigate reasons behind mobile shopping, in contrast to online shopping from other devices or traditional offline shopping. Particularly, researchers questioned on reasons of m-shopping adoption, as the understanding of m-shopping is still limited (Marriott, Williams and Dwivedi, 2017).

Previous research identified the important advantages of mobile shopping compared to what had already become traditional online commerce. As such, studies reveal advantages such as convenience (Sanakulov and Karjaluoto, 2015), instant connectivity (Nassuora, 2013), localisation (Zhang, Zhu and Liu, 2012), ubiquity (Zhang, Zhu and Liu, 2012; Nassuora, 2013) or accessibility (Sanakulov and Karjaluoto, 2015).

One such study is Ng's (2016) research, investigating associated factors of mobile commerce adoption, for the specific target of Chinese young adults. The research revealed factors such as technology acceptance readiness (TAR), personality traits and online trust, highlighting the importance of personality differences that may motivate or demotivate consumers when it comes to using new mobile services; as for categories that are more likely to use mobile shopping, his research reveals that impulsive and innovative consumers have this predisposition.

Tarhini *et al.* (2019) investigated the factors behind mobile commerce activities adoption. Their research considered consumers of Oman, a developing country. The research highlighted that behavioural intention on adoption of m-commerce is influenced by information quality, performance expectancy, trust, facilitating conditions, service quality, price value and hedonic motivation, while social influence, self-efficacy, effort expectancy or system quality were not identified as having a significant effect. Information quality is the strongest influencing factor. These results should be interpreted for the specific Oman low penetration rate of m-commerce adoption, as presented by authors (Tarhini *et al.*, 2019).

Researchers reveal that impulse buying behaviour of consumers will increase under the influence of mobile commerce (Zheng *et al.*, 2019).

Zheng *et al.* (2019) studied the hedonic and utilitarian browsing in the mobile commerce context and revealed that utilitarian browsing influences consumers indirectly to buy impulsively through hedonic browsing, while hedonic browsing has a positive and direct influence on impulsive buying. Thus, their study (Zheng *et al.*, 2019) confirms the appropriateness of both hedonic and utilitarian browsing adoption in the online context.

Chopdar and Balakrishnan (2020) identified mobile shopping applications' drivers of consumer impulsiveness and perceived value, namely perceived ubiquity – with the most powerful effect on impulsiveness, visual attractiveness, app incentives and contextual offering.

Social media transformed the consumption pattern and the advertising strategies. Researchers become more interested in the relation between impulsive buying behaviour and sustainable purchase behaviour. As such, the study of Zafar *et al.* (2021) reveals that personalised advertising, specific in the social media environment influences the urge to buy impulsively but the environmental knowledge decreases impulsive urges.

The literature on m-shopping adoption is focused on adoption factors, buying impulsivity and environmental awareness. Concluding on the factors influencing the m-shopping adoption, in their literature review study, Marriott, Williams and Dwivedi (2017) present an extensive list of factors of m-shopping, as previously identified by researchers in various contexts; this list includes factors such as perceived usefulness (Yang, 2010; Wong *et al.*, 2012; Agrebi and Jallais, 2015),

perceived ease of use (Yang, 2010; Wong *et al.*, 2012; Agrebi and Jallais, 2015), facilitating conditions (Yang, 2010), attitude (Yang, 2010), innovativeness (Wong *et al.*, 2012), experience (Agrebi and Jallais, 2015), satisfaction (Agrebi and Jallais, 2015), hedonic motivation (Yang, 2010; Agrebi and Jallais, 2015) and / or utilitarian motivation (Yang, 2010).

However, research investigating the factors influencing mobile commerce impulse buying is limited at this date.

3. METHOD AND PARTICIPANTS

3.1. Participants

The sample consisted of 25 bachelor's degree students. The main selection criterion was the usage of the mobile phone for shopping. We selected students that made at least 3 online orders in the past month, using their mobile phone.

3.2. Interview guide

The interviews were conducted using an interview guide with several open-ended questions. The interview guide was structured into 6 sections, as follows:

- *General questions* about mobile shopping – what are the product categories they order the most through mobile, what is the frequency of their orders, what are the advantages and disadvantages of mobile shopping;
- *Triggering factors* in mobile shopping;
- *The best and the worst mobile shopping experiences* – what was the ordered product, how long did it take to decide, what went wrong/well, what were their feelings;
- *Impulsivity* - what do they think about the people that shop on their mobile phone without thinking too much, describing a mobile shopping impulse buying experience;
- *Sustainability* - is there a link between mobile shopping and the environment, what do they do with the packaging of things they order online, what are the actions they take in order to protect the environment?
- *Adoption factors* - what are the aspects that influence them to order from mobile.

3.3. Data collection

In-depth interviews were carried out using Microsoft Teams video calls. Each interview lasted between 20 and 40 minutes. A number of 4 moderators were involved, each of them conducting between 5 and 9 interviews. The discussions were recorded using the Microsoft Teams recording function.

3.4. Data analysis.

We used thematic analysis and a deductive approach in analysing the results.

4. RESULTS

4.1. Mobile shopping – general

The product categories the respondents are ordering the most through mobile are clothing and footwear (25), cosmetic products (13), food (8), and electronics (5). We didn't find any patterns regarding the frequencies of mobile ordering, as it depends on the category of products - some participants can order food on a daily basis, others would order once a week, twice a month or even once a month. Clothing items are ordered 1 to 3 times a month. Cosmetics are ordered even less often (twice a year), and electronics are ordered 2 to 3 times a year.

Participants identified a series of advantages of using the mobile phone for shopping, the one mentioned most often being the easiness of use (16), followed by the convenience of using the mobile phone – they appreciated the instant access and the fact that they can order from everywhere they are when they want to buy something (11). Other perceived advantages are shown in the box below.

Advantages of mobile shopping

- *“I can quickly scroll to get what I want”*
- *“I spend a lot of time on my phone anyway”*
- *“I can order at any hour, even when I'm not at my computer”*
- *“It's very convenient, since I already do a lot of stuff using my phone”*
- *“I can easily track the status of the order”*
- *“I can hunt bargains more easily”*
- *“I can compare the prices of the desired product more easily”*
- *“I love to use most of the shopping apps”*
- *“It's very easy to pay since I have the payments details saved into my phone”*
- *“The bond of a person with its phone is tighter”*
- *“I save time and I'm not as tired as when I go to physical stores”*

Even if the subjects were very excited about the advantages of using the mobile phone for shopping, they also identified some disadvantages. One of them is the limitations provided by a small screen, as opposed to a larger one (such as a computer) – the pictures are displayed smaller (4) and the mobile shopping being prone to more errors happening while ordering (4). Other ideas about the disadvantages of mobile shopping are shown using the quotes in the box below.

Disadvantages of mobile shopping

- *“I miss the navigation between browser’s tabs, it’s easier to compare offers when you open several tabs”*
- *“The computer makes it easier to take my time and compare products”*
- *“My phone’s battery dies quickly and it happened to not be able to finish the order. I don’t have this problem with the computer”*
- *“The phone can get your eyes tired”*
- *“I’m not analysing much when I buy through my phone”*
- *“There are still websites not optimised for mobile, making the navigation process harder”*
- *“The mobile phone makes me buy more products and more often than when I need them”*
- *“I usually browse from desktop, but I order from mobile”*

4.2. Triggering factors

The triggering factor the subjects were more aware of is realising they have a need (16). They were able to name the exact need they have – hunger, the desire to socialise, the desire to be fashionable, replacing an old product, and the need to relax while browsing. Another triggering factor that seemed important is viewing an ad on Instagram, Facebook, and even on TV (15). Other mentioned triggers were promotions (4), friend’s recommendations, and online reviews (4).

An interesting pattern we found while discussing with the participants is that when the purchase is triggered by the need to relax, the purchase is postponed, the products are kept in the basket, but when the purchase is triggered by the need to have that product (objective need), the order is launched faster.

Generally, even if the subjects say they don't think much when they're buying something, they go through a buying process, analysing several offers, comparing by price or looking for deals.

4.3. The best mobile shopping experience

When asked what was the best mobile experience they can recall, the participants remembered experiences involving buying cosmetics (9), mobile phones (5) and other items such as footwear, clothing, electronics or books. When asked what made that particular experience the best, the most frequent answers were the fast delivery (8), the fact that the product exceeded their expectation (8), the quick placement of the order (5), the item was discounted (4), the order included a gift (4). Other answers are shown in the box below.

What made the best mobile experience the best

- *“The goods arrived in good condition”*
- *“Very good price”*
- *“They asked for my feedback”*
- *“The communication with client service team was very pleasant”*
- *“I ordered some fragile products and they were packaged and transported properly”*

We also asked participants to recall their feelings throughout the ordering process, most of them recalled the feeling of joy (13), enthusiasm (12) impatience (8), delight (6), gratitude (4), accomplishment (1). Not all the feelings they have were positive though, some feelings with negative valence as guilt, weirdness (because of the pandemics), remorse, anxiety and fear were also mentioned.

4.4. The worst mobile shopping experience

The next topic we covered was the worst mobile shopping experience they recalled. Participants reported experiences involving buying clothing (11), electronics (4), food (3), books (2) and other items.

The principal reason of dissatisfaction involved something that went wrong with the product (16), the return process (5), the late delivery (6), something wrong with the delivery (4), the contact staff was rude (2), and payment issues (2). Other factors that contributed to the dissatisfaction are shown in the box below.

What made the worst mobile experience the worst

- *“The product was not as described”*
- *“The sizing was wrong”*
- *“The quality was off”*
- *“The product was broken”*
- *“The delivery guy could not find a solution for a simple problem”*
- *“I had to pay for the product return”*

Even if the overall the experience was bad, some participants also remembered some positive aspects about the same experience, such as the fact that the delivery was fast (5), the ordering process was quick (4), the staff was kind and helpful (4), the product was good (1), the price was good (1).

The most frequent feeling they remember about their worst mobile shopping experience was disappointment (16), positive feelings – joy, enthusiasm and delight – mostly while waiting for the products (14), impatience (10), sadness (4),

anger (4), contentment (3), remorse (1), regret (1), resignation (1), curiosity (1) and fear (1).

4.5. Impulsivity

When asked what was their opinion regarding people ordering products from mobile without much thought and analysis, most of the participants had negative comments, some of them are illustrated in the box bellow.

Opinion on people ordering products from mobile without much thought and analysis

- *“They have a lot of money and they don't care how much they spend”*
- *“They don't think about the risks - the product may not be good”*
- *“They have no patience”*
- *“They buy products they don't need”*
- *“They waste their money”*
- *“They buy out of habit, for the sake of buying”*
- *“It is not wise to order without studying the market”*
- *“I don't have a very good opinion”*
- *“I feel sorry for the people who do not inform themselves better before buying and risk being deceived”*
- *“They are easily influenced by advertisements”*
- *“They risk to be taken advantage of”*
- *“It's not ok, you could be disappointed”*
- *“It is NOT ok what they are doing. I have this type of experiences with my family. You have to be very knowledgeable even when buying cheap products”*

Only 6 opinions were on the neutral or positive side – “They are excited about the product they are about to buy”, “Most of us order on impulse, but sometimes it's a good thing”, “I think for them it's a way to relax”, “It is better not to waste a lot of time. Sometimes it's ok to be more spontaneous.” and “There are people who are aware that it's possible the product will be sold out soon and take advantage of the current offer”.

Asked if they recalled any a purchase that was made impulsively, the main triggers were social media advertising (9), promotion (4), seeing a friend buying the item (2), the joy of collecting that product (2), sadness (1), boredom (1), a spontaneous need (1), and the minimum order for free shipping (1).

Only 4 participants stated they never made a mobile impulse buying.

4.6. Sustainability

Forwards, we wanted to know if the participants thought there is a link between mobile shopping and the environment. Only 1 participant said there is no link. 11 of them stated they were never interested in this topic. Some of them thought that the mobile shopping is better for the environment (13 ideas), some of

them thought the opposite (16 ideas). The thoughts of the participants are illustrated in the box below.

Mobile shopping – good for the environment

- *“The invoice is electronic, not printed”*
- *“The packaging is made of cardboard (physical stores are using a lot of plastic)”*
- *“The phone consumes less electricity compared to a computer”*
- *“I don’t have to use my car for shopping”*
- *“A lot of electricity is used by physical stores”*

Mobile shopping – bad for the environment

- *“You tend to order more than you need, so you make a lot of waste”*
- *“A lot of fuel is consumed with delivery”*
- *“A lot of plastic/cardboard is used”*
- *“The packages sometime come together but are packed separately”*

When asked what are they doing with the packaging materials after they open the ordered item, 9 of them said they dispose of them selectively in order to help the recycling process. Some of them are keeping whatever material they can use (for repurposing) (8). Unfortunately, some participants (especially the ones that live in rural areas) can’t dispose selectively and either are throwing them in the garbage, or they use the materials for making fire (to heat their houses) (12).

Furthermore, we asked what are the actions they are making in order to contribute to the environment protection. Many ideas emerged out of this discussion, the most frequent being the selective disposal of packaging (12), reusing the packaging (8), using a reusable bag (5), or avoiding plastic packaging (4). Other sustainable actions are illustrated by the box below.

Sustainable actions

- *“I only use electronic invoices”*
- *“I recycle old clothes”*
- *“I use biodegradable cups and straws”*
- *“I use garbage bins, I don’t litter”*
- *“I don’t buy products that are tested on animals”*
- *“I buy products that have their packaging either recyclable or made of recycled plastic”*
- *“I buy from companies that donate to causes related to the environment”*
- *“I don’t buy more than I need”*
- *“I choose to pick up my orders instead of waiting for the delivery guy”*
- *“I don’t pollute as much by setting fire to the boxes as by throwing them away”*

Out of the all subjects, 5 of them stated that they don't take any sustainable action. Another one said that he is reusing the packaging but not for sustainability reasons.

4.7. Adoption factors

The last topic we covered was regarding the aspects that influence them to order from the mobile phone. By far, the most frequently mentioned one is about the ads, especially social media ads, on Facebook or Instagram and even ads made by influencers (17). Other mentioned factors are convenience – ordering from anyplace, anytime (5), the easiness of the ordering process (5), their own needs (4), family and friend's reviews (3), previous experience (2), the mobile apps (3), the good visibility of the products (1), and better prices compared to desktop shopping (1).

5. CONCLUSIONS

This research has the purpose of providing a deep understanding of three important aspects related to the mobile shopping buying behaviour: the factors associated with adoption of mobile commerce among young buyers, the role of impulse buying in mobile commerce and the connection between mobile shopping and customers' awareness of the need to protect the environment.

The main factors influencing mobile commerce purchasing were identified and the results were in line with previous research literature. One of the main factors is the convenience of using the mobile phone (Sanakulov and Karjaluoto, 2015), explained by the instant access (Nassuora, 2013) and the possibility to order from everywhere (Zheng *et al.*, 2019), especially as the mobile phone has become a permanent accessory for young shoppers. Other identified factors are the special offers (Tarhini *et al.*, 2019), the good prices (Tarhini *et al.*, 2019), social influence (friend's recommendations and online reviews) (Ng, 2016; Tarhini *et al.*, 2019), the easiness of using the mobile phone for the ordering process (Yang, 2010; Agrebi and Jallais, 2015) and enjoyment seeking (Hou and Elliott, 2021).

The results of the qualitative research suggest a relation between the impulsive buying and the tendency to purchase from the mobile (Ng, 2016; Zheng *et al.*, 2019). The participants agreed they have sometimes an impulsive buying behaviour when using their mobile while the main triggers are social media advertising and the special offers. However, their opinion on impulsive shopping tendency is rather negative.

Only a few papers (Zafar *et al.*, 2021) explored customers' awareness of the need to protect the environment, in the context of mobile shopping. In our research, we identified a link between the mobile shopping and the need to protect the environment but the arguments of the respondents were different: mobile

shopping is both good (less electricity consumption, less pollution) and bad (more waste) for the environment.

