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THE RELATIONSHIP BETWEEN HUMAN RESOURCES MOTIVATION AND THE PERFORMANCE OF THE INSTITUTION - CASE STUDY BORDER POLICE

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Abstract: *The interest shown today for the degree of motivation of employees is in the attention of present psychology, where we are witnessing the phenomenon of the growing of the organizational culture, conflict mediation and negotiation policies, in order to achieve performance. Motivation, as a central process, appears with double meaning: cause and effect. It is the cause of the manifestation of the behavior and the effect of the appearance of the excitatory agent (need, expectation, purpose, effort, result). Indeed, the global context created by the pandemic influences the variations in the employee's motivation, usually demotivating the activities carried out on a daily basis. Thus, we believe that employee's motivation is a trigger for the entity's performance. Starting from this premise, in this article we asked ourselves the central question: to what extent does the motivation of human resources influence the performance of the institution? In order to find out the answer, we undertook a qualitative research based on an interview on a selection chosen from the staff of the Border Police of the country.*

Keywords: *motivation, human resources, management, performance.*

JEL Classification: *M12.*

1. Introduction

The conditions that favour motivation must be continuous and not sporadic, and the efforts to maintain motivation must be sustained. To the extent that the management is inconsistent in managing motivation, it will have a boomerang effect, people becoming reluctant or disinterested in it. The employee is more motivated when consulted to determine the nature of his work and how it will be performed. The employee's interest in what he does is a condition of the democratic or participatory management style.

In order to identify the motivation strategies of the Border Police personnel with implications on the institution's performance, we conducted a qualitative research, through which we received answers about the motivation strategies appreciated within the Border Police structures, about the personnel perception regarding motivation and the performance of the institution.

2. Qualitative research methodology

For the hypothesis: *motivation is an important factor in increasing the performance of human resources in the structures of the Border Police* - a qualitative research was carried out within the Territorial Inspectorate of Sighetul Marmăției Border Police. The sampling method was random, the target group of the interview was represented by the managers (chiefs or deputies from the Territorial Inspectorate of Sighetul Marmăției Border Police), who would have the possibility to implement a strategy to motivate the staff and the subordinates (deputies or heads of crossing points) within the Territorial Inspectorate of Sighetul Marmăției Border Police.

The interview includes six open-ended questions. Five people with management positions were interviewed (1 ITPF chief and four deputies from the Territorial

Inspectorate of Sighetul Marmăției Border Police and of the subordinate sectors: Halmeu, Petea, Târnava Mare) and seven people with executive positions appointed deputies within Territorial Inspectorate of Sighetul Marmăției Border Police (of which three heads of crossing points). Through this qualitative research we want to check the perception of the interviewees on the relationship between human resources motivation and the performance of the institution, and at the same time to know their opinion about the evaluation process and its degree of influence on the level of involvement of the staff in the Territorial Inspectorate of Sighetul Marmăției Border Police.

3. Qualitative analysis and interpretation of the qualitative research results

Interviewee profile

The interviewees are the heads or deputies of the Territorial Inspectorate of the Sighetul Marmăției Border Police and within its sectors. The sample was chosen at random and is represented graphically in Figure 1.

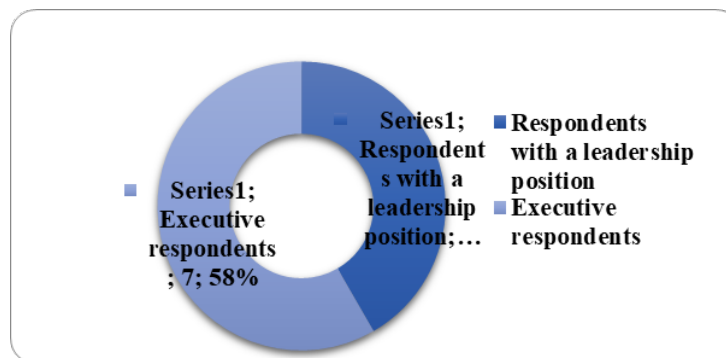


Fig. 1. Profile of the interviewed persons

Source: Developed by the author

I. The concept of motivation is often seen as a mystery - something like a magical substance that, if you sprinkle it on people, they become full of energy and eager to work. The first part of the interview checks the level of understanding of the phrase "*motivation of human resources*". It was found that the term was almost completely associated with "*stimulating and rewarding the employee, as well as recognizing his merits*" (the interviewees being familiar with only two perspectives of motivation - the economic and the affective one, regarding the energizing of behaviour and directing or orienting behaviour toward an objective, and less with the cognitive one regarding the intellectual dimension of the employee). Cognitive motivation focuses on meeting the individual needs of being informed, knowing, learning, innovating, operating and controlling the environment in which the employee works. Also, no interviewee spoke about the activity, within the human resources management, of maintaining and sustaining the motivating behaviour. So, to the question: "What do you mean by '*human resource motivation*'?" most of the interviewees define the motivation as the totality of those strategies implemented by the institution for "*the ambitioning of the staff to fulfill their attributions and to exercise the profession with dedication and passion*". Consequently, motivation determines the internal aims - innate or acquired of an employee's conduct - whether he is aware of it or not, in the form of some causes external to the personality (exciting, stimuli that are usually felt as needs) or internal causes (usually, abstract ideals).

II. In the second question: "*In your opinion, to what extent does the motivation of human resources influence the performance of the institution?*" the interviewees fully

confirmed the existence of this influence. The fact that motivation influences and drives performance is a matter of record. If a person is not stimulated to work in different ways, he will not achieve maximum performance. As well as with any element related to the human being, which is unique and unpredictable, at the level of motivation we are talking about a series of situations that motivate some, but do not motivate others, which have positive effects on some and negative effects on other individuals. In fact, one interviewee claims that *"the performance of the institution is largely influenced by the motivation of human resources, because any reward or incentive will make the employee exceed the threshold previously reached, consequently the institution has a profit."*

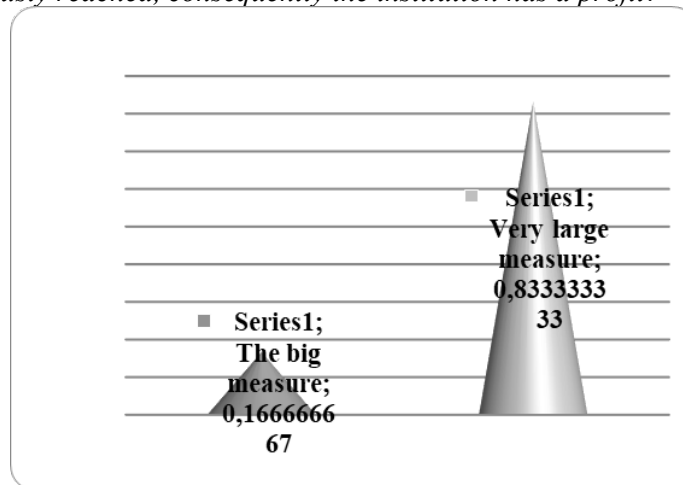


Fig. 2. Measuring the influence of human resources motivation on the institution's performance

Source: Developed by the author

III. In the case of the question: "Can motivation be considered a factor in increasing the performance of human resources?". All interviewees confirmed this. If the answer was yes, the interviewees were asked to argue the answer. Thus, from the received arguments, we bring into discussion two representatives: *"motivation can be considered a major factor in the performance of human resources, because the worker will feel more comfortable and eager for results when he notices that his work is valued and evaluated fairly "and" motivation can not only be considered a major factor in the performance of human resources, it is a factor in increasing performance."* In other words, the central hypothesis of our research is verified among the interviewees from the Territorial Inspectorate of Sighetul Marmatiei Border Police. The respondents stated that *"the human resources that will be motivated, regardless of the way of motivation (ideological, pecuniary, etc.) will have a higher degree of success in achieving the final goal that the institution proposes. This motivation attaches human resources to the values of the institution which leads to a much higher degree of success in achieving the objectives)".* In the central question of the qualitative research: "What motivational strategies are appreciated within the Border Police?", the answers were varied. For the examples of strategies proposed by us to increase the level of motivation and implicitly the performance of the institution, the interviewees confirmed each proposed strategy, each depending on the place held within the institution. For a much clearer picture of the answers, the following table is created.

Table no. 1. Motivation strategies are appreciated within the Border Police

The type of motivation strategy	Interview with leadership		Interview with execution function	
	YES	NO	YES	NO
reward;	✓		✓	
creating a culture in which employees' results are appreciated;	✓		✓	
increasing the degree of transparency in professional development;		✓	✓	
recognition of employees' merits using Social Media platforms;	✓			✓
flexibility, autonomy and stress reduction;	✓		✓	
creating opportunities for professional development;	✓		✓	
introduction of global mobility programs;		✓	✓	
giving personalized gifts;	✓			✓
job security;		✓	✓	

Source: Developed by the author

Thus, rewarding, creating a culture in which the employees' results are appreciated, flexibility, autonomy and reducing the level of stress, creating opportunities for professional development were strategies chosen primarily by both categories of respondents. 'A deputy from the Territorial Inspectorate of the Border Police Sighetul Marmatiei states that "*the creation of a culture in which the results of the employees are appreciated raises their morale and implicitly the results of the work converge to the objectives pursued by the institution.*" While recognizing the merits of the employees using social media platforms and giving personalized gifts are the preferred strategies of interviewees with leadership positions.). While introducing global mobility programs; increasing the degree of transparency in professional development, job security are strategies of the interviewees with executive function.