More understanding of mobile shopping buying behaviour could help practitioners to provide innovative solutions to adapt to the changing needs of the market, to implement marketing strategies to attract young customers and to encourage mobile shopping.

The present research has a few limitations, such as using only qualitative data to explore the mobile shopping buying behaviour. In this line, a quantitative survey is necessary to confirm the results, to support managerial decisions. Another limitation is about the sample size, which should be expanded in order to include young shoppers from all the Romanian regions.

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EXPLORING CUSTOMER EXPERIENCE IN THE COFFEE SHOPS – A QUALITATIVE APPROACH

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Abstract

The purpose of the research is to explore the customers experience and their preferences for coffee shops. The objectives of the research are: (1) to investigate the main factors that contribute to a pleasant customer experience, in a coffee shop; (2) to investigate the customer preferences for promotion ideas; (3) to identify the changes brought by the COVID 19 pandemic on the customers preferences. The data was collected based on 20 in-depth interviews. Four main dimensions were identified, related to customer experience: the location (including the appearance), the products (the coffee), the staff and the atmosphere. Customers prefer the campaigns that involve special offers, gifts or price reductions while the online environment might be the main promotion channels. The research results can be used by coffee shops managers to plan the next marketing and management actions, in order to better communicate and attract new customers.

Keywords: *customer experience; coffee shop; location; staff attitude.*

JEL Classification: M1

1. INTRODUCTION

In the context in which the coffee shop market offers a wide range of options and in which every consumer is assailed by information and promotions at every

step, differentiation from the competition, attraction and customer loyalty have become increasingly challenging for companies activating in this field. The consumer has become increasingly demanding and selective about the coffee he drinks. In order for companies to offer products according to their customers' preferences, in order to develop attractive campaigns, they must first of all understand the consumer, discover their needs, their expectations and what causes them to choose a certain product. Understanding the reasons why a consumer chooses a certain product over another, why he chooses to consume his coffee in a certain way or why he chooses to go to a certain cafe over another that may offer the same products and services and not lastly, the promotions that attract such consumers are all subjects of great interest for all economic operators in this highly competitive field. How to promote a coffee shop can represent the fine line between success and failure, choosing the right methods of promotion are essential and must be done in accordance with clients' needs, in order to create a unique, positive, memorable customer experience.

Customer experience represents an important concept in business literature and a challenge for practitioners. There is not a single definition for customer experience, this approach representing a strategic process for creating global client value (Jain, Aagja and Bagdare, 2017, p. 642) and the holistic experience of a client interacting with a service provider (Meyer and Schwager, 2007). Also, this multidimensional concept is being defined by clients' cognitive, affective, emotional, social and physical responses (Verhoef *et al.*, 2009, p. 32) to firm-related contact (Lemon and Verhoef 2016; Becker and Jaakkola, 2020).

Customer experience is related to the experience economy and has an important role in helping companies to create competitive advantages (Verhoef *et al.*, 2009; Pine and Gilmore, 2011; Branco and Kobakova, 2018).

The study of Stein and Ramaseshan (2016) identified seven factors influencing customer experience, for different retailers, including coffee shops: the general atmosphere, technological elements, communication process, employee–customer interaction, customer–customer interaction and product interaction elements. Zhang, Kim and Goodsir (2019) analysed five attributes for coffee shops customer experience: food quality, coffee quality, beverage (except coffee) quality, service quality and ambience. Also, their research revealed that, among all five elements, the quality of the coffee has the greater influence on clients' satisfaction. Also, customer experience in a coffee shop (the interior design, the pleasant atmosphere and friendly service) influences the level of loyalty (Amrie, Jatmiko and Handayanto, 2021).

In this context, the present research has the purpose to explore the customers experience and their preferences for coffee shops. The objectives of the research are: (1) to investigate the main factors that contribute to a pleasant customer experience, in a coffee shop; (2) to investigate the customer preferences for

promotion ideas; (3) to identify the changes brought by the COVID 19 pandemic on the customers preferences.

2. RESEARCH METHODOLOGY

In order to explore customers perceptions, thought and feelings, we used an exploratory qualitative research, based on the in-depth interview. Generally, qualitative research focuses on the way in which the subjects of the study interpret and feel certain experiences in their lives, but also the way in which they perceive the world in which they live in. More, the semi-structured in-depth interview gives us the opportunity to study in detail the hidden motivations behind certain consumer decisions.

The sample of the research consisted in 20 persons, 10 woman and 10 man, with ages between 20-35 years, frequent customers of different coffee shops. The selection of the participants was made with a screening questionnaire.

The instrument of the research was the interview guide, with open-ended questions. We used different types of questions, in order to better explore customer experience and their preferences: questions investigating the experience (“Please describe your experience in the last coffee shop you were in”), the opinions (“What you think about the products of this coffee shop?”), ideal situation (“How is your perfect place to drink coffee”), imagination techniques (“Now please imagine that you are the person in charge of the promotional campaigns for this coffee shop. What would your perfect campaign look like?”), ranking preferences (“Make a list of the top three places you got your coffee from in the last three months”) or probing questions (“Please tell me more about this”, “Can you give me another example?”). Each interview lasted around 30-40 minutes, in the online environment.

The data was processed using content analysis, identifying categories and codes related to the main discussed themes.

3. RESEARCH RESULTS

The first objective is to investigate **the main factors that contribute to a pleasant customer experience, in a coffee shop.**

Using the analysis of the qualitative data, four main categories were identified, related to customer experience: the location (including the appearance), the products (the coffee), the staff and the atmosphere.

The appearance of the coffee shop is one of the reasons why customers would have a pleasant experience during a visit to a coffee shop. The participants are looking for a modern and simple design place, arranged in such a way that it is welcoming and makes customers want to spend as much time there as possible and come back again ("The initial impact is the appearance of the cafe: from the colors, to the chairs and tables, to the model of the cups", "When I choose to be a customer of a cafe, first of all I look at its appearance", "The appearance of the

location is important because influences my mood. The place must be modern, airy and clean"). From the respondents' descriptions of the ideal place to drink their coffee, we notice that 18 out of 20 focused on the description of the location itself and more precisely, the characteristics it should have, the location and the surroundings. The perfect place is either a terrace surrounded by nature (beach, sea, mountain, forests and rivers) or a location that has views of the previously mentioned landscapes and possibly with natural elements, even inside the coffee shop. The observations related to the nature might be explained by the pandemic context, a period when people stayed mostly inside their houses ("a small terrace with a green fence", "the perfect cafe would be located in a park", "It must also have a corner of nature", "a terrace surrounded by greenery and nature, rustically decorated", "somewhere in the mountains, in front of a lake, surrounded by nature and birds", "I would also like the sofas to be next to the windows that face the street or anyway the area outside so you can see something beautiful"). Other aspects mentioned were related to cleanliness, decorations and colors. Also, the flow of people should not be too high, the location should not be too crowded, the design should be modern but simplistic and the space should be airy.

The results indicated that 17 out of 20 respondents, discussing about their experience in the coffee shops, mentioned the products (the coffee), its various characteristics representing the most important aspect for them in a cafe. This result is not a surprising one, since all the respondents are coffee drinkers and are expected to be interested to a great extent in aspects such as the quality of the coffee, its aroma, the degree of acidity and roasting, the taste or its correct preparation ("If I drink a bad coffee, I feel like I am having a bad day, my head hurts, I have no energy, I have a strange taste in my mouth and all day I think about how it would be to drink a good coffee", "I am willing to pay more for a better coffee, a more aromatic coffee", "The drinks should have the same recipe every time and the same taste"). As for their preferences, 18 out of 20 respondents most often consume coffee-based products, 16 people consume coffee with milk, while only two prefer espresso. The visual appearance of the coffee was also mentioned and, more precisely, the drawings that can be made on its surface through the latte art technique. Also, 11 out of 20 people referred to what should be found on the menu of a cafe and especially to the diversity of products that should be as large as possible. The respondents prefer coffees of different varieties and origins, but a large part of them also mentioned that they would like to serve their coffee with a biscuit, a cake or other sweets ("a multitude of coffee varieties, different from those on the market", "to be a place where I can serve some specialty drinks along with some unique sweets. I've always loved having my coffee with something sweet, a cake or a cookie").

Also, 14 out of 20 people mentioned that an important element defining customer experience is the staff (the people who serve and prepare the coffee). Characteristics such as the attitude and smile of the staff, their promptness,

kindness, fairness and politeness were mentioned (“The attitude with which I am served is almost as important as the coffee”, “If the person serving me has a bad attitude it can ruin my whole day and most likely I will not come back to that place soon”, “If a barista does not operate quickly, the queue and the wait become longer and longer and a certain discomfort occurs”, “By service I mean the attitude of the people who serve, be helpful, polite, fair and know their products very well”). The respondents also emphasize the importance of a constant taste (“keeping the taste of the drink identical from one visit to another”) and the importance of knowing the menu.

According to the results, 13 out of 20 respondents mentioned the atmosphere as an imperative requirement in their ideal coffee shop. It should be quiet, Zen, pleasant, relaxed and homely. Many participants mentioned the music they would like to hear, as either appropriate to the style of the cafe, or relaxing, soothing (“The perfect place is that cafe without many people, with a quiet environment”, “I like privacy, airy space, good music and a Zen atmosphere to calm me down”, “a quiet place, with a relaxing atmosphere, good music”).

The second objective has the purpose to investigate **the customer preferences for promotion ideas**.

The participants were invited to describe favorite promotion campaigns and to give ideas for promotion messages, for a coffee shop. Most participants (18 out of 20) appreciate the promotional campaigns based on special offers: a coffee and a pastry product offered as a gift or a large coffee and a free bottle of water. Also, the respondents (8 out of 20) appreciate the pro-cause campaigns, which assume that part of the product price is donated to support a social cause. Here they mentioned campaigns such as those that help children, those that involve donations or coffee for frontline doctors. This was motivated by the fact that the respondents believe that every coffee shop should engage in such actions to help the community in which they operate. Also, from the category of promotional campaigns, 4 out of 20 respondents said they like the loyalty card campaigns. This involves different discounts in the form of points, on the loyalty cards. This preference was motivated by the fact that it is something very advantageous, by the fact that they can purchase coffee from the shop based on these points, or they simply find the applications that makes these campaigns possible very interesting and useful. Within this theme, aspects such as paying for coffee by creating poems, by donating books, Happy Hour campaigns or discounts for your own cups were also mentioned.

Also, within this theme, the respondents were asked how they would promote the cafe. Out of the 20 participants, 17 mentioned the online environment as the main communication channel they would use for promotion. Many said they would make posts with interesting and useful information related to coffee and its preparation, as well as videos explaining how to properly prepare a coffee or a milk creamer, or live videos answering consumers to questions. Also, 3

respondents stated that they would do sampling for drinks that consumers are not used to. Respondents mentioned that they would do campaigns that include different prizes such as tickets to successful festivals or winning a barista course. Other promotion ideas are related to organizing humanitarian campaigns, using street banners, promoting non-coffee drinks for pregnant women and children, broadcasting stop motion films, naming products in a creative way and a tea promotion campaign.

Regarding the sources of information that the respondents use when they choose to go to a cafe, most (15 out of 20) stated that they are influenced by the recommendation of friends or family because they trust this source more against online sources that may contain erroneous information or fake reviews. They said the best recommendation is from someone they trust and who has lived the experience firsthand. Also within this topic, 10 out of 20 people stated that they also use social networks as a source of information because it is very accessible and they can form an opinion about the cafe based on the experiences of others. They said that through this source they can see the good and also the bad parts of a place. There they can read a lot of reviews and see pictures that can help them choose a place, especially if that place is out of town. Respondents said they use this source most often when discovering a new place or when traveling. At the same time, this source of information is used to obtain indications related to the location of the cafe. Also within this theme, 5 out of 20 respondents stated that they use Google as a source of information before going to a coffee shop. This is motivated by the trust that people have in this platform, but also because it provides them with all the information they need, such as contact details, pictures, directions and reviews. At the same time, this option was also motivated by the fact that Google is very accessible and easy to use for everyone.

The last objective refers to identifying **the changes brought by the COVID 19 pandemic on the customers' preferences on drinking coffee.**

Investigating this topic, the respondents were asked if they had changed their coffee consumption habits since the beginning of the COVID-19 pandemic. Half of them said they had not significantly changed their drinking habits. They stated that they drank the same amount of coffee at almost the same times, and the only thing that changed was that they drank coffee at home when the coffee shops were closed. They ordered through the delivery platforms, but were disappointed with the product, the coffee was cold, spilled and did not taste the same, so they did not order a second time, continuing to make their coffee at home. Most of them have an espresso machine that allows them to prepare their coffee quickly although they admitted that it doesn't taste the same as the one from the cafe. Although they did not change their consumption habits, the respondents stated that they missed a coffee drunk in the city and no matter how much they tried to make it as good as the one in cafes, they did not succeed. A few respondents (2 out of 20) stated that they got out of the habit of buying coffee in the city because they realized that it

is much more profitable to make their coffee at home and that is why they invested money in a high-performance espresso machine that makes very good coffee. They stated that they will most likely no longer buy coffee from cafes and will be much more careful about the price. If before they did not give importance to the price of these products, now it is no longer the case. One respondent stated that he started drinking coffee without milk because he cannot make milk foam at home, and with normal milk it spoils the taste of the coffee and therefore he prefers not to put milk in his coffee at all. Another respondent stated that he has considerably reduced his coffee consumption from 2-3 per day to just one because he does not like the taste of coffee at home and prefers to drink only as much as he needs. If he used to drink coffee for pleasure, now this does not happen anymore. Only 2 respondents said that they changed the type of coffee they used to drink. If at the cafe they used to buy only origin coffee, mostly a double espresso or a flat white, at home they did not have origin coffee, and the coffee they consumed was much weaker. The places where they purchased the most coffee, during the pandemic, are: the hypermarket where they shopped most often, gas stations and vending machines.

4. CONCLUSIONS

The research provides answers for the three established objectives, identifying the main factors that help to form a pleasant consumer experience, preferences related to promotion, the channels through which information reaches customers and the changes brought about by the pandemic at the level of coffee consumption. Customer experience is mainly defined by the coffee shop location (including the appearance), the products (the coffee), the staff and the atmosphere. For coffee drinkers, it is important to be able to enjoy a coffee in peace because they consider this moment as defining for the whole day. They value the friendly and professional attitude of the staff as well as the environment. As for the campaigns preferred by consumers, for coffee shops, they show a preference for campaigns that involve the offering of special gifts or price reductions. In terms of how to promote a cafe, consumers have chosen the online environment as the main channel, but also promotional packages that are not only for coffee but also for non-coffee drinks for people who do not consume caffeine. In terms of information sources, consumers rely heavily on family, friends and co-workers when it comes to visiting a new coffee shop. When it comes to how their drinking habits have changed due to the pandemic, most respondents said they haven't, the only thing that's not the same is the fact that they now drink coffee at home, not in the city.

The research results can be used by coffee shops managers to plan the next marketing and management actions, in order to better communicate and attract new customers. The research limitation are related to the small sample size and the fact that the results must be confirmed in a future quantitative research. Also,

the online environment for collecting the data might alter the depth of the answers but, in the same time, facilitate the way the interviews were conducted.

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IMPACT OF PERFORMANCE MEASUREMENT INDICATORS IN LOCAL PUBLIC ADMINISTRATION

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Abstract

Measuring performance in local public administration requires a different approach compared to the business environment. The need to measure performance, seen as a particular result, both in terms of efficiency and effectiveness, appeared more from the perspective of identifying directions, ways in which from a managerial point of view we can say that people management officials (county council president, mayors, directors of institutions) have achieved their mission and proposed objectives. According to the definitions, the local public administration must carry out its activity for the benefit of the citizen, but very often the results presented to him are of a propagandistic nature, easy to understand by the mass of voters, not specific to management specialists. The article aims to analyse the reports of mayors in the main cities of Romania and to identify their indicators and values in order to get an idea of how performance is presented at the level of such a public entity.

Keywords: *public administration; performance; measuring; indication.*

JEL Classification: H83, H11

1. INTRODUCTION

The public sector, the main provider of services to the population, is in many cases characterized by a lack of efficiency and effective strategies from a managerial point of view. The normality of this situation stems from the fact that many of the decision-makers are elected in general elections or appointed to these positions for a period determined by law, and furthermore, very few have degrees or proven skills in management.

2. LITERATURE REVIEW

If there is no planning, organization, coordination, training, and oversight because the elected or appointed decision maker lacks skills, performance, if any, is arbitrary or satisfies a set of immediate interests that are not validated over the

long term and are not the result of strategy or strategic planning. Performance measurement is a comprehensive process that requires approaches from two main directions: 1) in the strategic planning phase, which includes the establishment of goals with indicators and targets (identified based on collected and diagnosed data); 2) the evaluation of the results achieved to show progress. From this point of view, tracking the achievement of objectives is essential to determine the effectiveness of the administration. Public administration suffers from this point of view because, at the beginning of a new mandate obtained after democratic elections, those in charge of the sector have few strategic objectives and, in many cases, maintain some practices and activities whose non-functionality is attributed to the failure of the previous administration. The situation presented before does not lead to relevant strategic situations, so we wanted to show what happens to the performance of administrative units (e.g., city halls). According to Hak and Devčić, there is no unified system of indicators and methods of problem analysis in the evaluation of efficiency and effectiveness of the public sector (Hak and Devčić, 2017).

Private companies apply complex performance management systems that are useful for both planning and evaluation, such as the Balance Scorecard (BSC) or Balance Scorecard strategic maps. The public sector has not yet succeeded in moving away from the past when the only performance measurement indicators were the financial ones, as most organizations consider financial efficiency as the goal (Pasaribu *et al.*, 2016). The change is necessary and the transition to management planning and evaluation systems with more dimensions will be necessary in the future because the stakeholders (voters, local businesses, civic groups, NGOs, etc.) are forced by the socioeconomic environment to change their vision, and local government must prepare human resources, innovate and improve processes to meet the demands of a new category of customers who are much more attentive to the management activities of decision makers (chairmen of district councils, mayors, county councils, municipal councils, etc.). The performance problems in the public system are not only related to the way of measurement and the definition of performance in the public sector, however, is a difficult task arising from the complex role (Mihaiu, 2014).

Performance indicators are those constructions that are necessary for the management to show the evolution of the system. These indicators are characterized by several specific aspects, such as: meaningful, valuable, balanced, linked, practical, comparable, credible, timely, simple, which is why they regularly require several changes and adjustments depending on the evolution of the systems. van Thiel and Leeuw note a number of paradoxes with indicators, such as: i) positive learning, i.e., when performance improves, indicators lose their sensitivity in detecting poor performance; ii) perverse learning, i.e. when organizations and individuals learn what aspects of performance are being measured, they can use the information to manipulate their evaluations; iii)

selection, i.e., replacing poor performance with better performance; iv) suppression, when performance differences are ignored (van Thiel and Leeuw, 2002). The situation is different in the public sector, where the authors believe that the translation of ambiguous, intangible policy goals into operational objectives by managers leaves room for deviation in policy implementation (van Thiel and Leeuw, 2002).

In most cases, performance measurement programs in public administration are ineffective because, according to Shane and Lafferty: i) all public service organizations have a lot of data but very little useful information about how well their programs are working or about the climate among staff or about customer concerns; ii) the lack of balance among a number of directions: Finance, service providers, customers, and staff; iii) there is a tendency to measure too many dimensions of organizational performance - policy and programs, people, citizen services, risk management, responsibility, accountability, learning, innovation, and change management; iv) the timing of performance management is often too late and/or inaccurate in providing a solid picture of the organizational situation; v) there is also a lack of leaders providing effective measurement approaches and tools (Shane and Lafferty, 2010).

An exploratory research on performance measurement of Romanian local public institutions shows an ambiguous and complex picture regarding these measurements because: 1) that performance measurement is not an important concern for Romanian local public institutions, at least until now; 2) that citizens, media representatives and businessmen are less interested in performance measurement; 3) that performance measurement is still not considered a useful management tool in Romanian local public institutions (Raboca, 2021).

An important aspect that emerges from the comparative analysis of performance in public institutions is the possibility to identify several negative aspects that the organization faces but that are not visible through the presentation of some output indicators in reports. The reason why the use of outcome indicators resulting from the combination of output indicators gives a much clearer picture of the functioning of the system. When the objectives and indicators are designed to influence each other, the decision maker is presented with a dynamic situation that allows him or her to change outputs with a direct impact on outcomes through successive decisions

3. METHODOLOGY

The activity reports of the mayors of three cities in Romania, Braşov, Cluj-Napoca and Iaşi, were analyzed, the situations being somehow different: for Braşov we identified on the Braşov mayor's website only the report from 2021, in Cluj Napoca the reports were downloaded from the years 2019, 2020, 2021, also for the period 2016-2020, including the budget executions specific to the year 2021 and, in Iasi, the reports from 2020, 2021 that are active. Since we were able

to collect complete data from all three cities, we preferred to use only the information from the year 2021.

3.1. The level of transparency

In terms of the information that is disseminated to the public, there are significant differences in the way that performance indicators of City Hall entities are published. Therefore, in our opinion, one of the most important indicators is the level of transparency in the provision of information (see Table 1).

Brasov City Hall: the level of transparency is high, as the report contains a lot of quantitative information for all subordinate departments, but it is very difficult to interpret and measure the level of performance. Comparability, simplicity and practicality are important characteristics of an indicator, for example, it is easy to understand and analyse the number of paved roads - 119 - but the information on asphalt carpets - roadway and parking 335,300 sqm - triggers a sense of exceptional performance among citizens, and the administrative expert wonders how much these 335,300 sqm mean in kilometres of paved roads or how long the 119 roads are in kilometres/square meters.

Cluj-Napoca City Hall: the report presents the main achievements, detailing the projects implemented at the local level, those with high marketing potential, with a low level of transparency, the data are very low in quantitative terms. The financial data are available on the website of the City Hall of Cluj-Napoca but are not included in this report.

Iasi City Hall: the report contains a summary of the main results and details of the European projects financed and/or implemented, and includes a lot of quantitative information: Financial, Social, Investment, etc.

Table 1. Transparency level of City Hall report

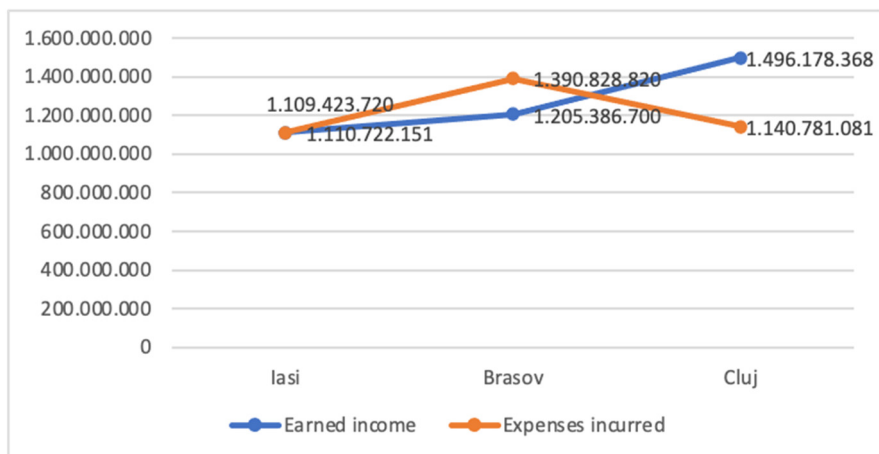
Indicator	Brasov	Cluj Napoca	Iasi
Transparency level of the report	High	Medium-High	Medium-High

Source: own data

3.2. Income vs. Expenses

The projected revenues and expenditures for 2021 for the studied municipalities are shown in Figure 1. From this it can be deduced that the financial differences between the three cities are not very large, but from an administrative point of view, differences can be observed between the planned value of the indicators and the value achieved.

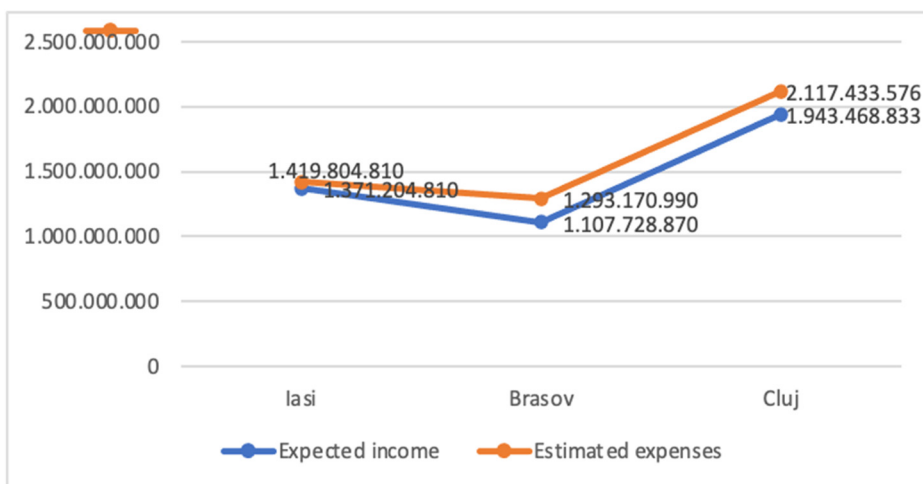
Iasi: The planned and the realized situation in both revenues and expenditures are approximately in the same order of magnitude, even if the degree of fulfilment in revenues is 81% and in expenditures 78.13%.



Source: own calculations based on the Reports of Iasi and Brasov County Mayors, for 2021 and budgetary execution for Cluj Napoca, for 2021

Figure 1. Realized income and expenses

Braşov: the values of realized revenues and expenditures exceed the planned ones, with a percentage of 108.81% for revenues and 107.55% for expenditures. However, what is interesting in the case of this city is the fact that the value of the difference between planned revenues and realized revenues/planned expenditures/realized expenditures, expressed in thousands of lei, is identical and amounts to 97,657,830 thousand lei.



Source: own calculations based on the Reports of Iasi and Brasov County Mayors, for 2021 and budgetary execution for Cluj Napoca, for 2021

Figure 2. Expected income and expenses

Cluj-Napoca: The values of the financial results were not given in the report, but on the website of the City Hall of Cluj-Napoca you can find the reports on the budget execution, from which the presented data could be extracted. Figure 1 shows that in this case the revenues obtained were higher than the expenditures, compared to the estimate in Figure 2, which shows us that the expenditures should be higher than the revenues.

3.3. The value and number of investments

The purpose of the administrative-territorial units is to support local development through the development of local infrastructure, so indicators related to the volume and number of investments made are important for performance measurement. The analysis of the reports presents the situation from two important points of view: large investments made from European funds, such as the purchase of ecological means of transport - each of the three analysed city halls presents the number of streetcars purchased, electric busses, the construction of schools etc. - or investments in civil works and rehabilitation, school infrastructure buildings, roads etc.

1) *Iasi* - most of the investments in school infrastructure were made from local budget funds and had the following directions: (i) Public transport, the streetcar lines in the Pădureii area were completed and continued in the industrial zone and Dancu, 16 PESA and 16 Bozankaya streetcars were purchased (ii) Urban mobility, 50 boarding and rental stations, 813 mechanical smart bicycles, 37 electric smart bicycles and 80 tricycles for seniors; (iii) Education, kindergartens in Dacia and Bucium, modernization of the Grădinița PP13, modernization of the campus of the Technical High School "Gheorghe Asachi" and creation of a multifunctional center in the area of Cicoara; (iv) Rehabilitation of historical objects, the Beautiful Monastery and the Palace Braunstein, and continuation of works on the Museum of Natural History and the Turkish Bath; (v) Investments: 140 roads, 1250 digital systems for online educational centers were modernized from the local budget; (vi) Consolidation of "Dimitrie Cantemir" High School; construction of sports halls for schools (in progress at "Ion Creangă" High School);

2) *Cluj*: investments in school infrastructure made in the framework of European projects and completed in 2021: (i) completion of the transport project for 24 new streetcars of ASTRA, 10 new busses for school transport; (ii) construction, expansion and rehabilitation of two schools ("Onisifor Ghibu" and "Ana Aslan"), development of the Youth Park, direct investments in the Municipal Hospital "Clujana", expansion of the kindergarten in Meziad Street no. 4; (iii) Municipal infrastructure, repairs and maintenance on a number of 70 targets in the municipality (roads, alleys, sidewalks, squares), with a total area (roadway and sidewalks) of over 140.841 square meters, equivalent to over 20 km of road with a width of 7 meters, rehabilitation of the boulevard 21. December 1989,

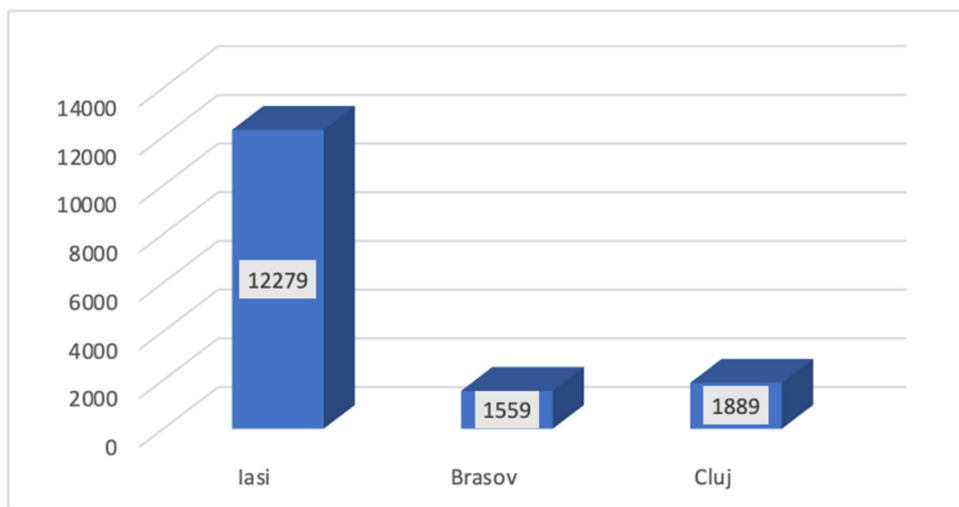
rehabilitation of Mihail Kogălniceanu Street; iv) urban renewal of the area Calea Mănăştur - Calea Motilor - Uzinia Electrică - Oţetului - Mărginasa; v) parking and parks 642 new parking spaces, 100 new bicycle parking spaces in secured areas, 4 new parks: East Park, Bună Ziua Park, Zorilor Park and the green area of the Morii Canal - Rozelor Park section; vi) sports facilities.

3) *Braşov* investments made in 2021 were of the following types: i) Buildings: Gymnasium no. 2, Kronstadt Vocational School dormitory; ii) capital repairs: Unirea National College, building A; iii) renovations, building St. M. Weiss no. 22, building St. Muresenilor no. 7 (People's Cinema); iv) efficiency improvements, College of Transportation - gymnasium + dormitory; v) electrical connections, charging stations for electric busses: terminal station, Saturn Boulevard, 13 Decembrie St., Pamshofor str.; vi) Poiana Braşov mountain bike trail; vii) rehabilitation of facades of buildings in the municipality: str. Iuliu Maniu no. 52, str. Laminoarelor no. 6, etc. According to the report, the value of investments in different areas was higher or lower, depending on their importance and needs. The following areas received significant values: i) education, approved 64,977 thousand lei, achieved 23,641.85 thousand lei, fulfilment percentage 36.38%; ii) housing, services and development, approved 89,280.78 thousand lei, achieved 37,141.56 thousand lei, fulfilment percentage 41.6%; iii) transportation, approved value 123,716.09 thousand lei, achieved 107,400.4 thousand lei, fulfilment percentage of 86.81%. From both the above analysis and the report, the percentage of investment was 57.8%.