The interviewees also mentioned some of the most appreciated strategies within the Border Police, such as: eliminating work under pressure, awarding merits and titles, advancements in rank and function (which implies a higher remuneration and a recognition of merits).

Unfortunately, at the level of the Romanian Border Police there is not really a strategy to motivate the staff at a formal level, there is no emphasis on this, except for the rewards provided in the Statute of the Policeman. In conclusion, the role of the manager is paramount, he being responsible for triggering the internal motives of the subordinate team members, but also for maintaining and sustaining the behaviour.

4. Conclusions regarding the identification of the strategies for motivating the personnel from the Border Police structures with implications on the performance of the institution

It was found that the term motivation was almost completely associated with "*stimulating and rewarding the employee, as well as recognizing his merits*" (the interviewees were familiar with the economic and emotional side of motivation, very little with the cognitive side of the intellectual dimension of the employee). Thus, the

energization of behaviour and the direction or orientation of behaviour towards a goal are means perceived as motivational. Most of the interviewees define motivation as the totality of those strategies implemented by the institution for “*the ambitioning of the staff to fulfill their attributions and to exercise the profession with dedication and passion*”.

All interviewees acknowledged the relationship between motivation and performance. Some of them claiming that there is a directly proportional relationship between the two, influencing each other. In other words, the central hypothesis of the qualitative research is 100% verified (83% of the respondents confirm a very high influence, and the rest a high influence).

The result of the interviews is not surprising being given by most of the interviewees, motivation and performance being linked by what specialists call optimal motivational, which designates the most significant proportionality between the intensity of motivation and the size of performance. But motivation is also related to a number of its characteristics: intensity, duration, persistence, etc.

Regarding the answers on the strategies practiced within the structures of the General Inspectorate of Sighetul Marmației Border Police, the strategies proposed by us were confirmed. Thus, rewarding, creating a culture in which employees' results are appreciated, flexibility, autonomy and reducing the level of stress, creating opportunities for professional development were strategies chosen primarily by both categories of respondents. While recognizing employees' merits using Social Media platforms and giving personalized gifts are the preferred strategies of management interviewees. While introducing global mobility programs; increasing the degree of transparency in professional development, job security are strategies of the interviewees with executive function. At the same time, three more types of strategies have been proposed: eliminating pressure work, awarding merits and titles, advancements in rank and position (which implies higher pay and recognition of merit).

From these interviews we can say that at the level of the Territorial Inspectorate of Sighetul Marmației Border Police, motivation is already a trigger for performance.

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THE IMPACT OF CHANGE ON SCHOOL ORGANIZATION

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***Abstract:** The pandemic has caused an unprecedented shift to the online environment in most areas of life, and education was no exception. Since students all over the world have had to stay at home, the use of digital alternatives to classroom teaching has increased, thus determining a continuous improvement of teaching staff for a high-performance instructional-educational act. Therefore, the purpose of the article is to find an answer to the question "Is the change caused by the Pandemic in education, from the point of view of technology and digitization, advantageous?".*

***Keywords:** change, improvement, school environment, digitization.*

***JEL Classification:** M15, O15.*

1. The impact of the pandemic on education

The COVID-19 pandemic has significant repercussions not only from a health and economic point of view, but also from a social point of view, especially from an educational point of view. This is a double crisis: an educational crisis related to school closures and a general economic crisis that also affects the education sector. In particular, the closure of educational institutions in connection with the pandemic leads to the suspension or slowing down of educational processes and an increase in inequality in this field.

There is no doubt that the COVID-19 pandemic has caused a major change in the use of "digital" technologies in education, and the main question is whether this change is only temporary or whether it will be perpetuated and further developed by education staff. The impact of the crisis caused by COVID-19 on digitization in education has been significant. All education systems in Europe resorted to some form of online education during the initial period of the pandemic.

The reaction to the changes brought about by the pandemic has been generally positive in most education systems, although some groups of learners have not enjoyed the benefits equally. The educational institutions, but also the teaching and management staff responded well to this change and demonstrated a positive response, accepting the change, so that the educational process continues.

Although many positive effects have been observed following the pandemic, a number of challenges have also been reported, including the different levels of preparation of educational institutions for the transition to online education, the lack of digital infrastructure, the lack of digital skills, but also the volume of overwork and pedagogical concerns. Therefore, there is a risk that the digitization experience in the context of the COVID-19 pandemic will become a missed opportunity. In addition, the question arises as to which of the digital education practices will be retained by educational institutions and which will be discarded.

These challenges are mainly related to the negative social impact and costs of digitization, as well as the increase in workload and the emergence of health and safety issues.

In contrast, there was less consensus on the main opportunities presented by digital education, including: more possibilities for individual learning and encouraging learners to adopt a self-disciplined learning process; increasing access to education and promoting

inclusion; creating more engaging learning experiences for learners at risk of dropping out; a small group considered the reduction of administrative costs to be the main advantage of using digital tools

The use of digital technologies in educational systems is widespread, but there are differences from one educational setting to another. It appears that digital tools are little used in the face-to-face educational process, being only partially used in teaching and learning practices or related assessment processes.

In general, it seems that teaching staff are more willing to use digital tools. However, a significant gap was found in terms of professional training, as the teaching staff did not benefit from effective and quality professional training in pedagogic methods in the digital environment. In particular, a significant gap was found in the provision of quality professional training courses on the use of the Internet and communication tools in online and/or blended learning.

Another important aspect is related to those who develop and provide the digital tools and devices used in the online/blended teaching process in the education sector.

Private companies play an essential role, with little involvement of decision-makers in the educational system in the process of developing and providing such technologies.

Looking ahead, the private sector will continue to play a major role in the development of digital tools for the education sector. This raises questions about how the influence of this sector on digitization in education could be mitigated through a careful and well-thought-out use of digital tools, an extremely important aspect across Europe.

There was a general consensus among the stakeholders consulted on the types of investments needed to ensure the optimal development of digital education. These include investments in developing the skills and competences of teaching staff, digital infrastructure and tools for learners and teachers.

As for the digital skills of teaching staff, it was found that the self-assessed level of understanding of the concept of digital skills is very high. However, it does not seem to be translated into practice: not all teaching staff actually have extensive digital skills, and this aspect requires a more in-depth analysis. This situation should come as no surprise, especially when coupled with the findings that there are no uniform support structures and processes to support the development of digital skills.

There is a clear need for teachers at all stages of their careers to have access to quality digital skills development programs that give them the confidence and knowledge they need to use effectively in teaching to students.

This appears to be related to the quality and professional development aspect in the digital context, as well as the need for quality support for teachers to develop and update their digital skills.

Also, the extent to which these training needs are met shows a significant socioeconomic gap: teachers who live and work in rural and poorer areas appear to be at a disadvantage. These findings are particularly alarming and suggest that further research and action is needed in this regard, as the basic digital skills of educational staff are at stake.

Finally, education systems have successfully transitioned to distance learning modalities during the COVID-19 pandemic. However, in reality, educational staff need much more support so that they can properly incorporate digital technologies and associated teaching methods into classroom practice.

This will be considered an essential priority in the short and long term, as it is expected that digitization will increasingly become an integral part of all aspects of the educational process, including supporting teaching and learning activities.

2. Disadvantaged areas (where people live below the poverty line) and digital skills

In Romania, the pandemic had a major negative impact on children from disadvantaged areas. The figures show us that we have reached more than 1.7 million children who live at risk of poverty or social exclusion.

First of all we look at the financial resources the family has to survive in relation to the monthly basket that should be allocated for a decent life. Practically, these families live with quite limited resources, which most of the time do not allow them to cover the costs of food, utilities, rent, if necessary.

In Romania, the number of children in poverty is higher than the number of adults in poverty and it increased a lot in the last year, it increased by almost six percent, reaching over 1.7 million.

In vulnerable environments, in poor communities, the problems are very diverse. And digital transformation in education has become something extremely difficult to do in the pandemic.

Digital transformation in education, because the didactic process is not simply taken and moved online, it must be adapted to other benchmarks, because children's attention has other parameters online, exposure to devices again requires another way of segmentation of the content, implies even more autonomy, somehow the teachers have to give more freedom to the children to solve certain problems by themselves.

In vulnerable environments, in poor communities, the problems are very diverse.

The story with the Internet is very complicated, because there are regions where the signal is very weak.

That's why the school was an ideal space for this digitization process to happen, in the context where there was openness on the part of the school and on the part of the community. When the pandemic came, the data of the problem changed a lot, the location of this digitization is in every child's home, and there are multiple challenges. Overcrowded spaces where families with 5-7 children live in less than 15 square meters.