3.4. Social assistance

The specific indicators in this area are complex in a poor country like Romania, and social assistance programs are in many cases very expensive for local households. The social problems are different and were identified in the mayors' reports, indicators such as: i) the number of energy supplements granted, at least at the Iasi city level, a high value of this indicator is observed in 2021.

A comparative analysis between the three cities (Figure 3) shows that the value of the indicator for Iasi in 2021 is very high, but if we examine the report of 2020, we find that there were only 1323 financial supplements, a figure equivalent to Cluj-Napoca and Brasov. This very strong increase in Iasi makes us ask a question: If the number of surcharges in 2021 was so high, what will happen in 2022, when we are in the middle of the energy crisis.



Source: own calculations based on the Reports of the Iasi and Brasov County Mayors, for 2021 and budgetary execution for Cluj Napoca, for 2021

Figure 3. Number of financial supplements for energy

All reports contain a lot of information about the social activities carried out, measured by different output indicators, such as the average number of free transportations, 49228 in Iasi, or the number of people with disabilities transported for free, 2257 in Cluj Napoca, the number of grants for people with disabilities. Elderly people receive assistance in the form of social vouchers, value vouchers, etc.

4. CONCLUSIONS

The analysed reports show several major differences in terms of the method of data collection and analysis, which leads us to conclude that there is no unified reporting system in the public administration in Romania and many of the results are not effective in the sense that the performance indicators are not correlated with the strategic objectives proposed at the time of application. The reports required by law, in which all functional departments of the city halls present their performance, may be beneficial for the public, but not from the administration's point of view. The absence of strategies and strategic planning that prioritises clear, specific, measurable, accessible and achievable (SMART) goals, clear directions for action, resources and effective implementation timelines leads to poor administrative performance and the inability of decision makers to validate the results achieved. In this sense, we support the need to establish a system for determining institutional performance based on quantifiable input and output indicators, supported by strategic approaches at all levels of action.

The performance measurement indicators identified in the reports of the mayors of the cities of Iasi, Cluj-Napoca and Brasov are mostly output indicators or very few input indicators. The data presented are unedited, contain little interpretation or analysis, and in some cases give the impression that the report was prepared because it is required by law or because it is an important marketing factor, presenting only the elements that are attractive to the general public.

In the absence of targets, the indicators presented sound good, but since we do not know what the public administrator has proposed, we cannot measure whether there is a specific performance. The limitations of our study are determined by the uncertainty of the data obtained. Future research will aim to identify concrete ways to define and quantify some performance indicators at the level of public administration.

ACKNOWLEDGEMENTS

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STUDENTS' PERCEPTION OF THE ADVANTAGES AND DISADVANTAGES OF REMOTELY, ONLINE WORK

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Abstract

Remote online work has lately become a habit. The global labour market has adapted to the requirements of this way of working, and the labour supply has become hybrid. To support the understanding of this change in the labour market, the current research' aim was to analyse the advantages and disadvantages of working online, remotely. The analysis was performed using an online questionnaire, and the research sample consisted of undergraduate and master students. Data was collected between November 2021 and January 2022. The main results indicate that the most important advantages of the remote work, in the online way are: the availability of employees at work it is increased, the interaction with people from other work environments create new learning opportunities, and work problems are solved without having to relocate employees. The most important disadvantages of working remotely in the online way are: isolation can appear and the lack of physical contact can lead to interaction problems, communication problems may appear, and interruptions during work can occur. These results are part of a complex research, created specifically for the analysis of the desired organizational rewards for a remote, online job, and the analysis of the research results will continue.

Keywords: *online work; students; advantages; disadvantages; hybrid work.*

JEL Classification: J23, J32, M54, O15

1. LITERATURE REVIEW

The remote work has many synonym terms that currently are used in practice: working from home, teleworking, remote work, mobile working, virtual working, telecommuting (Simenenko and Lentjushenkova, 2021). Yet, the remote work can be classified in three major types: distance working, remote working and working from home (Simenenko and Lentjushenkova, 2021).

According to Ferreira *et al.* (2021), the results from a qualitative research made on remote workers show that the main advantages in this environment are cost-reduction and flexibility (to promote work–life balance), while communication, technical problems, and management issues reflect negative aspects of this way of working (Ferreira *et al.*, 2021). In another study, the positive side of e-working is demonstrated via productivity, efficiency, flexibility, satisfaction, and work-life balance (Beno, 2021). Moreover, in the same study is mentioned that e-working provides more advantages than disadvantages (Beno,

2021). Another major advantage of the remote work for employees is that they save important amounts of money on clothes, transport and food compared to the employees that go to the office (Murphy, 2022).

Other advantages of the remote work can be the following: a higher productivity at work, employees' timeliness, a reduced absenteeism and decreased turnover, cost savings, program and location flexibility (Stevens, 2021). A study made on knowledge workers that were working from home, with collected data from 29 European countries during the pandemic generated by COVID-19 revealed the following advantages: work-life balance, improved work efficiency and a greater work control (Ipsen *et al.*, 2021). In the same study were mentioned the following main disadvantages of the remote work: home office constraints, work uncertainties and inadequate tools (Ipsen *et al.*, 2021). A study made of 704 academics discovered that, according to the analysed sample, 66% of them declared they would be more efficient when working from home in the future, after the pandemic generated by COVID-19 (Aczel *et al.*, 2021).

In a study made in 2021 on employees from Latvia, were found the following disadvantages of the remote work: lack of environment change, lack of inspiring working atmosphere and difficulty to stop working in the evening, lack of face-to-face communication with other employees, and lack of balance between work and personal life (Simenenko and Lentjushenkova, 2021). Other disadvantages of the remote work are: the technology used can bring problems, the lack of social interaction and isolation, less work-related discussions and brainstorming, the variation of internet speed for several locations, an extra effort to keep in touch with colleagues (Salmah, 2016).

Even if, work-life balance is perceived as an advantage of e-working, this can represent as well a disadvantage, because boundaries between personal and professional can be jeopardised (Gordon Institute of Business Science, 2020). Therefore, in the remote work, employees will need a highly self-motivation, it is possible that the employer cost to increase, and also the work environment will need to be reconsidered (Salmah, 2016).

But not every employee is suitable to work from home (Gordon Institute of Business Science, 2020). For example, the entry level employees, especially students, do not need to work first from home (Gordon Institute of Business Science, 2020).

The pandemic generated by COVID-19 was an opportunity to practice work remotely (Aczel *et al.*, 2021), and influenced a lot the way people work these times. For example, in Latvia, before the COVID-19, 95% of the employees never worked from home (Simenenko and Lentjushenkova, 2021).

Today's students represent future employees. That is why, in this paper, we present an analysis about their perception of remote, online work. In the following are described advantages and disadvantages for working this way, useful for researchers, and for employees as well.

2. METHODOLOGY

The present paper reflects partial results from a whole research that has the main purpose to describe what rewards future employees want to accept an online, remote offer. In particular, this article presents advantages and disadvantages of the online, remote jobs, thus comprehending a global view of the expectations of the future employees. To assure these assumptions, data was collected between November 2021 and January 2022, using an online anonym survey. In total, 405 answers were collected: 147 from undergraduate students (representing 36.30% of the sample) and 258 from master students (representing 63.70% of the sample), both categories of respondents being affiliated to Faculty of Economics and Business Administration from Iași in this period.

Data was processed in the program “Statistical Package for the Social Sciences program” (SPSS). We have used 31 variables for this paper, excluding the social and the demographic ones. The Cronbach’s Alpha coefficient resulted of 0.874, higher than 0.600, which indicates a good internal consistency of the questions (Robinson, Shaver and Wrightsman, 1991).

The variables used in this research are described with the used codes directly in the next section, Results. There were used 17 variables that express the advantages of doing work remotely, online, and 14 variables that express the disadvantages of doing work remotely, online.

3. RESULTS

In the following, there are presented the averages for the advantages that can appear at a remote, online workplace. The respondents were asked to appreciate for each possible advantage separately, the extent to which they consider it an advantage or not. Thus, they gave scores from 1 (minimum) to 5 (maximum) for each individual item. The obtained results are presented in Table 1.

Table 1. The advantages of doing remote work (online)

Nr. crt.	Code	What do you think are the advantages of doing remote work (online)?	Mean	Std. deviation
1	AVAIL	Increases employee availability	3.81	1.108
2	LEARNO	Interacting with people from other work environments creates new learning opportunities	3.79	1.166
3	PRSOLV	Problems are solved without ordering the relocation of employees	3.76	1.100
4	NOAVOID	Employees are unlikely to avoid/quit work if they are given the opportunity to work from home	3.75	1.177

Nr. crt.	Code	What do you think are the advantages of doing remote work (online)?	Mean	Std. deviation
5	DISCONNECT	It is faster to disconnect from work because it is completed outside the formal work environment	3.75	1.216
6	REXPENS	Reducing expenses (water, electricity, gas, etc.) at the workplace	3.74	1.278
7	IAUTON	It increases the autonomy of employees in carrying out work tasks	3.71	1.109
8	WLB	Work-life balance it is achieved	3.52	1.304
9	CHANGEXPER	Realizing the exchange of experience with employees from all over the world, who have expertise in the field	3.52	1.190
10	ICOMPET	It increases the competitiveness of companies on the market	3.47	1.074
11	RBURN	Burnout it is reduced	3.45	1.250
12	IW	Labor productivity it is increased	3.41	1.187
13	WPHIGH	Productivity and performance are the same or higher in remote work compared to office work	3.4	1.223
14	PERFTEAM	The performance of work teams increases	3.4	1.139
15	IJOBS	Job satisfaction increases	3.33	1.146
16	HMORALE	Morale is higher	3.16	1.197
17	LOWERD	Distraction is much lower compared to that at the official headquarters	2.77	1.352

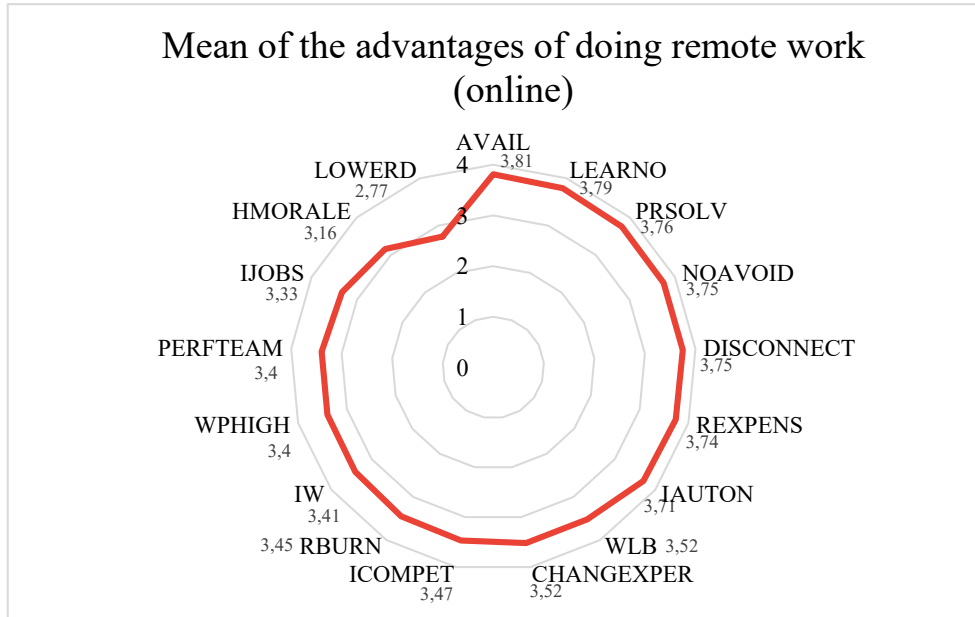
Note: Each variable was measured by the respondents using sores from 1 – minimum to 5 – maximum. In the table are presented the means obtained for each variable.

Source: author’s processing

The results of the respondents highlighted that the most important advantages of the remote work, in the online environment, are: the availability of employees at work it is increased (Mean = 3.81, Std. deviation = 1.108), the interaction with people from other work environments create new learning opportunities (Mean = 3.79, Std. deviation = 1.166), and work problems are solved without having to relocate employees (Mean = 3.76, Std. deviation = 1.100).

From the top 3 advantages for working remotely, online, 2 are especially for the organization (AVAIL and PRSOLV), while only one (LEARNO) is specific at the individual level. Employees’ availability can be valued by each individual, but the biggest plus from that is brought to the organization.

The same results are presented below, in Figure 1.



Source: author's processing

Figure 1. The advantages of doing remote work (online)

The difference between the highest mean's score and the lowest mean's score is around 1.04 (AVAIL Mean = 3.81 and LOWERD Mean = 2.77). Both of these two variables (AVAIL and LOWERD) reflect an individual context: the availability for work, and the lack of distraction during work. We have expected a better score for the employees' morale (HMORALE Mean = 3.16) and also a higher score for achieving work-life balance (WLB Mean = 3.52).

Below are presented the averages for the disadvantages that can occur at a remote, online workplace. Students were asked to appreciate for each possible disadvantage, the extent to which they consider it a disadvantage or not. They have granted scores from 1 (minimum) to 5 (maximum) for each individual item. The obtained results are presented in Table 2.

Table 2. The disadvantages of doing remote work (online)

Nr. crt.	Code	What do you think are the disadvantages of doing remote work (online)?	Mean	Std. deviation
1	ISOL	The isolation appears. Lack of physical contact can lead to interaction problems	4.22	1.075
2	COMM	Communication problems appear	3.94	1.136
3	INTERW	Interruptions during work occur	3.89	1.177
4	BLOCK	Work blockages occur due to technology	3.85	1.152
5	STRESS	The occurrence of stress	3.81	1.163
6	WORKINC	Workload it is increased by companies	3.67	1.189
7	TIMEMNG	Time management problems appear	3.65	1.216
8	TIMETASK	Problems related to the time of completion of tasks appear	3.65	1.179
9	CONFL	Conflicts and coordination problems appear	3.57	1.148
10	KNOWSH	Knowledge sharing problems occur	3.56	1.168
11	LEADC	There is an increased complexity when leading work teams	3.51	1.161
12	JUDGE	The tendency to make harsher judgments against everyone appears	3.44	1.153
13	MONITORL	There is a lack of monitoring	3.36	1.209
14	WLBAFFECTED	Balance between work, family and solving personal problems is under attack	3.15	1.343

Note: Each variable was measured by the respondents using scores from 1 – minimum to 5 – maximum. In the table are presented the means obtained for each variable.