This whole issue of digitization must be approached very carefully, but with a lot of patience and attention to each child, it is possible. It opened up a very beautiful universe to the children, but still the school must be this space, which also gives them the ability to concentrate, because in families it is extremely complicated.

Almost everything that happened during the pandemic completely turned the entire educational system upside down and for children from vulnerable families, it generated a deep regression, especially in the context where they, not having access to school, had to learn from home - when your parents can't support you, you can't connect, you don't have privacy.

In these areas, pictures of the blackboard in the classroom were being sent on Whats App, this means digitization for many of the schools in these areas.

Pictures of the blackboard, on which the teacher wrote with chalk, were sent on Whats App to the parents.

Along the way it has been to develop the digital skills of the teaching staff, so that they can go further and transfer this to the way they relate to children and develop their potential.

With a consistent investment in education, I think our future will look very good, because that will present a lot of opportunities for the whole society, not just for the future young adults of this country.

3. Directions for digital education

Digital transformation has changed society and the economy, having an ever-increasing impact on everyday life. However, before the COVID-19 pandemic, its impact on education and training was much more limited.

The pandemic has shown that it is essential to have an education and training system ready for the digital age.

The COVID-19 pandemic has demonstrated the need for more developed digital capabilities in education and training.

Moreover, it has led to the accentuation of existing challenges and inequalities between those who have access to digital technologies and those who do not, including people from disadvantaged backgrounds.

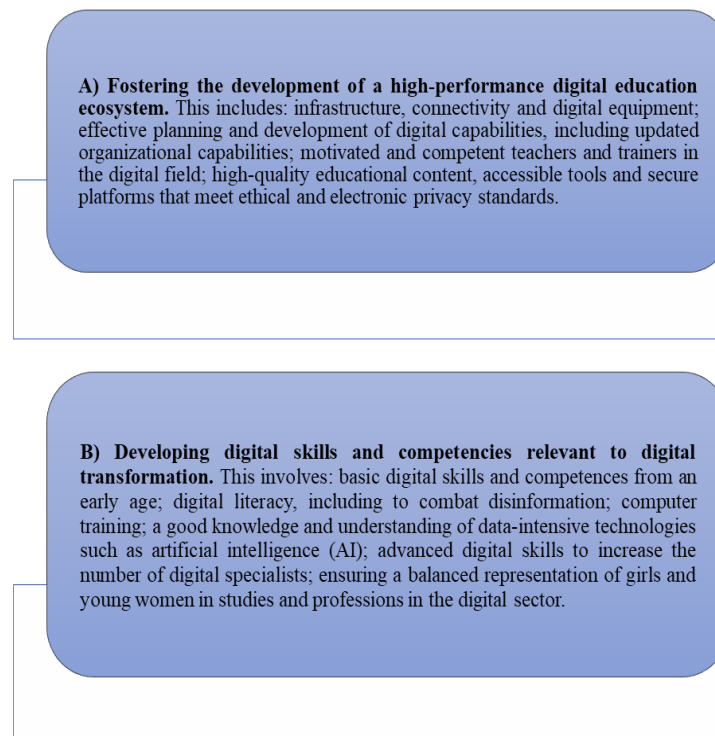
In addition, the pandemic has revealed certain challenges for education and training systems related to the digital capabilities of education and training institutions, teacher training and general levels of digital skills and competences.

The pandemic has accelerated an already existing trend towards online and hybrid learning.

This transition has revealed new and innovative ways in which students and teachers organize their learning and teaching activities and interact in a more personal and flexible way online.

These changes require an intensive and coordinated effort at EU level to support education and training systems in addressing the challenges identified and accentuated by the COVID-19 pandemic. At the same time, a long-term vision of the future directions for digital education must be proposed.

Fig. no. 1. Directions for digital education



Source: Dalu, A-M., Noveanu G., (2020). Back to School post-COVID. România. August 2020. Disponibil online: <http://www.ise.ro/wp-content/uploads/2020/08/Raport-Back-to-School2020-2021.pdf>.

The Internet, the digital environment and virtual reality have become increasingly influential phenomena in everyday life, the tendency of users of digital technologies being to substitute a large part of classic activities with new means, regardless of whether it is about spending free time, communication and information or professional and commercial activities, adapted to the digital age in which we find ourselves.

Moreover, the effects of extensive use of digital devices and applications induce stress syndrome. And this is all the more so since people feel this stress not only in their personal lives, but also in collectives, at the workplace, where digital skills are frequently required.

4. Conclusions

The Covid-19 pandemic crisis was a challenge. But it also offers an opportunity to review strategic approaches to the use of digital to improve public services, an opportunity that is achievable by making individual rights the basis of digital transformation. As digital tools and data inevitably integrate into our lives, individual rights should be the central pillar for policies related to digital technologies.

The digital divide is one of the main problems highlighted by the pandemic. It is composed of three main gaps between those who can and those who cannot benefit from digital tools: absence of internet connection, lack of an appropriate device, poor digital literacy.

Even though a stable broadband internet connection is available to a large part of the population, it was not enough to guarantee the exercise of individual rights for a significant part of the population.

Internet access is often linked to classical rights representing a digital projection of them. But the crisis has changed this perception, showing the profound impact that lack of access has on political space and socio-economic rights.

The right to access the Internet is no longer just an appendage to freedom of expression in a broad sense, but is a right in itself. The crisis has shown that the right to access the Internet possesses the human rights characteristics of universality, indivisibility, interdependence and interrelation, as it is indispensable for the full exercise of human rights. It doesn't make sense to have rights if we didn't have access, and vice versa.

As such, the crisis confirmed the UN's decade-long policy of declaring internet access a human right. So is the trend of many countries that have codified it in their legislation. For example, Greece, Ecuador, Portugal, Mexico and, more recently, Georgia and Sudan have regulated access to the Internet as a fundamental right at the constitutional level, although in all cases it appears to have emancipated itself from the protection of freedom of expression.

Other countries have codified it at the sub-constitutional level: Finland, Estonia, Spain. And in France and Costa Rica, a "right to the Internet" has been affirmed by constitutional judges.

However, the pandemic has shown that asserting the right to access the Internet becomes meaningless in the absence of digital literacy or the absence of appropriate devices. Along with access to the Internet, access to appropriate devices and knowledge of their use are extremely important for the exercise of individual rights.

More problematic is digital literacy. This must be a key component of education and everyone must be educated about digital technologies. Government should consider organizing and assisting citizens in using digital devices, networks and services.

Reforms towards digitization raise many questions, especially for citizens who are less familiar with information technologies. Therefore, the government could consider

creating ad-hoc information centers and organizing appropriate courses to train and assist citizens during the digital transition.

The complexity and topicality of the access issue suggests the need for the adoption of significant legal and social reforms, such as the codification of a "right to the Internet" in the Constitution. The codification of the right to access the internet, devices and knowledge as a social right, which involves the active intervention of public authorities to guarantee them, would be a significant step towards ensuring the exercise of individual rights in the digital sphere.

Moreover, it would be consistent with the fundamental principle of "leaving no one behind" of the UN 2030 agenda for sustainable development, which seeks to strengthen human rights for all without discrimination on any grounds. Digital devices are part of our culture, increase our productivity, simplify our lives and are a great entertainment factor.

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INNOVATIVE PERFORMANCE IN THE PRACTICE OF THE ACCOUNTING PROFESSION IN THE REPUBLIC OF MOLDOVA

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***Abstract:** Science is determined by innovation, and accounting is no exception. The professional reasoning in organizing the accounting activity within each entity in any field of the national economy, presupposes the implementation of technologies, innovations and the application of National Accounting Standards, IAS / IFRS, which can be influenced by taxation, level of experience, the quality of financial audit, as well as the attitude towards risk. The slowdown in the implementation of technologies and standards in the case of the Republic of Moldova has been influenced by the complexity of the adoption and implementation of IAS / IFRS, the imbalance of internal versus external beneficiaries, and the costs of implementing advanced technologies or innovations. The influence of factors (bureaucracy, formalism and professionalism) on the supervisory bodies of the Republic of Moldova has contributed to the slowdown in the full adoption of IAS / IFRS and innovations or technologies. The required direction at the moment is the digital domain, entities transiting from physical work in the office to the remote one, and which requires the moment of transition to the online environment of tools necessary for connection through technologies, to ensure data protection and to protect against cyber attacks. In this context, the emergence of several venture capital firms is possible. Every innovative idea needs to be reflected in Accounting Reports and Balance Sheets, for these reasons accounting is bound to crystallize truthful and current information, based on fair and true value.*

***Keywords:** IAS, IFRS, accounting, innovations, technology.*

***JEL Classification:** M41.*

1. Introduction

Intellectual products and technologies are recognized in accountants' work today, as decisive factors in increasing labor productivity, mandatory and indispensable elements of work strategies, because the management of all operations requires interdependence with information technology. The use of technologies in the practical activity of accountants stimulates the interaction with other professions, but also with potential clients, and the possibility to use within the entities and to introduce innovations, also increases the degree of competitiveness of the entity.