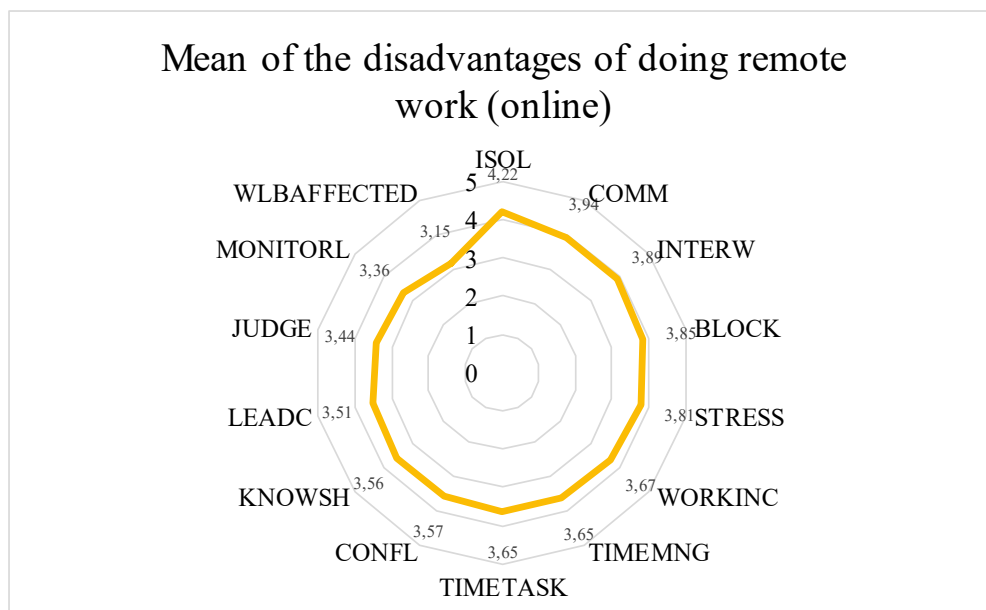
Source: author's processing

The most important disadvantages of working remotely in the online way are: isolation can appear and the lack of physical contact can lead to interaction problems (Mean = 4.22, Std. deviation = 1.075), communication problems may appear (Mean = 3.94, Std. deviation = 1.136), and interruptions during work can occur (Mean = 3.89, Std. deviation = 1.177).

Unlike the scores that resulted in the advantages of online, remote work, the disadvantages start from a much higher average, over 4: ISOL (Mean = 4.22) compared to AVAIL (Mean = 3.81). Also, the last score recorded for advantages is much lower than the last score recorded for disadvantages: LOWERD (Mean = 2.77) compared to WLBAFFECTED (Mean = 3.15). That it means that probably

students perceive the disadvantages of the online, remote work more intense than the advantages of this work itself.

The same results are presented below, in Figure 2.



Source: author's processing

Figure 2 The disadvantages of doing remote work (online)

The difference between the highest mean's score and the lowest mean's score is around 1.07 (ISOL Mean = 4.22 and WLBAFFECTED Mean = 3.15). Both of these two variables (ISOL and WLBAFFECTED) reflect an individual context: the feeling of isolation during work and the balance that an employee builds for solving family and job problems.

We have expected a lower score for the employees' knowledge sharing (KNOWSH Mean = 3.56) giving the fact that information is quick spread via online environment and also a lower score for monitoring employees' activity (MONITORL Mean = 3.36), since there are several indicators for measuring productivity and performance for the online work.

4. CONCLUSIONS

Today's students represent future employees. That is why, in this paper, we have presented an analysis about their perception about the remote, online work. In particular, in this paper were presented advantages and disadvantages for working this way, useful for researchers, and for employees as well.

The main results indicate that the most important advantages of the remote work, in the online way are: the availability of employees at work it is increased, the interaction with people from other work environments create new learning opportunities, and work problems are solved without having to relocate employees. The most important disadvantages of working remotely in the online way are: isolation can appear and the lack of physical contact can lead to interaction problems, communication problems may appear, and interruptions during work can occur.

From the advantages of working remote, online, we have expected a better score for the employees' morale and for achieving work-life balance in this way of working. In what concerns the disadvantages of working remote, online, we have expected a lower score for the employees' knowledge sharing giving the fact that information is quick spread via online environment and also a lower score for monitoring employees' activity, since there are several online indicators for measuring it.

This paper does not take into consideration advantages and disadvantages of remote, online work, during pandemic generated by COVID-19, but these all separately. These results are part of a complex research, created specifically for the analysis of the desired organizational rewards for a remote, online job, and the analysis of the research results will continue.

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THE IMPACT OF MONEY LAUNDERING REGULATION ON THE EVOLUTION OF THE BUSINESS ENVIRONMENT

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Abstract

Legislative changes in the field of money laundering offence have had a significant impact also on the rules governing business law. One of these changes, the relinquishment of bearer securities, be they bonds or shares, had a visible effect on the territory of the European Union. The COVID-19 pandemic imposed the natural obligation on the national legislator to adapt the regulatory framework to the needs of the business environment, which is facing a real crisis. Thus, the tightening of the rules governing especially companies, to prevent and combat the crime of money laundering, creates real difficulties for entrepreneurs, who are already facing a series of economic and social problems. The compensatory measures inherent in any major crisis must be compatible with the transparency policy imposed including at the European level, by the rules adopted by the institutions of the European Union, in order to prevent and sanction this criminal phenomenon. It is thus necessary to identify balanced solutions that ensure the safety of the business environment.

Keywords: *money laundering; entrepreneurship; COVID-19 pandemic; force majeure; real estate.*

JEL Classification: L25, L26, K20, K21

1. INTRODUCTORY REMARKS. THE LEGISLATIVE CONTEXT

Apparently, a crime without victims, money laundering represents a real danger for society, especially in the context in which we can consider that it is likely to constitute a supportive offence for organized crime (Mani, 2003, p. 19). In this sense, the large flow of cash that is realized from the commission of crimes, such as drug trafficking, human trafficking, arms trafficking, computer crime, would be impossible to use in the absence of money laundering activities. (Pitulescu, 2014, p. 144).

Money laundering describes a series of specific acts, which, if analyzed in an independent manner, do not, at least in appearance, present a high degree of social danger. The essence of this crime is the concealment of the illegally acquired assets in order to be able to capitalize and draw profit from them (Cazan, 2012, p. 196).

An important instrument adopted in the matter is Law no. 129/2019 for the prevention and combating of money laundering and the financing of terrorism, as

well as for the modification and completion of some normative acts. The purpose of adopting the law was also to transpose Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on preventing the use of the financial system for the purpose of money laundering or terrorist financing, of amendment to Regulation (EU) no. 648/2012 of the European Parliament and of the Council and repealing Directive 2005/60/EC of the European Parliament and of the Council and Directive 2006/70/EC of the Commission, published in the Official Journal of the European Union, series L, no. 141 of June 5, 2015 as well as Council Directive (EU) 2016/2.258 of December 6, 2016 amending Directive 2011/16/EU with regard to tax authorities' access to information on combating money laundering, published in the Official Journal of the European Union, series L, no. 342 of December 16, 2016.

2. MEASURES ADOPTED TO PREVENT AND COMBAT MONEY LAUNDERING

The business environment was significantly affected by the legislative changes adopted to combat and prevent money laundering. Thus, although beneficial for the purpose of combating this criminal phenomenon, the adopted measures were likely to raise a series of barriers in the organization of a commercial activity.

One of these measures we refer to is the removal of bearer stocks and bonds. In this sense, with the entry into force of Law no. 129/2019, it is prohibited to issue new bearer shares and carry out operations with existing bearer shares, in accordance with art. 61 para. (1).

Bearer shares that were issued prior to the entry into force of Law no. 129/2019 were converted into registered shares with the obligation to submit the updated constitutive act to the trade registry office.

Para. (3) of art. 61 of Law no. 129/2019 imposes on the holders of any bearer shares the obligation to deposit them at the headquarters of the issuing company within 18 months from the date of entry into force of the law, under the penalty of legal cancellation in case of non-fulfilment of the obligation by the date of expiry of the term, with the effect of the corresponding reduction of the share capital. Non-fulfilment of the conversion obligation by joint-stock companies and joint-stock limited companies attracts their dissolution, according to art. 61 para. (6) from Law no. 129/2019.

We do not dispute the importance of these changes and in the serious context of the increase in organized crime we appreciate these measures as useful, but the removal from the market of a category of negotiable securities, used not only in Romania, raised a series of problems for the business environment both at national and European level.

The COVID 19 pandemic calls for a streamlining of bureaucracy, but clearly a fair balance is needed between the need to support the business environment on

the one hand and the prevention and fight against money laundering and terrorism on the other.

3. ADDITIONAL CUSTOMER AWARENESS MEASURES

Under Law no. 129/2019, a number of legal entities have the obligation to report suspicious transactions, transactions with cash amounts to the national Office for the Prevention and Control of money laundering, in lei or foreign currency, as well as transactions whose minimum limit is the equivalent in lei of 10.000 euros, including transactions that have a connection between them.

The reporting entities, in accordance with the provisions of Article 5 of Law no. 129/2019, are: „a) credit institutions Romanian legal entities and branches of credit institutions foreign legal entities; b) financial institutions Romanian legal entities and branches of financial institutions foreign legal entities; managers of private pension funds, in their own name and for the private pension funds they manage, with the exception of professional occupational retirement houses; d) gambling service providers; e) auditors, chartered accountants and authorised accountants, censors, persons providing tax, financial, business or accounting consultancy; f) notaries public, lawyers, bailiffs and other persons exercising liberal legal professions, if they assist in the preparation or completion of operations for their clients regarding the purchase or sale of immovable property, shares or social shares or goodwill items, administration of financial instruments, securities or other assets of clients, operations or transactions that involve a sum of money or a transfer of property, setting up or managing bank accounts, savings or financial instruments, organizing the process of underwriting the contributions required for the incorporation , the operation or administration of a company; the establishment, administration or management of such companies, collective investment undertakings in securities or other similar structures, as well as if they participate on behalf or for their clients in any operation of financial character or aiming immovable property; g) providers of services to the companies or trusts, other than those referred to in the letter. e) and f); g1) providers of exchange services between virtual currencies and fiduciary currencies; g2) providers of digital wallets; h) real estate agents and developers, including when acting as intermediaries in the rental of real estate, but only in respect of transactions for which the monthly rent amount represents the RON equivalent of EUR 10.000 or more; i) other persons who, as professionals, market goods only to the extent that they carry out cash transactions whose minimum limit is the RON equivalent of EUR 10.000, regardless of whether the transaction is executed by a single operation or by several transactions that have a connection between them; (j) persons marketing works of art or acting as intermediaries in the trade in works of art, including where this activity is carried out by art galleries and auction houses; if the value of the transaction or a series of related transactions is the equivalent in lei of EUR 10.000 or more; (k) persons storing or marketing works of art or

acting as intermediaries in the trade in works of art, where such activity is carried out in free zones, if the value of the transaction or a series of related transactions is the equivalent in lei of 10.000 euros or more”.

The above-mentioned reporting entities have, in addition to their standard and simplified customer knowledge obligations, additional customer awareness measures. Thus, they are required to examine the context and purpose of all transactions that fulfil at least one of the following conditions: "A) they are complex transactions; b) they are transactions with unusually high values; c) they do not fit the usual pattern; d) they do not have an obvious economic, commercial or legal purpose", in order to comply with the requirements of Article 17 (2) of Law no. 129/2019. In this respect, the reporting entities must ensure that the level and nature of the monitoring of the business relationship is increased in order to determine to what extent those transactions or activities are suspicious.

4. TRANSPOSING THE DIRECTIVE

One of the measures adopted through the fifth Directive of the European Parliament and of the Council on combating money laundering - Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/ 849 on preventing the use of the financial system for the purpose of money laundering or terrorist financing, as well as amending Directives 2009/138/EC and 2013/36/EU, published in the Official Journal of the European Union (EU) on June 19, 2018, adopted for the purpose of the harmonization of the rules in the matter at the level of the member states of the European Union, it was also the establishment of the responsibility of corporate entities and other legal entities to declare the real beneficiaries in the central register.

Romania proceeded to institute a truncated version of this obligation, established by Directive 2018/843, which led the European Commission to notify the fact that the exemption of certain categories of corporate entities and other legal entities by the Romanian state constitutes a violation of the obligation to transpose according to the rules of the European Union. It is considered by the European Commission that the failure to transpose the European rules on money laundering is liable to affect the European Union as a whole. Thus, an invitation to normative accountability and harmonization was launched by the European Commission to Romania, and a deadline of two months was established for the normative change to meet the requirements imposed by the Directive. The two-month period expires during September of the current year.

To the extent that the Romanian state does not intend to make these legislative changes, the European Commission has reserved the right to refer Romania to the Court of Justice of the European Union regarding this particular situation of non-fulfilment of obligations by Romania.

Regulatory harmonisation in the field of money laundering is a sensitive issue, especially in the context of facilitating the movement of capital through the emergence of cryptocurrencies, the easy cross-border transfer of companies' headquarters as well as through the quick and ingenious solutions of organized criminal groups for money laundering.

Thus, the temptation might be to identify a more relaxed and less binding regulatory framework followed by the transfer of the corporate seat to such a state. The adoption of the fifth Directive of the European Parliament and of the Council on combating money laundering is aimed precisely at regulatory harmonisation at Member State level with a view to joint action to prevent and combat this criminal phenomenon, while limiting regulatory gaps.

Organised crime and the threat of terrorism constitute a real danger to society in general and to the business community in particular. Normative gaps make it difficult to prevent and combat money laundering. Although an action to refer the matter to the Court of Justice of the European Union may appear to be excessively harsh, the interest in complying with the obligations assumed by membership of the European Union goes beyond the isolated interests of some Member States.

Indeed, we believe that for the business environment, especially in the context of the Covid 19 pandemic, measures are needed to limit bureaucracy and facilitate the instruments available to entrepreneurs. These measures are not always congruent with the measures aimed at combating the phenomenon of money laundering, but in the long term the latter are likely to generate a safer business environment.

The creativity of those who commit money laundering acts and the possibility for corporate organizations to offer them a screen for this purpose, makes it mandatory to mention the real beneficiaries in the special register as a transparent and natural measure.

Fictitious companies are a real danger for the business market, and the rules adopted at the level of the European Union have the role of thwarting the activity of hiding illegal funds and strengthening control over high-risk third countries.

5. INSTITUTIONAL FRAMEWORK

The Romanian State has established the national Office for the Prevention and Control of money laundering, the financial information unit of Romania, a specialized body of administrative type, with legal personality, independent and autonomous from an operational and functional point of view, subordinated to the Ministry of public Finance, with role in receiving, Analysis, processing and dissemination of financial information, supervision and control, according to the law, of reporting entities for the purpose of preventing and combating money laundering and terrorist financing, in accordance with the provisions of Article 39 of Law no. 129/2019.

The creation of such an institution is first and foremost a guarantee in preventing the criminal phenomenon and, on the other hand, ensures the transposition of the requirements of the European norms adopted in this field, similar institutions existing at the level of the other Member States of the European Union, with similar attributions.

6. CONCLUSIONS

The legislative revisions in the field of money laundering also bring significant changes to the regulatory framework applicable mainly to entrepreneurs.

Whether we are talking about the disappearance from the market of bearer securities (bearer shares and bearer bonds), about the obligation to declare the beneficial owner in the centralized register or about the obligation to communicate to the Office the information required by law, these changes are mandatory to be known and respected.

Undoubtedly, all these changes generate additional costs for the business environment and additional procedures, which can add to the existing obligations.

A fair balance between the general interest of society as a whole and that of the business environment in particular must be maintained. It is the legislator's responsibility to adopt measures that meet this need, of correct coordination between the rules relating to the prevention and combating of money laundering and those aimed at protecting the business environment.

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THE SMART CITIES OF ROMANIA: AN OVERVIEW

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Abstract

The 'smart city' emerged as a complex strategy, involving different urban aspects and dimensions. The European model is currently built on six domains: smart mobility, smart governance, smart economy, smart people, smart living and smart environment. The current paper investigates how Romanian cities have implemented smart city strategies and how are they evolving from a more practical perspective. While the vast majority of initiatives are concentrated in the capital city and other important regional centres, not all projects are functional and have yet to generate benefits for citizens. With regard to the status-quo in Romania, smart cities are rather in the adaptation phase, having emerged from tensions between modern and traditional forms of governance and socio-economic and environmental goals. The aim of this paper is to critically assess how close are Romanian cities to the conventional smart city by analysing how and which smartness factors have been translated in the seven Romania's regional development centres – Iași, Cluj-Napoca, Timișoara, Brașov, Constanța, Craiova and Ploiești.