At present, a clear idea has formed of the need to move to an innovation-based economy (Turcanu and Golocialova, 2015, p. 450), in which innovation is the main driving force of socio-economic development and progress. The small and medium-sized enterprise sector proves a more advanced flexibility and a predisposition to innovation, thus representing an accelerated impulse of revolutionary innovations and of optimization and improvement (Turcanu and Golocialova, 2017, p. 28).

The effectiveness of the accountant's practical work depends largely on the outcome of developments based on the process of continuous modernization of technologies and management systems with high-performance and advanced indicators. The innovation field is the core of modernization in any economic field, especially accounting, and its characteristics drive the acceleration and quality of transformations in the professional activity of accounting from accountant based on bureaucratic skills of accounting, calculation and payment of taxes, to the accountant applying technology and generator of ideas innovative. The innovative activity is the determining condition for the development of the practical activity of the accountant, because it favors the generation of results based on performance, on positive effects of collaboration with other employees and creates a basis for the realization of many projects and programs to improve the whole

business. Accounting is a mastery of recording, classifying and crystallizing financial information about all transactions and transactions that take place in the business of any entity. Technologies help the practical accountant as a tool used for processing, storing, organizing and transmitting data, usually by using computers and other electronic means (e.g electronic signatures). As a result of the elimination of bureaucratic operations, we are gaining rapid access to information, information technology, innovative products and internet connectivity, which have led to significant changes in the work of professional accountants and improved the financial reporting system. Technological changes offer new opportunities and bring countless challenges to the field of accounting and the accounting profession, helping entities to make decisions. The impact of technologies and innovations is expected to be positive, overcoming the negative effects, such as data loss or cyber security problems manifested as a result of the use of information technology. New software tools used to perform data processing in the accounting business, such as audit and reporting software, improve the overall performance and competitiveness of the business.

2. Innovative performance in accounting

In the years 2020-2021, according to accountants, artificial intelligence and automation of other processes not only increases the level of efficiency, but also reduces the level of stress, resulting from the pandemic situation, where physical contact could be avoided for business. In accounting practice, the physical circuit of documents has been replaced by the digital circuit, due to the pandemic situation. The ability to quickly digitize accounting processes also requires proper training of accountants. The innovative performances in accounting (Figure 1) have become today in the activity of the accountant obligatory elements for the accomplishment of his work.

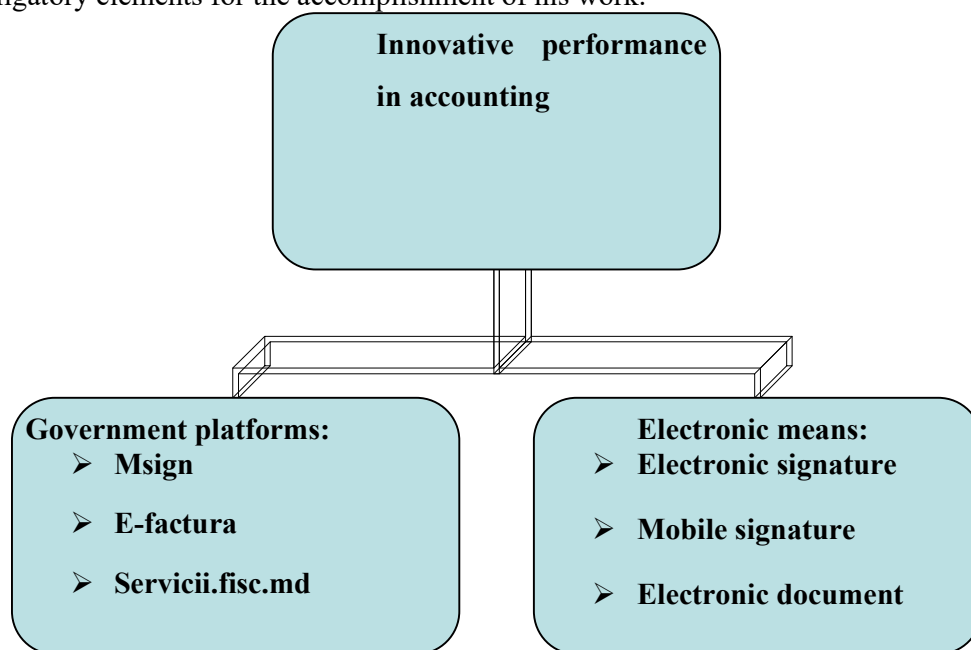


Figure 1. Innovative accounting performance

Source: Elaborated by the author

As an innovative performance (Figure 1) in the practical activity of accountants can be considered the digitization of the circuit of documents and reports, the possibility of

signing documents remotely through certain innovative devices, and / or is achieved through government platforms and electronic means or instruments:

- ✓ **MSign** - the government electronic signature service, which allows the signing of documents remotely by using a secure information system (documents for receiving works or services, etc.);
- ✓ **E-invoice** - information system that ensures the electronic circuit of invoices between beneficiaries and suppliers;
- ✓ **Servicii.fisc.md** - state platform for electronic receipt of reports through which statistical and fiscal reports are submitted online;
- ✓ **Electronic signature** - represents data in electronic form, which are attached to or logically associated with other data in electronic form and which are used as a method of authentication (Law no. 91/2014). In the Republic of Moldova, the regulatory framework regulates three types of electronic signatures:
 - *simple electronic signature;*
 - *unqualified advanced electronic signature;*
 - *qualified advanced electronic signature.*
- ✓ Mobile Signature - is an innovative service that allows access to electronic services using a mobile phone;
- ✓ Electronic document - information in electronic form, created, structured, processed, stored and / or transmitted through computer or other electronic devices, signed with electronic signature in accordance with Law 91/2014.

The current environment does not allow the accountant to work without the application of contemporary technologies and without access to remote information, digitization giving accounting a number of benefits that contribute to the improvement of all other processes within a company.

As the profession of an accountant evolves, we need to improve our performance in the use of technology, because, as practice shows, accounting is not just about keeping track of all business operations and knowledge of taxation, but is directly related to other areas. that there is a high demand for the skills of an accountant. The prospective accountant is the professional who changes his conduct and skills necessary to be successful in the future business ecosystem, with the changes in society.

As, from an organizational point of view, the accounting of the entities from the Republic of Moldova continues to be regulated, based on jurisprudence, the accountants are getting closer to the profession of lawyers. The legal framework is determined by the accounting law, which is specific to EU member states. Because, "accounting science is a bridge, which unites economics and law, the practicing accountant also manifests himself as a lawyer, judge of economic processes, and as an economic consultant" (Richard, 2000, p. 160). Thus, the accountant is obliged to know the legislation and aspects of taxation, and the electronic access to the State Register of legal documents through legis.md becomes, day by day, more and more necessary and sometimes even ordinary.

Methodologically, the accounting is based on the IFRS principles, reflected in the provisions of the CNS. By innovation we mean the creation of an advance towards something better or towards a superior and advanced development through dynamism and utility. With the acceleration of the expansion of globalization, the complexity of the problems arising in the sphere of realization and regulation of business and professions has increased enormously. Globalization in the field of accounting has led to the emergence of international models and standards that, through their transposition at the country level, become innovations. The progress made by the notion of innovation in the accounting profession is manifested by changes in the rules that create important changes in practice.

For these reasons, an issue of accounting in the Republic of Moldova is currently its harmonization with both European directives and IFRS

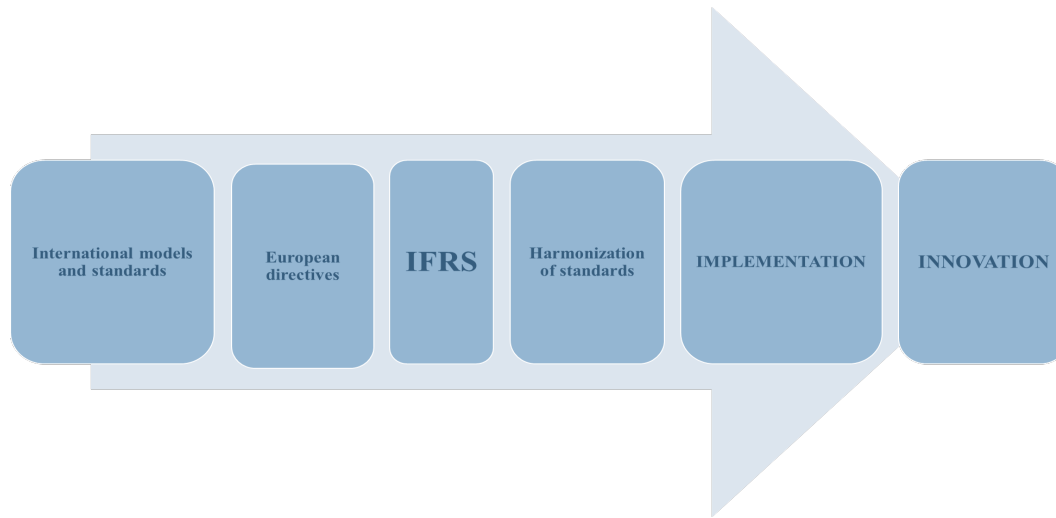


Figure 2. Model transposition, international standards, EU and IFRS directives at country level - innovations

Source: Elaborated by the author

Innovation is not easy to achieve, when in the accounting profession it is specific that everything you do is guided by regulations and bureaucracy. The mentality practiced over time, together with elements of bureaucracy, prevents the practitioner of this profession from advancing in the absence of technology. But the current conditions for progress are changing this paradigm. Rules and regulations remain strict and based on the law, but innovation comes with the application of technology.

The technology allows accountants to connect more effectively with their clients through software platforms, to transmit the necessary feedback from the official website of the company, as well as can always download or view information from other information systems related to the activity in the field. in which he is employed. In order for employees to be innovative, an innovation-oriented organizational culture is needed. Innovation is more attached to the functions that use information technology in the company, but it makes all the processes inside are dynamic and leads to a collaboration between all professions, but the miracles of technology will benefit most accountants. In the accounting profession there is a need to focus on technological innovation and change. An accountant can be a professional who initiates innovation in a company. To do this, it is necessary to create a culture of innovation based on technology. To achieve this goal, we need to consider the skills of an accountant focused on innovation (Figure 3).

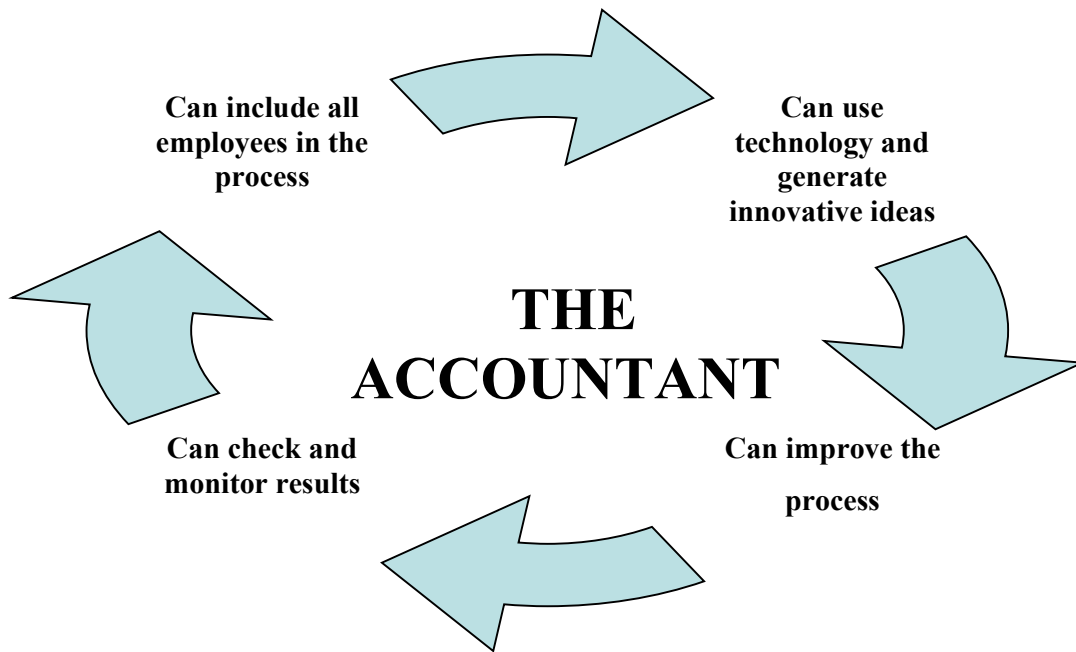


Figure 3. Modern accounting-oriented organizational culture of innovation

Source: Elaborated by the author.

1. The accountant can use technology and generate innovative ideas - many ideas can be generated by an organization's accountants, but if they do not have the necessary testing framework, only ideas remain. That is why digitization is needed to support the testing or implementation of these ideas. As bureaucratic as the accounting profession may seem, yet using IT technologies, this profession greatly simplifies their work process, and the ideas of an accountant become a first step towards formalizing the innovation process that might otherwise fail in time, exhaustion and disappointment.

2. The accountant can improve the process - Accountants are creative. That is why in the work process, the accountants interacting with the specialists from different fields, different knowledge and experiences, can bring together ideas to improve the processes. Sometimes, by recombining and reorienting simple ideas, solutions can be generated with an impact similar to inventing completely new things. Processes can always be improved, and such an approach helps employees make decisions quickly and be focused on customer needs.

3. The accountant can check and monitor results - Every new day should be seen as a new beginning for the innovation process, and in innovation, every idea takes you one step closer to an exceptional discovery. Any situation is a new opportunity to look for a new solution to an old problem, and then you can monitor both your results and those of all employees.

4. The accountant can include all employees in the process - Accountants are always the ones who will perform better than others, but the result of innovation is better when everyone contributes or aims to be innovative. This approach is important for those who are in contact with clients, where good guidance of accountants is important to be innovative. Innovation has its role in guiding employees and training their ability to be innovative in the use of technology.

3. Conclusions

The innovation trend is a strategic one, aimed at supporting companies that provide services in areas with vital applicability in the current context of globalization and the technology-based world. Of course, every idea in order to be put into practice needs to be argued and legally regulated, and then reflected in accounting and reporting.

Digitization and innovation have an impact on the accounting mechanism of accounting operations which corresponds to the basic trend of modern accounting methodology. As accounting is closely linked to taxation and legislation, there is a need for moderate regulation in the work of an accountant, as well as the need to develop mechanisms to reflect all accounting operations, to prepare appropriate management reports, statistical and fiscal financial reports by structuring corresponding to the field of activity to which it belongs. There is a need to harmonize legislation, to encourage entrepreneurs to innovate. In a rapidly changing environment, information technology is becoming an important strategic partner for accountants. Manual accounting work has been replaced by the most advanced techniques using technologies and innovations. Computers, printers, faxes, smartphones, digital signatures along with accounting software have a big impact on the field of accounting. Accounting technologies and software help professional accountants in their day-to-day accounting tasks to efficiently perform the calculations required by accounting operations and the reporting process. As a result of internet connections, accounting documents can be shared, and the online tax record system has effectively improved accounting.

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CONDITIONS OF CONTRACTUAL CIVIL LIABILITY

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Abstract: *Social relations are governed by the rule of law. Through this regulation, the legislator takes into account the conditions under which the norm can and must be achieved, its ability to model behaviors, leading them on a path considered socially useful. At the same time, the legislator is considering the possibility of violating the rule through misconduct. Thus, the violation of the provisions of the legal norms attracts the legal responsibility of the guilty person. In the traditional conception of contractual liability, this is closely linked to the idea underlying the principle of binding force of the contract. Since the contract has the force of law in the relations between the parties, it is considered that each party must be liable for any non-compliance with its "law", respectively for violation of the "private rule" that the contract generates. Civil liability is a form of legal liability that consists of a report of obligations under which a person is obliged to repair the damage caused to another by his deed or, in the cases provided by law, the damage for which he is liable. As a legal institution, the civil liability consists of all the legal norms which regulate the obligation of any person to repair the damage caused to another by his extracontractual or contractual act for which he is called by law to answer.*

Keywords: *liability, contract, obligation, prejudice.*

JEL Classification: *K10.*

1. Introduction

Liability for damages caused by one's own act, of the entire tort liability presupposes the cumulative existence of four conditions or constituent elements: the damage, the wrongful act, the causal relationship between the wrongful act and the damage, the guilt of the perpetrator of the wrongful and prejudicial act (Pop, Popa and Vidu, 2012, p. 411) .

In order to be able to speak of the contractual civil liability, there must be a contract, a contractual connection, between the called party and the person to whom he is responsible. This is the major premise of engaging in contractual liability (Anghel, Deak and Popa, 1970, p. 316).

According to art. 1350 of the Civil Code, any person must perform the obligations he has contracted.

Therefore, contractual liability is incurred only between the parties to the contract. In the execution of the contract is the reason for triggering the mechanism of contractual liability, and this can only happen between those who have concluded the contract, and the persons who succeed them in rights or between the occurring parts of the non-executed act.

In other words, the contractual liability consists in the debtor's obligation to repair the damage caused by non-compliance with his contractual obligations.

From the point of view of contractual liability, it is irrelevant whether the breach of obligations justifies the termination of the agreement or the creditor can claim only the forced execution of obligations which without justification the debtor has not paid (Vasilescu, 2012, p. 535).

Based on the need for unitary treatment of civil liability, it can be said that in order to engage in contractual liability, the following conditions must be met: the causal relationship between the act and the damage, as well as the fault of the debtor, sometimes called "guilt".

Analyzing the texts of art. art. 1073 - 1090 C.civ. these conditions can be traced precisely to the idea that any hypothesis of liability concerns, in principle, the sanction of guilty conduct.