Keywords: *smart city; Romania; post-socialist urban development; smart governance.*

JEL Classification: O18, Q01, R11

1. INTRODUCTION

Cities nowadays are the main centres of economic growth inhabited by an increasing number of people. More people live nowadays in urban areas (or *cities*) than in rural settlements, the proportion of people living in cities exceeding 54% of the world's population in 2014 (Apostoaie, Mihai and Maxim, 2015). In 2020, 56.2% of the world population was urban (Buchholz, 2020). Half of these people lived in towns of less than 500,000 inhabitants. Overall, at the global level, cities account for over 80% of GDP (World Economic Forum, 2014) while the United Nations (2018) estimates that by 2050 the urban population will grow to around 68%. Moreover, the number of megacities will rise and yet the mid-size and small cities are the ones with the fastest rates of grow and change. Therefore, the problems that cities face today are complex and cover social issues like access to

education, health, housing; environmental challenges such as increasing CO2 emissions, degradation, pollution and of course, administrative issues which relate to the low level of participation and quality of life (Chourabi *et al.*, 2012). Thus, the concept of 'smart city' has become a tool used by municipalities across the world for solving challenges.

Having numerous interpretations, the smart city represents a significant shift of urban development practices worldwide. Although a fuzzy concept, without a clear definition, the smart city narrative projects the opportunity to increase quality of life through the optimisation of hard (transport, energy, resources) and soft (human capital, inclusion, participation) infrastructure (Hollands, 2008). The European Union views the concept from a normative perspective as a combination of technological instruments with social and economic development, underlining the importance of citizen involvement and democratic governance. Smart city definitions imply the integration of ICTs, although only their implementation does not guarantee smartness, as it is only a tool for social, economic and environmental development (Nam and Pardo, 2014). The smart city normative, therefore, emerged like a complex strategy, involving different urban aspects and dimensions, the European model being built on six domains: *smart mobility, smart governance, smart economy, smart people, smart living and smart environment* (Giffinger *et al.*, 2007).

In Central and Eastern Europe this kind of solutions are rarely implemented, yet they've received increasing attention in the last couple of years. The significant change that occurred in the transition period, created new patterns of shaping Central and Eastern European urban environment. Having escaped the totalitarian central planning, the right to redesign cities was claimed by capitalism and its urge for urbanisation and post-industrial accumulation through modernisation. In the last years, new investments in physical infrastructure took the form of urban regeneration and suburbanisation while advanced technologies are expected to reduce the time and energy spent on urban services, as well as increasing human capital and enhancing social cohesion. Romanian cities are therefore distinct from the Western ones due to the overlap of the inherited socialist structures with the new economic dynamics.

Becoming smart has become a policy priority for many cities in their transition period. Local administrations constantly introduce innovative solutions yet are unable to meet the growing needs of citizens and increase the quality of life. In their process of development, Romanian cities have embraced smart city strategies, highlighting the desire to achieve economic, social, democratic growth.

This paper will investigate how Romanian cities have implemented smart city strategies. Moreover, the paper investigates a possible pattern that could emerge as best practice among Romanian cities in their process of becoming smart cities. Although the vast majority of initiatives are concentrated in the capital city and other important regional centres, not all existing projects are functional and have

yet to generate benefits for their citizens. Thus, we can argue that, in the Romanian case, smart cities can be regarded as being more in the adaptation phase, having emerged from the synergies between modern and traditional forms of governance, on the one side, and socio-economic and environmental goals, on the other side. The aim of this paper is to expand the existing literature on the topic by analysing how and which smartness factors have been incorporated in the seven Romania's regional development centres. In addition, it will assess the emergence of the concept in literature and existing policies, as well as institutional documents. It will then look at the implementation of smart initiatives that were established and try to highlight the main patterns in the evolution of the Romanian cities.

2. THEORETICAL FRAMEWORK

Cities have been always regarded as being futuristic, since the interwar period, architects and planners developed ideas of greener cities as solutions for the effects of industrialisation and Le Corbusier's (1971) *City of tomorrow* is one of the most representative examples. The end of the Second World War brought new perspectives as cities had to adapt to the new challenges imposed by global trade while the rise of information and communication technologies (ICTs) in the last decades offered great opportunities for growth and innovation. Nowadays, the high urbanisation rates and demographic changes pressure cities to find future-oriented solutions for economic, environmental and social issues (Gabrys, 2014).

The academic literature on future cities is mostly linked to the sustainability of urban areas, even since the 1990s (De Jong *et al.*, 2015). The concept of 'digital city' emerged in the 2000s being replaced by 'smart city' a few years later and the climate change discourses generated increased interest in terms of 'resilient city'. In their paper, Moir, Moonen, and Clark (2014) found that these concepts have often been used to express the same context, however, the future city mainly encompasses the technological dimension. The use of ICTs in urban development is not a new concept, with well-established constructions such as 'information city' (Castells, 1996), 'wired city' (Dutton, 1987), 'cyber city' (Graham and Marvin, 1999), 'ubiquitous city' (Anthopoulos and Fitsilis, 2010) and the 'intelligent city' (Komninos, 2013) being used since the 1990s. These examples clearly show a way of linking the urban areas with specific technologies. Thus, the latest developments in the IT sector brought innovative solutions for cities such as the Internet of Things (IoT), smart devices, increased connectivity and accessibility, real-time data and many others (Saunders and Baeck, 2015), paving the way for *smart cities*. In addition, Bonsón *et al.* (2012) show in their paper that most local governments are using Web 2.0 and social media tools to enhance transparency but, in general, the concept of corporate dialog and the use of Web 2.0 to promote e-participation are still in their infancy at the local level.

In more recent years, the concept of smart city has become more popular and many scholars from different fields have tried to define it based on their

understanding and experiences. They conceptualise the smart city as a digital, intelligent or sustainable city (Albino, Berardi, and Dangelico, 2015; Hollands, 2008). At the international level, the 'smart city' is envisioned as a vast project based on digital integration and "frictionless forms of exchange and consumption" (Caprotti, 2019). Governments across the world have created strategies in order to promote the transition to a much smarter urban future, examples of such practices coming from South Korea, the UK, the Netherlands and so forth, while multinationals' interventions in the digital economy have flooded the market, providing technologies for urban stakeholders (Kitchin, 2015). Following the 20th and 21st century utopian urban projects, the smart city developed as a much more modern approach to urban futures, and it constitutes a "grander and more diffuse project" (Caprotti, 2019). Thus, the smart city cannot be limited to the planning practice, but as a way of re-designing the whole economic and cultural dimensions (Cowley and Caprotti, 2019) through digitalisation, innovation and overall smart technologies. As the concept lacks a clear definition and is therefore difficult to visualise the smart city as a whole, one can rather identify spaces and places in the current urban environment that can be considered part of the smart city.

Some scholars argued that technology contributes to the development of a smart approach for urban policies while fostering citizen participation (Romanelli *et al.*, 2019). Other studies proposed different methods for the measurement of 'smartness', building a smart city model (Anthopoulos *et al.*, 2016). Silva, Khan, and Han (2018) identified four pillars: institutional, physical, social and economic infrastructures, yet from a rather technic perspective. As people and regions have different objectives and priorities for smart solutions, the establishment of a singular and universally accepted definition is almost impossible. Moir, Moonen, and Clark (2014) have tried to define the 'smart city' in a broader and narrow sense. They argue that while in a narrow perspective, the smart dimension means the use of technology for solving urban challenges, in a broader frame it implies good governance, increased participation, smart citizens, combined with the use of technological instruments. Giffinger *et al.* (2007) have established a different approach, analysed 70 European cities and emphasised six smart city characteristics - *smart economy*, *smart mobility*, *smart governance*, *smart environment*, *smart living* and *smart people*. This framework has been used by other scholars in their smart city conceptualisations. Table 1 presents some of the most relevant definitions and meanings attributed to the concept of 'smart city' and the main characteristics identified by scholars.

Table 1. Smart city definitions

Authors	Smart city definition	Dimensions
Hall <i>et al.</i> (2000)	"The vision of 'Smart Cities' is the urban center of the future, made safe, secure environmentally green, and efficient because all structures—	environment, mobility, integration,

Authors	Smart city definition	Dimensions
	whether for power, water, transportation—are designed, constructed, and maintained making use of advanced, integrated materials, sensors, electronics, and networks which are interfaced with computerized systems comprised of databases, tracking, and decision-making algorithms”.	technology, decision-making
Giffinger <i>et al.</i> (2007)	“A city well performing in a forward-looking way in economy, people, governance, mobility, environment, and living, built on the smart combination of endowments and activities of self-decisive, independent and aware citizens”	technology, people, economy, mobility, environment, governance, quality of life
Lombardi <i>et al.</i> (2012)	“A smart city therefore has smart inhabitants in terms of their educational grade. In addition, the term is referred to the relation between the city government administration and its citizens. Good governance or smart governance is often referred to as the use of new channels of communication for the citizens, e.g., “e-governance” or “e-democracy”	people, governance, technology
Caragliu, Del Bo and Nijkamp (2011)	“A city is smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance.”	sustainability, economy, governance, quality of life, people, mobility, technology
Kourtit, Nijkamp and Arribas (2012)	“Smart cities are the result of knowledge-intensive and creative strategies aiming at enhancing the socio-economic, ecological, logistic and competitive performance of cities. Such smart cities are based on a promising mix of human capital (e.g. skilled labor force), infrastructural capital (e.g. high-tech communication facilities), social capital (e.g. intense and open network linkages) and entrepreneurial capital (e.g. creative and risk-taking business activities)”	people, economy, technology, mobility, environment
Lazaroiu and Roscia (2012)	“The smart city represents a community of average technology size, interconnected and sustainable, comfortable, attractive and secure. A smart city is a city well performing in 6 characteristics. These characteristics are built on the smart combination of endowments and activities of self-decisive, independent and aware citizens.”	sustainability, people, technology

Authors	Smart city definition	Dimensions
Neirotti <i>et al.</i> (2014)	“The various positions in the debate agree on the fact that an SC should be able to optimize the use and exploitation of both tangible (e.g., transport infrastructures, energy distribution networks, natural resources) and intangible assets (e.g., human capital, intellectual capital of companies, and organizational capital in public administration bodies).”	natural resources, mobility, buildings, governance, economy, people

Source: authors’ representation

The proposal forwarded by Silva, Khan, and Han (2018) with regard to the four-pillar model is also useful for the analysis of the smart city. The institutional structure covers the governance of smart cities and is associated with participation in decision-making, transparency and political strategies. Thus, citizens are at the core of the smart city as a community engagement is vital for the resilience and durability of any plan. Physical infrastructure is represented by the natural resources and technical infrastructure which ensures the sustainability of initiatives in the long term. Apart from ICT infrastructure this also includes green buildings, planning and energy efficiency and most smart cities are focused on resource preservation and green spaces. The social infrastructure consists of the human capital, citizen responsibility and quality of life. This has been considered the main pillar of a smart city as the lack of social awareness can compromise any smart project. Knowledge is a key factor in urban growth and smart development and people can use and grow their potential to increase the quality of living. Economic infrastructure is defined through stability and opportunities. In addition to the application of e-commerce to increase productivity, it also implies innovation and management. Lombardi *et al.* (2012) note that GDP per capita, employment rates and investments in research and development can be used to evaluate the performance of smart cities.

The diffusion of smart city initiatives in places with different conditions and needs makes it difficult to identify common features and trends on a global scale (Albino, Berardi, and Dangelico, 2015). The wide understanding of the concept comes from its use of ICTs which can help cities use their resources efficiently, however, this can be considered just one of the various approaches that can improve the economic, social and environmental aspects. This can mean that the number of ‘smart’ initiatives created by a municipality or its technological equipment does not make a city better, and more attention should be given to human-based solutions (Neirotti *et al.*, 2014). Moreover, drawing on Harvey’s (1989) ‘entrepreneurial city’, Hollands (2008) argues that some cities are labelling themselves as smart only for branding purposes, while smart solutions can increase inequalities in urban spaces as not all citizens have access to technological instruments. In the same context, Kitchin (2015) by comparing the smart city ideas with other future city projects, argues that this new concept is just

a technology-oriented version of the others. The increased use of ICTs also poses threats to inhabitants through the high level of monitoring and vulnerability to cyberattacks (Bibri and Krogstie, 2020).

The general critiques of ‘smart city’ visions are generated by their rather universal and profit-driven perspective. The ‘one size fits all’ narrative dominates the academic literature on the topic as each local context provides another view. Kitchin (2015) stresses the need for in-depth empirical analysis on specific initiatives that can show how certain smart city ideas are adapted or constructed, how they are implemented and whether they generate results. In the same perspective, the smart city concept is idealised and provides unrealistic visions, thus underlying the need to analyse the real smart city.

2.1. Smart cities in Europe

In Europe, smart cities represent the new approach to urban development. The ‘smart’ dimension is not only meant for rethinking infrastructure but also for making cities more innovative and competitive and the new conceptualisations are often focused on economic development, sustainability and inclusion (Dameri and Cocchia, 2013). At the core of smart cities in Europe are people and the infrastructure (Caragliu, Del Bo and Nijkamp, 2011) and one way to understand smart city approaches is by associating ‘intelligent’, ‘digital’ and ‘smart’ cities to human capital, education, accessibility, transportation and creative industries (Capello, Caragliu and Nijkamp, 2009). The literature analysing the concept of ‘smart city’ in Europe is based on a few main topics. Several scholars focus on debates around smart and digital city concepts (Hollands, 2008; Dameri and Cocchia, 2013) while others offer integrative frameworks applied on case studies such as Vienna (Fernandez-Anez, Fernández-Güell and Giffinger *et al.*, 2018), Barcelona (Bakıcı, Almirall and Wareham, 2013) or multiple cities (Anthopoulos, 2017; Cowley and Caprotti, 2019). Other scholars consider the smart city concept as a means to increase resilience and the quality of life (Kourtit, 2019). Governance is another topic analysed in regards to ‘smart city’ development and the involvement (or not) of organisations (Anthopoulos, 2017), stakeholders (Marrone and Hammerle, 2018) and citizens (Engelbert, van Zoonen and Hirzalla, 2019) is explored.

Furthermore, smart city policies and their influence on urban policies are also investigated through topics such as innovative cities (Kourtit, Nijkamp and Arribas, 2012; Dameri, 2013; Caragliu and Del Bo, 2020), competitive cities (Taylor Buck and While, 2017), smart urban planning (Komninos *et al.*, 2019) and urban experiments (Cowley and Caprotti, 2019), while the Internet of Things is seen as a transformative factor which places people over technology. Smart city indicators have been developed for measuring the performance of urban areas (Lombardi *et al.*, 2012), the use of EU funds (Lazaroiu and Roscia, 2012) or to create a ranking for European smart cities (Giffinger *et al.*, 2007). ‘Smart city’ approaches have been

linked to green, sustainability and resilience (Antrobus, 2011; Bănică, Eva and Iașu, 2019; Bănică *et al.*, 2020) and a model for a European smart and resilient city has been proposed (Arafah, Winarso and Suroso, 2018). According to the literature, six main areas of smart city initiatives can be identified: economy, mobility, environment, people, governance and living, each 14 of them comprising several potential actions (Giffinger *et al.*, 2007; Lombardi *et al.*, 2012; Albino, Berardi, and Dangelico, 2015). However, the existing set of criteria and factors are often ambiguous and are based on various priorities that the 'smart city' is supposed to tackle, depending on the region.