2. The illicit deed

The unlawful act is a human act that has caused harm to another subject of law. According to the provisions of art. 1349 C.Civ. the perpetrator has the obligation to fully repair the damage caused.

Illicit acts are human conduct that violates the mandatory rules of law, committed without the intention of producing legal effects against their perpetrator, effects that occur in the power of law.

The wrongful act consists in the non-execution, improper or delayed execution of the obligation. Therefore, the unlawful act committed by the contractual debtor consists in the non-performance of his contractual obligations.

In the matter of civil liability, the illicit deed is defined as any act by which, in violation of the rules of objective law, the damage of the subjective right belonging to a person is caused.

It can also be said that the wrongful act represents the action or inaction that results in the violation of the subjective rights or legitimate interests of a person. The wrongful act consists in an act of conduct by which the rules of conduct in society are violated.

The wrongdoing has the following characteristics:

- the deed has an objective character, ie the deed consists in an externalized human conduct or manifestation;

- the illicit deed is the way in which a psychic, subjective element is objectified: the will of the man who has chosen a certain conduct. We can say that the wrongdoing is the result of a mental attitude.

- the deed is contrary to the social order and reprobated by the society; social reprobation, from a subjective point of view, is related to mistake, guilt or guilt, and from an objective point of view, it finds its legal expression in the illicit character of the deed.

It can be said that the illicit deed represents the violation of the right of claim of the other contracting party, by non-execution of the contractual obligations. The meaning of the expression “non-performance of contractual obligations” has a double meaning:

- in the strict sense, it consists in the non-performance or incomplete performance of the obligations,

- in a broad sense it consists in the non-execution, the improper execution or with delay of the obligations.

Failure to comply, in whole or in part, means failure to fulfill all or part of the obligations assumed by the principal contractor.

In case of total non-execution, the contractual liability will be committed with certainty, the debtor being obliged to repair the entire damage caused (Adam, 2011, p. 666).

On the other hand, the improper execution represents the execution of the service with the non-observance of the quality conditions imposed in the contractual clauses.

When there is a question of a late execution, this presupposes that the debtor has executed in kind the services assumed or will continue to execute them, but only after the fulfillment of the term established in the contract, thus causing the creditor a prejudice. If, as a result of the delay in execution, the creditor has suffered damage, the debtor will be obliged to compensate him. These compensations are called moratorium damages.

3. Injury

Damage is an essential element of tortious civil liability and is the negative consequence (patrimonial or non-patrimonial nature) suffered by a person, as a result of the illicit act committed by another person, which violated a subjective right or a legitimate interest.

Terminologically, prejudice has the same meaning as damage. Therefore, it can be said that there is a difference between damage and injury. The damage or damage can be represented by any injury, any evil that affects either the person, in the attributes of the personality, or the patrimony.

Damage, damage, is a simple injury or loss of value, viewed in a neutral way, without locating it in someone's property or person, without still raising the issue of liability, while the damage would be the legal expression of the damage, having, this time, a subject who feels it and a person designated to fix it.

The damage represents the harmful consequences of patrimonial or non-patrimonial nature, effects of the violation by the debtor of the right of claim belonging to his contractual creditor, by non-execution of the service or services to which he owed.

In order for the obligation to repair to arise, the pecuniary damage must be certain: the damage whose existence is certain and the extent of which can be established at present is certain, as well as the future and certain damage that will occur.

Certain damage means damage which is certain both in terms of its existence and in terms of its extent. The damage must also be current, ie it must have already occurred. However, the damage that is likely to occur in the future is also certain and is likely to be assessed (for example, the future decrease in the victim's income due to the reduction of his work capacity).

The involvement of the patrimonial liability for the non-patrimonial damages has a limited scope of application. However, there are situations when compensation is granted and for such damage caused by non-performance of a contractual obligation: such as in the case of medical contracts or passenger transport contracts.

The Civil Code states that liability without damages does not exist, and therefore the creditor is required to prove that the breach of contract has caused him damage. Even if the non-performance of the contract is considered the specific wrongful act, the reparable damage must not be identified with the non-performed obligation.

The damage is an essential element, the debtor's liability not being incurred if the non-execution attributable to him did not cause the creditor a material damage to be repaired.

The assessment of the damage can be made in court and it must be complete, including both the loss actually suffered by the creditor and the gain he was deprived of.

Unrealized gain is the increase that would normally have occurred in the creditor's assets if the debtor had fulfilled his obligation. Damages consist of a direct and immediate consequence of the non-performance of the contract.

In the legislation and literature, in addition to the term "damage", the following synonyms are also used: "damage", "damage", "damage".

In order for the court to order that the damage be remedied, it must satisfy certain conditions, namely that the damage must be certain and that it has not yet been repaired.

The literature has argued and unreservedly claims that harm is the most important element of civil liability, being an essential and necessary condition of it, in its own right (Pop, Popa and Vidu, 2012, p. 412).

A first condition would be that the damage be certain, ie the existence of the damage must be unquestionable and, at the same time, it can be assessed at present. The actual damage is certain, ie it has occurred in full until the date of its repair, but the future damage can be certain if it is certain that it will occur and there are the necessary elements to determine its extent.

When the question of the existence of a future prejudice is raised, art. 1385 para.2 C.civ. states that: "Compensation may also be awarded for future damage if its production

is unquestionable." Paragraph 4 of that article also provides for the possibility of losing an opportunity to obtain an advantage in addition to the damage caused.

There should be no confusion between the possible, uncertain injury and the future injury. The certainty of the future damage refers both to its existence and to its extent. If the full extent is not known, the court will limit itself to the obligation to repair the damage found and assessed with certainty, but may return to grant due compensation for damages that became certain after the judgment.

The second condition, that the damage has not yet been repaired, is justified by the existence of the principle of full reparation of the damage set out above.

This second condition is explained by the concern not to make the repair of the damage a source of enrichment of the victim without a legitimate reason.

There are situations in which the victim retains his right to compensation from the perpetrator of the unlawful act causing damage, even if the damage suffered has been fully or partially covered.

A very important rule is that the victim, respectively the creditor, is entitled to compensation, so he has the right to compensation in kind for the damage suffered.

In some cases, the violation of the law is a basis for the birth and development of a civil legal relationship. This will lead to the appearance of the civil legal claim for compensation.

When it is impossible to recover the infringing legal relationship in kind, the liability measures shall be directed to change the rights and obligations of the parties concerned, in the end result to achieve the intended purpose from the outset, as well as the losses and damage caused by breach of the obligation to be repaired by the guilty person. Establishing the penal clause or repairing the damage in case of non-execution of the contractual obligation in the conditions in which this execution is real, aims to obtain the concrete result (execution of a work, circulation of goods, quality products, based on purchase-sale contract).

4. The causal relationship

The causal relationship is the link that must exist between the non-execution and the damage claimed as repairable (Vasilescu, 2012, p. 537).

The causal relationship between the non-performance of the contractual obligations and the damage caused to the creditor is a condition of the contractual liability. Article 1530 Civil Code. stipulates that "the creditor has the right to damages for the damage caused by the debtor and which is the direct and necessary consequence of the non-execution without justification or, as the case may be, guilty of the obligation".

According to art. 1351 of the Civil Code, the debtor cannot be obliged to pay damages if the non-execution lato sensu of the contractual obligations is caused by force majeure or a fortuitous case, which in turn also includes the fact of the creditor or the deed of a third person. It should be noted that in terms of contractual liability, fortuitous event and force majeure produce the same consequences. In the case of unilateral contracts, the debtor's obligation is extinguished. In the case of synallagmatic contracts, they cease automatically. In the case of contracts with successive execution, the effect will be that of extinguishing the obligations that have become impossible to execute.

The meaning of the causal relationship is represented by the connection from cause to effect, where the wrongful act is the cause, and the damage is the effect, respectively the result of the wrongful act. As long as it cannot be established that an unlawful act has caused damage, it cannot be a question of tortious civil liability.

Also, the causal relationship is the criterion according to which the extent of the reparation due to the victim is determined, since the right to reparation can be recognized only for the damages that are, undoubtedly, the direct consequence of the illicit deed.

As a subjective condition, we can say that the causal relationship has an objective character, which is not to be confused with mistake or guilt. Therefore, it is possible to have a causal relationship and to blame and vice versa.

In the matter of contractual civil liability, there is no difference of effect between fortuitous event and force majeure - both exonerate the debtor from liability. Force majeure and fortuitous event, as indicated in the legal literature, are exonerated from liability only as long as no previous action or inaction has been proved to the debtor that is attributable to him and without which these events would not have occurred.

The existence of the causal relationship in contractual matters is presumed by law, a relatively presumed deduction, under the influence of the regulations of the Civil Code of 1865, from the final provisions of art.1082 Civil Code, respectively art.1530 Civil Code, which provides: the creditor is entitled to damages for the damage caused by the debtor and which is the direct and necessary consequence of the non-execution without justification or, as the case may be, guilty of the obligation (Adam, 2011, p. 672).

5. The guilt or guilt of the debtor

Guilt is an essential element of liability for non-performance. The debtor is at fault in all cases where - intentionally, recklessly or negligently - he has made it impossible for the debtor to perform the obligation in kind, thus causing harm to his creditor. Any unlawful action or inaction of the debtor, having as final result the impossibility of execution in kind of the obligation taken, thus constitutes a fault on his part. In principle, the breach of its contractual obligation - as soon as the creditor has administered the proof of this breach - is imputable to the debtor, unless he establishes that the non-performance is due to a foreign cause not attributable to him.

Failure to comply with the voluntary obligation must be culpable, ie it can be blamed on the debtor, who has no justification for its non-performance.

Although it is required by law with value in principle, in the conception of Romanian civil law, guilt is a necessary condition only in certain cases of tortious liability.

Contractual liability remains a subjective one, which is based on the guilt of the debtor, even if it is legally presumed.

Guilt is the general condition of civil liability. In principle, the form of guilt does not matter, but we are interested in proving it in the case of result obligations in which the debtor's guilt is presumed because the debtor did not obtain the due result for the creditor. On the other hand, in the case of middle obligations, where the debtor is obliged to make every effort to obtain the result desired by the creditor, if it is proved that he did not do so, then the debtor is guilty of causing the damage.

According to art. 1548 C.Civ. it provides: "the fault of the debtor of a contractual obligation is presumed by the simple fact of non-execution". The practical effect is that the creditor is not required to prove guilt, and the debtor, if he claims not guilty, must prove it; the sample being free. The rule of presumption of guilt applies only to the obligations of result, the creditor of an obligation of means is - instead, required to prove that the promised result was not obtained due to the lack of diligence of his debtor.

The guilt of the debtor as a condition of the contractual liability follows from the interpretation of art. 1547 and 1548 Civil Code. With regard to proof of guilt, this is done according to whether the obligation is a result or a means. The distinctions made in the previous point, regarding the illicit deed, are valid in their entirety and the matter of guilt.

The Civil Code enshrines the necessity of the existence of guilt in art.1349 par.3 C.civ.

The civil liability of the person who caused the damage may be incurred, provided that the condition is that the wrongful act is causally related to the damage caused, and the act is attributable to its perpetrator, ie the perpetrator was at fault when he committed a.

In civil law, unlike other branches of law, liability will intervene regardless of the form of guilt, and the damage will be fully repaired in all cases, even if, in the case of the existence of several perpetrators, they will bear the damage proportional to the seriousness of each guilt. .

The tortious capacity (discernment) is an essential condition for the existence of guilt which consists in the person's mental ability to understand the meaning of his deed and to consciously represent its result, the lack of this ability leading to the removal of the perpetrator's responsibility for the wrongful cause of injury.

The tort capacity is not confused with the exercise capacity of the natural person; the first refers to liability for damages caused by the commission of non-contractual acts that produce such consequences, and the second means the person's ability to conclude civil legal acts alone and to be liable for failure to fulfill his obligations under his undertaking (Pop, Popa and Vidu, 2012, p. 454) (art.37 C.civ).

In addition to the persons placed under interdiction and minors under 14 years of age, art.1367 Civil Code. it provides for the possibility of harm to persons who, without being alienated or mentally debilitated, were "in a state of mental disorder at the time of the act, which made it impossible for them to realize the consequences of their actions."

The rule is that these people are not criminally liable unless that condition has been caused by themselves by consuming alcohol, narcotics or other such substances.

In principle, the guilt of the debtor matters, and not any special form of it. As with tortious liability, guilt is only a structural element of liability, but it does not matter whether the debtor worked intentionally or was only at fault (art. 1547 Civil Code).

In conclusion, by regulating the contractual liability for the act of another, the Civil Code does not make any hint about the subjective nature of this form of liability. However, it can be noted that this indirect liability is also subjective, and the presumption of fault must be applied if the debtor is held liable for the deed of the one he replaced in the execution of the contract.

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INTERFERENCE OF ACCOUNTING POLICIES WITH FISCAL POLICIES IN THE CONTEXT OF THE APPLICATION OF IFRSS

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***Abstract:** Specialists in the field of economics, technology and knowledge of the activity of the reporting economic entity must be involved in the development of accounting policies. Accounting policies must also be developed in connection with the specifics of the entity's activities and strategies, in accordance with the legal provisions in force (currently OMFP 1.802 / 2014 harmonized with European Directives and IFRSs). In the current context, the accounting policies of the reporting economic entity should take into account the tax effects generated as a result of the correction of errors from other prior periods and are treated in accordance with the provisions of IAS 12 "Income Taxes".*

***Keywords:** accounting policies, accounting, tax, specialists, profit tax.*

***JEL Classification:** M41.*

1. Introduction

IAS 12 outlines the approaches to accounting treatment used to highlight corporate income tax based on current and future tax impact on the future recovery of the carrying amount of assets and the events and transactions of the current period recognized in financial statements of the reporting economic entity.

2. Accounting policies and fiscal policies

The provisions of IAS 12 use a number of terms, the definition of which is absolutely necessary and which we will set out below:

- accounting profit, represents the calculated profit or loss without applying the deductions of the expenses related to the tax. The destination of the accounting profit is registered in the accounting records of the reporting economic entity according to its distribution approved by the governing bodies of the GMS and CA, amounts materialized in dividends, reserves or other destinations;
- the taxable profit or the fiscal loss, is calculated in relation to the existing regulations in fiscal matter by which the method of determining the payment or recovery of the profit tax is established;
- tax expense (tax revenue), “the aggregate amount of current and deferred tax included in determining profit or loss”;
- the current tax, is the value of the tax payable or recoverable in relation to the taxable profit of the period or its fiscal loss;
- the deferred tax receivables reside in the recoverable amount of the profit tax determined by some differences related to the deductibility, the reported and unused tax losses, the reported and unused tax credits;
- temporary differences, resulting from the difference between the carrying amount of the assets or liabilities included in the financial statements and the related tax base;
- the tax base of an asset or liability represents the amount given for tax purposes to that asset or liability.

The tax base of an asset is the amount that is deducted for tax purposes related to any economic benefit subject to taxation produced by the economic entity in the event of its recovery of the carrying amount of the asset. The tax base is determined as follows,

- for debts,

tax base = book value - the total tax deductible amounts of future periods;

- for income,

tax base = book value - the value of non-taxable income for future periods.

Other significant provisions in accordance with the subject of scientific research are contained in IAS 12 which deals with “the recognition of current tax liabilities and receivables” and “the recognition of deferred tax liabilities and receivables”. So,

- on “recognition of current tax liabilities and claims”,

the direct tax for the current and previous periods must be recognized as a debt calculated in the amount of the unpaid amount, and if the value of the tax paid for both the current and the previous period is higher than the amount due, the difference must be recognized as debt. It may also be recognized as a claim the benefit of a tax loss for which it is permitted to move to an earlier period in order to recover the current tax relating to an earlier period;

- on “recognition of deferred tax liabilities and claims”,

any deferred tax liability is required to be recognized for any taxable temporary difference. Exceptions to this recognition are differences related to the initial recognition of goodwill or those that relate to the initial recognition of an asset or liability resulting from combinations of economic entities or at the time of the economic event do not affect the accounting profit or tax loss.

Deductible temporary differences refer to those differences whose result is deductible in the calculation of the tax loss for the future period if the value of the asset or debt is subject to recovery or settlement.

Reporting economic entities are required to recognize a deferred tax liability related to taxable temporary differences in the case of investments in subsidiaries or associates under joint commitments unless two cumulative requirements are met, as follows: joint ventures have the capacity to exercising control over the timing of temporary differences and creating the possibility of not recognizing the temporary difference in the foreseeable future.

The recognition of a deferred tax asset that relates to all deductible temporary differences arising entirely from investments in associated economic entities shall be made by the reporting economic entity only when the preconditions for resuming the temporary difference in the immediate future are created. with which to use the temporary difference.

The assessment of debts and receivables related to the current tax for the current period but also of previous periods must be performed at the value at which the payment or recovery is estimated to be made, or from the tax authorities using tax rates established by the tax regulations issued during the reporting period. financial.

The measurement of deferred tax assets and liabilities is measured at the estimated tax rate to be applied to the period in which the asset or liability was realized, relative to the tax rates established during the reporting period by the tax regulations.

The assessment of deferred tax liabilities and receivables requires highlighting the tax consequences arising from the way in which at the end of the reporting period the economic entity estimates the possibilities of recovering or settling the carrying amount of assets and liabilities. It should be noted that the revision of the carrying amount Deferred tax receivables are recognized at the end of each reporting period.

In accordance with the provisions of IAS 12, the amount of deferred tax, including profit or loss for the reporting period, is required to be recognized as income or expense except in the following cases:

- a transaction or event that is recognized, at the same time or at a different time, outside profit or loss, either in other comprehensive income or directly in equity [...]; or

- a business combination [...]”.