In Europe, the balance of distribution of smart cities is greatly inclined towards the Western countries and most research was based on examples from this region (Joss *et al.*, 2019). Amsterdam is considered to be the most successful smart city (Lombardi *et al.*, 2012; Albino, Berardi, and Dangelico, 2015) while Barcelona (Bakıcı, Almirall and Wareham, 2013), London (Bibri and Krogstie, 2020), Helsinki (Hämäläinen, 2020), Manchester (Antrobus, 2011), Vienna (Fernandez-Anez, Fernández-Güell and Giffinger, 2018) or Thessaloniki (Kominos *et al.*, 2019) have included smart city initiatives in the overall strategic urban development framework. It is clear that none of these cases is coming from Eastern European countries that have the socialist heritage embedded in most sectors (European Union, 2021). Smart city initiatives are still a novelty in post-communist states (Sikora-Fernandez and Stawasz, 2016) as the concept cannot be analysed without considering the historical determinants and development factors. Therefore, it is useful to determine which cities can be labelled as smart in CEE and whether urban areas in the post-socialist space can keep up with the implementation of such novelties.

2.2. The post-socialist smart city

The challenges that post-socialist smart cities face are great and the concept does not have a clearly defined position in the overall urban management (Kola-Bezka, Czupich, and Ignasiak-Szulc, 2016; Kollar, Bubbico, and Arsalides, 2018). The lack of sufficient municipal financial resources makes these cities dependent on EU programs, yet in some cases, the difficulty to attract such funds enhances the productivity and innovation gaps. Thus, most smart city initiatives are limited to punctual actions and do not address all areas of urban life (Dameri and Cocchia, 2013). The concept of smart city in CEE began to capture the attention of researchers in the last decade, the most analysed countries in terms of published papers being Poland, Romania, Croatia and lately Hungary (Ibănescu *et al.*, 2020). There is a clear difference in how countries in CEE approach the 'smart city' concept as according to the definition, the transformations it implies are expected to contribute to increasing the quality of life and better governance (Dameri, 2013).

Evidence from the Visegrad (V4) countries shows that smart city analyses are not associated with these and lack a comprehensive approach for implementing the concept. Cities from Eastern EU countries are ranked lower in the smart city index due to the low level of 'smart quality of life' and 'smart management' (Kollar, Bubbico, and Arsalides, 2018). There is also evidence that these countries mostly promote smart solutions for transport and energy sectors while other aspects are left behind (Sikora-Fernandez, 2018). This variability in smart city approaches can be balanced through national-level planning as Visegrad countries are relying on EU funds that are regulated through national programs and all states have national urban policies or are in the process of developing one. However, V4 cities are still facing the challenges imposed by the top-down perspective to urban planning that can block initiatives to increase the transparency of government and society.

South-Eastern European countries (Romania, Bulgaria, Croatia and Slovenia) have been identified as lacking proper implementation of smart city initiatives when compared to the Western or Northern countries (Klimovský, Pinterič and Šaparnienė, 2016) and are clearly behind in terms of promoting them (Kola-Bezka, Czupich, and Ignasiak-Szulc, 2016). There is a need to broaden the research on this topic, yet the current approaches are focused on analysing the current perspectives related to 'smart city' at the national level (Čukušić, Jadrić, and Mijač, 2019), analyses of case studies (Nicula *et al.*, 2020), analysis of particular segments such as the environment (Petrova-Antonova and Ilieva, 2019), governance and people (Soomro, Khan and Ludlow, 2017), mobility (Bănică, Eva and Iașu, 2019) or technology (McElroy, 2020; Briciu, Briciu, and Kavoura, 2020).

One way of analysing the level of implementation of smart city initiatives is through the territorial disparities visible across most CEE countries. For example, more developed areas in Romania do show greater smart initiatives in the last decade (Ivan, Beu and Van Hoof, 2020), while the smart city agenda is mostly focused on infrastructure and lacks the community dimension. Moreover, ICT, the main instrument for providing smart solutions for cities (Kourtit, Nijkamp and Arribas 2012; Pašalić, Čukušić and Jadrić, 2020) lacks proper awareness among citizens in regard to its transformative power (Klimovský, Pinterič and Šaparnienė, 2016). From a broader perspective, cities from CEE present similar initiatives to the other European countries. Yet, copying and implementing Western models without accounting for local context presents a great challenge for post-socialist societies as there already exists a major imbalance between smart solutions and the current urban planning strategies. Most CEE cities have undergone major transformations in the last decades, completely different from the Western urban areas, thus smart solutions must adapt to the issues that arose following the transition. Furthermore, the potential of these cities to become smart and align with the successful cases from Europe should be analysed and

developing a particular framework is needed for an accurate understanding of post-socialist smart cities.

3. METHODOLOGY

Qualitative research implies generating theory by collecting data, trying to understand the social world presented in the case study. This implies, in turn examining its participants and interpreting the processes that takes place in that space as a result of the interaction between actors. Berg (2001) argues that no matter which approaches to qualitative research is used, theory, data collection and data analysis create a spiralling process through which the researcher is “never actually leaving any stage behind” (Berg, 2001, p. 18). The initial design was framed by our interest in the evolution of Romanian cities and the way in which the smart-city narrative is approached. In most studies that analyse smart cities Worldwide or in Europe (Giffinger and Gudrun, 2010), the occurrence of Romanian cities was very scarce and is believed that the main reason behind such a fact is the unavailability of information outside the country’s borders due to the language constraints.

To achieve the objective of this study, a range of research methods have been used. Firstly, we examined and reviewed the existing literature on both ‘smart city’ and ‘post-socialist urban development’ topics in order to establish a relation between the current urban practices and the particularities of cities in CEE. Secondly, we performed a discourse analysis on policy reports, city council strategies and visions, websites and minutes of city council meetings to identify the conceptualisation of the smart city in each city.

This study proposes a model to analyse the Romanian cities’ smartness filtering them by the six main criteria found in the literature (Giffinger *et al.*, 2007): (i) smart mobility, (ii) smart environment, (iii) smart governance, (iv) smart economy, (v) smart people, (vi) smart living. The research took into consideration the investment projects implemented in each of the six areas. Therefore, the European model of a smart city was adapted on the case of the 7 regional development poles in Romania - Iași, Cluj-Napoca, Timișoara, Constanța, Brașov, Ploiești and Craiova. In order to measure the level of the smartness of cities, a comparative analysis of the chosen Romanian cities was performed. The comparative case-study approach was found the most suitable for this paper as it offers the possibility to generalise findings (Saunders, Lewis and Thornhill, 2009). The inductive characteristic of this paper gives the opportunity to investigate common trends and themes from one case study to another.

Thus, the seven cities were chosen due to their high potential for financing new projects and attracting EU funds for development.

4. SMART CITY IN THE ROMANIAN CONTEXT

The *smart city* concept has not been present for a long time in Romania, as researchers and administrative bodies have only approached this topic in the last years. However, smart initiatives have had a rapid growth and while the first projects were implemented in 2014, nowadays there are hundreds, distributed across the country. Most of the initiatives were developed in the capital city (Bucharest) and the major regional centres, however, some rural areas have created innovative projects that quickly attracted attention from the media, such as Ciugud and Luncăvița. Moreover, some counties, such as Cluj, embarked on the smart journey developing large-scale projects. Since their launch, these initiatives have also been critiqued for their lack of impact on the local economy, their dysfunctionalities and slow implementation (Ibănescu *et al.*, 2022). This section will provide detailed insight into the current state of the smart city narrative in Romania, presenting findings from literature and institutional documents such as the Smart City Strategies.

The first smart city initiatives in Romania emerged through the business environment, while the academic field tried to ground the concept in a new context. The first research papers on the topic were linking the term to the digitalisation process, including democracy and services, within the e-governance dimension (Stoica and Ilaș, 2009). Since then, various approaches to e-governance and e-government paved the way for the introduction of smart initiatives in the urban development process in Romania, being related to safety, education, participation and presenting the main challenges of such approaches (Vrabie, 2018). Moreover, the ‘intelligent city’ was introduced in the literature to describe initiatives that implied the use of ICTs in the transport system (Bătăgan, 2012). Thus, for a long time, the terms ‘intelligent’ and ‘smart’ were used as synonyms in Romanian cities’ analysis.

The literature discussing the Romanian smart city focused on topics such as open data and technological instruments (Oproiu *et al.*, 2017), while most of them analysed a broader territory such as the EU or CEE (Di Leo, and Salvia, 2017). The concept has been analysed through the six dimensions. Thus, scholars have focused on the impact of digitalisation, education and creative industries in the context of smart economy (Grab and Ilie, 2019; Mazilu, Incaltarau, and Kourtit, 2020). Regarding smart people, the literature discussed social innovation and inclusion (Hosu and Hosu, 2019) while smart living was touched upon through renewable energy and waste reduction (Cerasi *et al.*, 2021; Mancò *et al.*, 2021). Smart mobility has been approached through innovation in transportation (Neagu, 2018) and smart environment studies addressed municipal waste management and air pollution (Muntean, Caranfil, and Ilovan, 2021; Popa *et al.*, 2021). Smart governance analysis proved that there are many challenges in Romania in implementing smart city projects (Bănică *et al.*, 2020). Vrabie and Dumitrașcu (2018) provided the most comprehensive study on smart cities in Romania, discussing topics such as

infrastructure, technology, innovation and strategies. However, Baltac (2019) looks at the technological dimension and argues that although cities report many projects, in most cases they lack proper implementation. Thus, the smart city narrative becomes a political priority and is used as a branding tool.

Urban strategies have incorporated the concept only in the last years and local administrations faced many challenges in implementing such ideas. The interest in investing in smart solutions was sparked by the Cohesion Policy funds (Structural and Investment Funds) and private companies (Vegacomp Consulting, 2021). EU provides specific initiatives and tools for the integration of smart projects in urban planning, such as the Smart Cities Marketplace, the Smart Cities Information System (SCIS) and the ERA-NET Cofound Smart Cities and Communities (ENSCC). However, local authorities understood the need to develop smart solutions due to the present challenges of digitalisation, technological developments, governance and overall lifestyle of citizens.

Cities in Romania began their smart transformations with pilot projects and later established integrated frameworks that included transport infrastructure, e-governance, energy and tourism (Bucharest). National initiatives emerged in 2016 including the Ministry of ICT Smart City Guide (2016), the Smart City Magazine (2016), followed in 2017 by the Annual Smart City Urban Projects Fair and the Smart City Caravan. The Ministry of Regional Development and Public Administration established in 2018 the National Strategy for Smart Cities which made smart city projects a development priority. The following years brought new initiatives, such as the Smart Cities of Romania Cluster (SCoR), the Intelligent City 2030, the establishment of the Centre of Digital Inclusion and the adoption of the first smart city standard - ASRO SR ISO 37120 - Sustainable cities and territorial communities (Ibănescu *et al.*, 2022).

At the city-level, smart solutions have been approached individually for a long time, referring to the integration of digital tools in urban services. These were later introduced in broader strategies, the first such attempt coming in 2010 from 'Târgu Mureş - Digital European City' which aimed at improving the communication between citizens and the local administration and increasing the efficiency of public services. Alba Iulia started its smart initiatives in 2010, firstly focused on tourism promotion and extended later throughout the city's dimensions. It was declared the first smart city in Romania due to its large number of implemented projects, 106 until 2021 (Vegacomp Consulting, 2021). The initiatives implied partnerships with private companies and included internet connection across the city, interactive city guide, environmental monitoring, e-governance, tourism, parking etc. Other cities followed in the next years such as Sibiu, Cluj-Napoca, Iaşi, Oradea, Craiova and Bucharest, however not all were dedicated particularly to smart transformations.

4.1. Smart city implementation across the regional growth poles

Across the country, most smart city initiatives are concentrated in the capital and in the largest cities, the regional poles, that have a high GDP/capita value. This can be explained through the high number of IT companies, in the five leading cities (Bucharest, Cluj-Napoca, Timișoara, Iași and Brașov). Moreover, most initiatives are addressing the smart mobility, smart governance and smart living dimensions and while the EU's latest priorities focus on green transition and inclusivity, the smart environment and smart living features are the least represented in Romanian cities (Vegacomp Consulting, 2021).

A. Iași

Iași is the most important city in the North-East region, being one of the regional development (growth) poles at the national level and having the second largest population in Romania, of over 320.000 people. The city is an emerging automotive hub in Europe and an important IT centre in Romania, with over 17.000 specialists. Moreover, Iași is the third largest university city in the country, with over 10.000 graduates each year from five universities with diverse profiles (science, medicine, arts, IT, environment, engineering, business etc.). The overall infrastructure of the city guarantees great connectivity as 95% of locals have access to Internet and mobile coverage (EC, 2019). At the economic level, the city was ranked 11th in a report of the fastest growing cities in the EU (Skanska, Dentons and Colliers International, 2019).

The city of Iași is the first Romanian city that won, in 2017 the Digital Cities Challenge competition, organised by the European Commission and in 2020 the city was chosen to receive support through the Intelligent Cities Challenge for the implementation of intelligent, green and inclusive solutions. The Integrated Urban Development Strategy of Iași for 2015-2030 notes the objective of aligning with the smart city narrative as it believes it will contribute to tackling present challenges represented by the enhanced competitiveness among Romanian cities in terms of job market, creative industries and investment opportunities, and increased citizens' expectations in regards to transparency, accessibility and high-quality public services (PMI, 2015).

Over the years, many smart initiatives emerged in the city, yet not all of them have been implemented or produced visible results. The local administration is currently developing an Integrated Smart City Strategy, part of the Intelligent Cities Challenge and has promoted the initiative online. The Strategy will be developed on the six pillars adopted by the European Union. Most of the initiatives have been developed by the public authorities and are focused on mobility and governance. In the last years, with the EU support, the municipality has invested in green transportation, by replacing dated trams and buses and installing charging stations for electric vehicles. Moreover, it developed mobile apps (HereitIS, Tranzzy) for public transportation users and optimised the parking system. In Iași,

smart governance implies e-governance tools, such as feedback report app, online booking and payments for public services offered by the City Council. The smart solutions for the environmental dimensions include air-quality sensors, waste management and energy efficiency, while the other three smart features refer to access to free Wi-Fi and street surveillance. Future priorities for the city include the enhancement of existing initiatives, as well as the implementation of further solutions, aiming for improving the citizens' satisfaction and quality of life. In Iași, the smart projects are related to transportation and the use of mobile apps for urban services and most of them are financed through public funds or PP partnerships.

B. Cluj-Napoca

Cluj-Napoca is considered the second most important city in Romania (after the capital), having a population of over 300.000 people. The city hosts numerous IT and engineering companies, with 20.000 professionals and a growing business sector which ascribed it the title of 'Silicon Valley' of Transylvania. Cluj-Napoca was the first Romanian city that implemented the participatory budgeting process in 2013, a model that was later replicated by other 40 cities in the country and was ranked 7th in the fastest growing cities in the EU report (Skanska, Dentons and Colliers International, 2019). Its smart transformations began almost a decade ago with the help of EU funds and private actors. The local administration works in close contact with the civic society, academia and the private actors and has managed to build a strong community through the Civic Imagination and Innovation Center (CIIC). Over the years, the city implemented various smart solutions, recording at this moment 58 smart projects. Almost half of Cluj's smart initiatives are focused on improving mobility and accessibility by using traffic management systems, electric public transportation, parking sensors, bike sharing systems and connected and efficient bike lanes.

Its 'smart street' project represented the first such initiative in Romania, providing green spaces, a sensor-based irrigation system, a rain-water collecting system, charging stations for electric vehicles and free Wi-Fi. Smart living is supported through entertainment events such as film festivals (TIFF), music festivals (Untold, Electric) and sports events which generated an increase in tourists, especially in the summer period. Smart governance is addressed through e-governance services, with high accessibility, efficiency and transparency. The good coordination between the County Council and Cluj-Napoca Council is one factor that enhanced the urban development processes. Overall, the smart projects developed in Cluj-Napoca are based on the use of mobile apps for different urban services and high connectivity to the internet. Smart initiatives are mostly funded by public bodies, yet there are some PPPs and private projects.

C. Timișoara

Timișoara is the biggest city in the Western region of Romania, with a high level of accessibility due to its geographical location near the Romanian border with Hungary and Serbia. As the fourth largest university centre in Romania, Timișoara has over 9.000 graduates each year in diverse fields and over 6.000 IT professionals working in multinational IT&C companies. The city is known for its bicycle infrastructure with almost 25.000 users of public bikes. In regards to economic performance, the city was ranked 9th in the report on the fastest growing cities in the EU (Skanska, Dentons and Colliers International, 2019).

Timișoara has recorded 26 smart city projects, yet its Smart City Strategy is still up to public consultation. The planned vision includes 7 pillars, built on the smart city dimensions: Every Citizen Has a Voice (smart governance); The City for All (smart people); The Sustainable City (smart environment); The Fun City (smart living); Smart and Impactful Public Investments (smart mobility); Vibrant Innovation Ecosystem and An Attractive City for International Talent (smart economy). However, most of the smart solutions address urban mobility issues and refer to parking systems (TIMPARK), traffic management, bicycle use and public transportation improvement. Smart living is approached by increasing the number of cultural events (European Cultural Capital) and related infrastructure, tourism facilities and recreational activities (on the Bega River). Overall, the smart initiatives of Timișoara are linked to transportation systems and the use of mobile apps and are funded by public bodies and PP partnerships.

D. Brașov

Brașov is the economic, administrative and cultural centre of the Center Region and a significant touristic city in Romania and Europe. The city has one of the most efficient public administrations in the country and a high level of citizen satisfaction regarding living conditions (World Bank, 2019). Its 2030 vision targets sustainability, mobility and innovation, supported by an active business and creative industries environment. In 2013, the city implemented an innovative public transportation system and is now using only electric vehicles and has an integrated cycling infrastructure. In 2020 the city reported 18 smart projects.

These smart initiatives are focused on smart mobility, considering the city's objective of becoming the European Green Capital in 2028. Thus, Brașov has implemented a smart street lighting system (inteliLIGHT), charging stations for electric vehicles, intelligent pedestrian crossings and surveillance cameras. In regards to smart governance, the local administration has developed platforms for increasing communication with the civic society such as incident reporting, participatory budgeting, neighbourhood reports and cultural events. It can be observed that most of these initiatives are interconnected, including more dimensions (mobility and environment, living and governance) while the majority

are based on the use of technological tools. The projects are financed through public funds and managed by the local authorities.

E. Constanța

Constanța is one of the largest cities in Romania, having a favourable geographic location as a port city near the Black Sea and as an important seaside touristic destination at the national and European levels. Its smart transformation has been slower compared to the previous cities and it has just established the Smart City Strategy for 2021-2027. The vision is focused on becoming a regional hub, a touristic destination and a smart city. However, the city faces many challenges such as the low level of civic participation, chaotic urban development, environmental degradation and outdated public transportation.

In 2021 there were 13 smart projects reported in Constanța, out of which 6 are focused on mobility. These are related to bike-sharing, parking, traffic management and public transportation ticketing. The local administration offers digital services for online payments and complaints, while smart living includes services for tourists (City Tour, Sea Status) and music festivals (Neversea), yet projects are financed mostly through PPPs.

F. Craiova

Craiova is the main metropolitan area in the South-West Region having an industrial profile. Thus, the city faces many challenges in terms of environmental protection such as high levels of pollution and degradation. However, the existing smart initiatives are not addressing these issues. In 2021 there were 7 smart projects registered in Craiova. Four projects are related to urban mobility, including parking systems, electric buses, traffic management and ticketing systems. Three projects are dedicated to governance, implying online booking for public services and payments.

G. Ploiești

Ploiești is the largest city in the South-Muntenia region, with a population of over 200.000 people and located 60km from the capital. The city has an industrial profile and over 40.000 people work in Bucharest. Ploiești faces various challenges such as a high level of pollution, usage of cars and migration even though there are opportunities for business development and smart mobility. The city has recently started to develop smart initiatives, having reported in 2021, 8 projects. These are related to ticketing systems, charging stations for electric vehicles and traffic management and imply the use of mobile apps for different services.

4.2. Smart City priorities and vision

The creation of smart city strategies in Romania is the responsibility of local administrations even though it is supported by national authorities in urban policy. Most large cities still lack a comprehensive understanding of the smart city concept in their strategies, and they implement individual initiatives which can be linked to the smart city characteristics, such as transportation, energy and e-government. Moreover, additional difficulties are generated by the allocation of funding as the Regional Development Agencies (ADR) are responsible for the EU funding spending. Thus, the main barriers for Romanian smart city development are represented by the lack of resources, top-down governance structure, insufficient human resources and a general focus on hard infrastructure. Challenges in smart city implementation can be also the result of lagging structural changes which are typical for CEE countries, while Romanian cities are developing strategies in a rather underdeveloped political context.

An analysis of the existing Integrated Urban Development Strategies (SIDU) and Smart City Strategies across the seven cities presented shows an increasing interest in developing intelligent solutions for urban challenges (Table 2).

Table 2. Hard and soft infrastructure characteristics

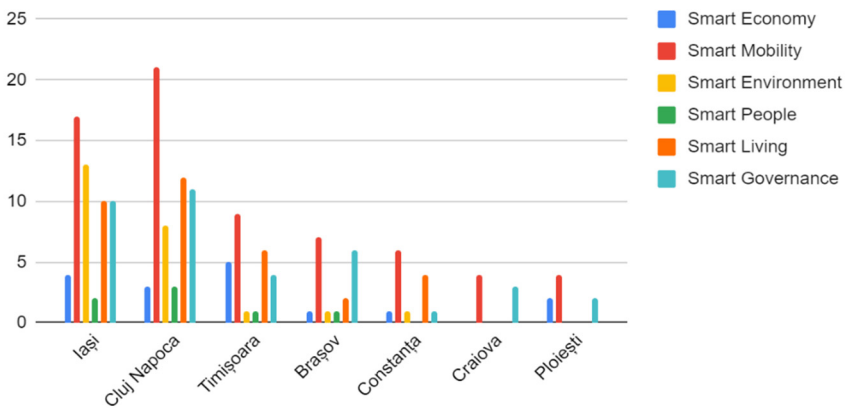
Cities	Hard infrastructure				Soft infrastructure			
	Energy	Transportation	Waste/ Pollution	ICT	Education	Health	Social inclusion	Participation
Iași	x	x	x	x	X	x	x	x
Cluj-Napoca	x	x	x	x	X	x	x	x
Timișoara	x	x	x	x	X	x	x	x
Brașov	x	x	x	x	X	x		x
Constanța		x	x	x				x
Craiova		x	x	x				
Ploiești		x	x	x				

Source: authors' elaboration based on the analysis of six cities strategies

This content analysis (Table 2) indicates an emphasis on the 'hard' infrastructure and physical development in areas of transport and ICTs. Thus, it reflects an overall interest in areas of smart and sustainable mobility, as they can have a significant impact on both the environment and the quality of life. Infrastructure investments usually involve funding from the EU while the use of ICTs is important for accessing Cohesion Funds. Therefore, city strategies are

quite similar as the main themes are transportation and the environment followed by ICTs. In regard to soft infrastructure, participation is the most approached topic in strategies. While most cities are large university centres with thousands of graduates each year, strategies do not focus on the improvement of training.

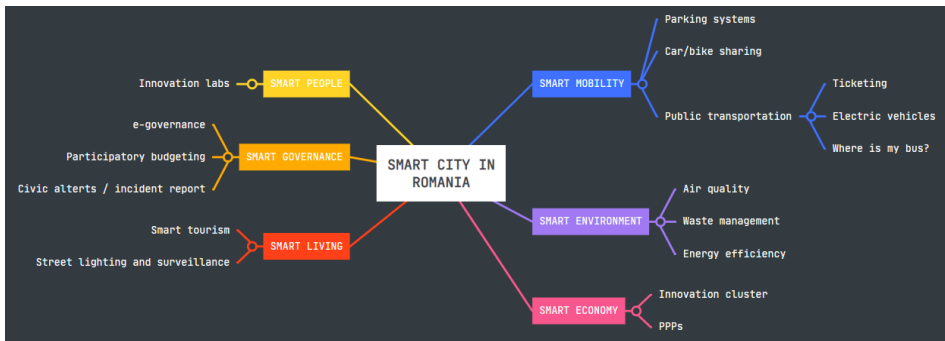
Having studied the smart projects reported by each city, we found that the real degree of implementation of these is lower than the reported one. The number of smart city projects by categories, reported by each city is shown in Figure 1. There are high disparities among cities as the largest urban centres have the most initiatives while the topics of the projects are rather similar.



Source: (Vegacomp Consulting, 2021)

Figure 1. Smart City initiatives reported in Romania, by category

Some patterns can be identified across the smart projects (see Figure 2).



Source: author's elaboration

Figure 2. Smart City - common themes in Romania

Most of the initiatives are focused on the smart mobility dimension and the main themes are traffic management, electric public transportation, bike sharing, parking and ticketing systems, linked to the use of mobile apps. The second category is related to the smart governance feature and is mainly referring to e-governance platforms for public services. Most initiatives imply online bookings, payments and civic participation in budgetary decisions and citizen incident apps. In the smart living field, projects are targeting entertainment, street lighting and video surveillance. Smart environment is approached through low carbon economy and the use of renewable energy. Therefore, most initiatives are based on the use of ICTs for improving services and infrastructure across urban areas and are not integrated into a broad system of innovative management.

5. EUROPEAN BEST PRACTICES

Recent research on European cities has approached the smart city through its sustainable perspective. Although there are many common features between ‘smart’ and ‘sustainable’ cities, some scholars argue that the concept of ‘smart city’ implies an economic dimension, while ‘sustainable city’ mostly addresses the environmental factors (Ahvenniemi *et al.*, 2017). Other studies state that the incorporation of ICTs in urban development does not address environmental challenges (Kramers *et al.*, 2012), yet the United Nations (2015) defines the smart sustainable city as “an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, cultural and environmental aspects” (United Nations, 2015, p. 3). Analysing smart city rankings worldwide, visible differences are found between approaches as successful urban development strategies in Europe seem to be increasingly dedicated to sustainability, examples of best practices coming from Barcelona, Vienna and London.

Barcelona is considered an example of best practices in urban development across Europe, being often ranked 1st for its smart city strategy. To become smart, the city undertook significant transformations of urban planning, having great difficulties in regards to housing, environmental issues and transportation. Thus, implementing smart solutions was necessary. In 2011 the City launched a new digital strategy, aligned with the Horizon 2020 priorities, addressing urban challenges such as climate change and natural resource scarcity, pushing for a more collaborative economic and social inclusion, through innovation. The main pillars of its strategy are governance, city services, digital socio-economic system and local innovation and citizens and include 22 programs. The basis of the initiative is the collaboration between academia, authorities, private actors and citizens, all working together to develop smart projects. Bakıcı, Almirall, and Wareham (2013) analysed the Barcelona model for the smart city using four dimensions - governance, economy, living and people and three pillars -

infrastructure, human capital and information and showed that overall, the citizens are at the core of the projects. Through Living Labs, smart solutions are tested, and citizens are empowered to work together with private actors to innovate. Thus, some of the projects developed in Barcelona include smart lighting, smart citizens, e-governance, smart transportation, energy efficiency in buildings and waste management.

London has been the smartest city in the world for the last years (IESE, 2020) and its efforts began in 2012, with solutions for traffic management in the context of the Olympic Games. In 2013, the Smart London Board was created, including researchers, businesses and authorities which later established the Smart London Plan. This was based on 7 pillars: open data, technology and creative industries, networking, smart infrastructure, social inclusion, efficient governance and smarter experiences. London's strategy is mostly focused on the digital and institutional dimensions as it aims to be a 'global test-bed city', yet it includes all smart city characteristics. As Europe's technological centre, London is implementing ICTs in all its systems, supporting sustainable transport, skilled workforce, accessibility to services and aiming to become carbon neutral by 2050. Thus, London has already become a hub for smart mobility, e-governance, innovative technology and citizen participation in decision-making.

In Vienna, the Smart City Wien Strategy highlights the city's objective of becoming Europe's digitalisation capital. The city has been recently ranked 18th worldwide (IESE, 2020) and it is praised for its high liveability index. Vienna's approach is holistic and collaborative, based on three pillars: high quality of life, resource conservation and social and technical innovations. The strategy implies a strong engagement of the community and innovation includes research and a strong education system. The quality of life is targeted through affordable housing and equal access to public services, while maintaining a clean environment.

All three cities are using data-driven technology solutions to attain their sustainability goals. Vienna, London and Barcelona have become experienced in the use of IoT, sensors, platforms and applications for solving urban challenges such as traffic congestion, emissions, access to services, citizen participation and transport efficiency. In their case, the use of ICTs has proved to be vital for the success of smart solutions. However, strategic planning for smart transformation must include both soft infrastructure (social and educational programmes) and hard infrastructure (technology and innovation). Collaboration and networking should facilitate the development and implementation of smart projects, involving stakeholders at all levels.

6. CONCLUSIONS AND RECOMMENDATIONS

Smart city initiatives, despite having been present for decades in Western Europe, are treated as a novelty across cities in Central and Eastern Europe, including Romania. The lack of coordinated and integrated solutions seems to be

the chosen way of tackling urban challenges, instead of establishing long-term strategies, focused on the benefits brought by modern technologies. These benefits can include lower costs of lighting, public transportation, waste management, low level of pollution and overall better life standards. This lack of vision across Romanian cities can explain their existing position in the adaptation phase.

National, regional and local strategies show interest in the improvement and increasing the use of ICTs in various domains of city management. However, the use of ‘smart city’ has become a fashionable label for many cities while the authorities lack the necessary skills to successfully implement solutions. The extensive use of technologies is a priority for most cities, yet in the Romanian case other issues must be solved for achieving results in this field, such as the abolition of inherited governance structures and improvement of cooperation between city actors.

Change in governance styles are visible through the use of e-governance systems, participatory budgeting, consultations and support for NGO activities which address citizens’ needs and promote engagement. It is however hard to distinguish smart city initiatives from other strategic and governance objectives. While sustainability and efficiency are addressed by most cities, the integration of these objectives among broader governance goals is still under development. This paper confirms that Romanian cities might be successful in implementing smart city initiatives as changes in terms of institutional cooperation have taken place and increased digitalisation has facilitated communication between stakeholders while technology improved public services and operations through online payments, parking systems, air quality monitoring and traffic management.

Smart mobility seems to be the main priority for Romanian cities and the increasing need for accessibility and efficiency pushed local administrations to develop intelligent systems, evidence coming from Iași, Cluj-Napoca and Brașov. Initiatives are also targeting improving environmental quality, through the use of electric buses, improved public transportation and car/bike sharing systems. Thus, it is visible that initiatives implemented in cities across Romania are mostly aligned with the EU objectives, as well as the sustainable development goals, although they still have improvements to make.

Significant disparities are visible across Romanian cities in terms of smart initiatives, as well as priorities underlined in strategic documents. While larger cities with dynamic economic, social and educational systems are catching-up with the Western trends, cities such as Craiova and Ploiești are still focused on improving basic infrastructure and services. Therefore, models from developed cities in the West are not quite designed to incorporate the lack of sustainable systems and problems generated by political, social and economic constraints that are common to many urban areas in Romania. Technological-based solutions cannot represent the smart transformation, as the smart city must contribute to

reducing inequalities and increasing cohesion at social, economic and territorial levels.

Drawing on smart city definitions provided at the beginning of this paper, we also argue that smart cities must target citizen involvement and knowledge development for better governance, thus Romanian cities can become smart when the level of participation will not be resumed at budgetary participation and citizen' incident reports. Moreover, urban smartness can be achieved through increasing the institutional quality and functionality of public services, urban planning practices and investments in smart people. Furthermore, there is a need to respond to pressing challenges at the global level, achieving environmental standards and improving resilience. Thus, cities in Romania must integrate sustainability and resilience in their smart objectives while also ensure the equal access to smart initiatives and aligning with European Union policies.

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