In addition to profit or loss, current and deferred tax is obligatorily recognized if it is connected to items already recognized either in the same period or in a different period.

The offsetting of current tax receivables and liabilities is carried out only if the following conditions are cumulatively met:

- has the right to exercise legally acquired in order to compensate the recognized values;
- has in perspective the settlement of the debt related to a net basis, or to settle the debt at the same time as the capitalization of the asset.

Furthermore, the reporting entity is obliged to offset the deferred tax assets and liabilities subject to the following conditions:

- the reporting entity has the legal right to offset receivables from current tax liabilities;
- deferred tax assets and liabilities are associated with corporate income taxes levied by the same public tax authority.

Tax expenditures or tax revenues include a number of items that are as follows:

- has in perspective the settlement of the debt related to a net basis, or to settle the debt at the same time as the capitalization of the asset.

Furthermore, the reporting entity is obliged to offset the deferred tax assets and liabilities subject to the following conditions:

- the reporting entity has the legal right to offset receivables from current tax liabilities;
- deferred tax assets and liabilities are associated with corporate income taxes levied by the same public tax authority.

Tax expenditures or tax revenues include a number of items that are as follows:

- the amount related to current tax expenses;
- the amount related to current tax revenues;
- the amount of adjustments recognized in the reporting period for current tax in past periods;
- the amount related to the expenses associated with the deferred tax and the income from the deferred tax associated with the events initially recorded in the accounting records and the resumption of the temporary differences;
- the amount of the benefit determined by a tax loss related to a previous period, or from the use in order to reduce an expense with the current tax of a tax credit or a temporary difference from the previous period;
- the value of the benefit occasioned by the reduction of the deferred tax expenses either by credit of fiscal nature, or by temporary difference or fiscal loss;
- the amount related to the deferred tax expense determined by the reduction or resumption of a reduction related to a previous period belonging to a deferred tax receivable;
- the amount of either the tax expense or the tax revenue caused by changes in the reporting entity's accounting policies.

In addition to the components of tax expenditure and tax revenue, the reporting entity is required to provide the following information separately:

- “current and deferred aggregate tax related to items that are debited or credited directly to equity”;
- the value of the distinct profit tax for each separate element included in the global result;
- explanations regarding the determining causes of changes in tax rates;

- the aggregate value given the temporary differences related to investments between associated economic entities whose deferred tax liabilities have not been recognized;
- information on each category of loss and type of tax credit is presented separately, on which occasion it is specified: the amount of deferred tax assets and liabilities, recognized in each period in the financial statements of the reporting economic entity; the amount related to deferred tax or deferred tax expense recognized in profit or loss;
- information on the impact on corporate income tax of dividends granted to shareholders, declared before the approval of the financial statements, etc.

3. Conclusion

There is a complementary relationship between the accounting policies and the fiscal policy of a reporting economic entity, but also a reciprocal causal link. These phenomena are visible from the stage of registration in the accounting records of the economic entity of any event economic or transactions. Moreover, the provisions of IFRS require the management of economic entities to take into account the development of accounting policies and the tax aspect associated with each event or transaction.

An efficient management of the economic entity's resources presupposes an increased attention both on the economic-financial operations carried out in order to obtain profit and on the fiscal dimension of the economic activity.

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TRAINING OF PRE-UNIVERSITY TEACHERS IN ORDER TO STREAMLINE THE TRANSITION PROCESS TO ONLINE ACTIVITIES

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Abstract: *The conduct of teaching activities in Romanian educational institutions was based until March 2020 almost exclusively on traditional learning methods, namely they were organized face to face in a classroom. The sudden outbreak of the Covid-19 pandemic shook the world and forced the education system in all parts of the world to switch to online teaching overnight. The school environment has been reluctant to take over the changes in technology, often emphasizing the risks of using them compared to its benefits, but in the crisis the existence of technology facilitated the transition when the only option was to move entirely to an online teaching-learning system. Teachers were given the opportunity to rethink the methods by which the instructive-educational processes were carried out and to find a balance between their traditional role and the new roles assigned through digitization. In order to achieve this balance, teachers need to be trained for today's education. This article aims to analyze the factors that determine an effective transition to online activities and to explain the need for an interdependence between specialized, pedagogical and technological knowledge in the context of teacher training for online teaching - learning activities.*

Keywords: *online activities, training, TPACK model, specialized knowledge, pedagogical knowledge, technological knowledge.*

JEL Classification: *I21, O15.*

1. Introduction

The COVID-19 pandemic has forced the entire globe to find coping mechanisms to adapt to the changes that have occurred and to find rapid and workable solutions to the challenges brought about by this experience.

In the two decades preceding the COVID-19 pandemic, the proportion of people working remotely increased steadily but at a relatively modest rate. While organisations and workers have gradually shifted to telework over time, the sudden shock of the COVID-19 pandemic presented a massive and unexpected challenge to many managers, workers and the organisations in which they worked, as well as to the education system worldwide.

Telework, also known as 'telecommuting' or 'remote working', refers to the ability of employees to work remotely using technology to facilitate communication with the workplace, with online activities taking the place of telecommuting in the instructional-educational process.

The conduct of teaching activities in educational institutions in Romania was until March 2020 based almost exclusively on traditional learning methods, i.e. face-to-face in a classroom. The sudden outbreak of the Covid-19 pandemic shook the whole world and forced education systems everywhere to switch to online teaching overnight. Many academic institutions that had previously been reluctant to change their traditional pedagogical approach had no choice but to switch entirely to an online teaching-learning system.

More than 1 billion and 575 million students in some 188 countries have been affected by the closure of schools and universities due to preventive measures taken by them to prevent the spread of COVID-19 (UNESCO, 2020). Because of this, the use of technology has been considered the most appropriate (if not the only) alternative to keep education systems functioning in most institutions. Despite implementation challenges, multiple advantages in the transition to online activities have been recognised, including the opportunity for rapid progress in digital education that would otherwise take years but also a good opportunity for teachers and students to become more creative. There are

numerous studies worldwide focused on identifying factors that successfully integrate technology into classroom teaching and learning. It is assumed that the same factors influence the level of use of technology in the processes of moving learning from face-to-face to online activities, but also the quality of learning in both formats.

2. Factors involved in teacher education

At a time when quality of work is of paramount importance, efficiency can only be achieved through the successful use and training of human resources. There is a consensus in the field of human resource management that in order to remain competitive and to achieve organisational goals, managers need to incorporate human resource management strategies into their overall planning. Human capital theory aims to effectively and proactively use human resource management to increase the value of the organisation's human capital and the value of anticipated returns such as labour productivity.

Organisations and institutions that invest in developing human resource competencies seek to create working conditions that are compatible with their requirements and desires, and thus are the ones that achieve success. Employees are the essential resource that institutions need in times of change, so organisations that have managed to please their employees and have been able to implement loyalty and trust, can get through difficult times with greater ease. The COVID-19 pandemic has provided a completely new perspective on traditional work organisation and thus highlighted the importance of achieving productive management in the conduct of online activities.

The transition to remote activities represents an important organisational change for economic agents, institutions and the educational environment and is driven by a number of forces. In order to survive the various changes, organisations need to be aware of the dangers to which they are exposed as well as the opportunities in the market. They must therefore be able to adapt consistently and cope with the environment in which they operate, which automatically implies a degree of flexibility on their part.

Table 1. Factors of organisational change

Factor name	Implications for organisational change
<i>Develop the technology domain</i>	New technologies are used in a beneficial, personalised way.
	Attention is directed towards digitization and robotization
<i>Economic factor</i>	Actions in the area of foreign exchange, national and international markets are directly influenced by it.
<i>Socio-cultural factor</i>	Demographics, income distribution, corruption, education, attitudes, beliefs, mentality, trends, living conditions, labour flexibility.
<i>Political-legislative factor</i>	existing international relations as well as taxation policies, competition policies, social protection, job security.
<i>Ecological factor</i>	natural resources, pollution levels and climate

Source: processing and adaptation after Şendrea, 2017

Communication plays an important role in training human resources to make the transition to online activities more efficient. Sharing information with all employees and managers, producing information, distributing it and reflecting it in daily life and services

is the main structure of communication in the internal and external environment of the organisation.

In order to meet the inherent challenges of doing work, employees need to continually update their knowledge, skills and work competences and organisations need to invest in human capital development. The need for adequate training and equipment for employees is the first step in effective employee training. Representatives of employers' associations stress the need to improve the managerial culture and digital skills of managers involved in coordinating and managing employees who will be working remotely, while others point to the risks associated with intrusive supervision which can affect the physical and mental well-being of employees and raise privacy issues.

In establishing an effective human resource training strategy for an effective transition to remote working, the following factors need to be considered:

- ✓ **the conditions under which remote work will be carried out, namely:**
 - ICT/digital equipment;
 - energy costs consumed at home;
 - speed and quality of broadband connection;
 - training on remote working, communication and management of virtual teams for teleworkers and their managers.
- ✓ **organisation/reorganisation of work and management style:**
 - degree of autonomy and flexibility of employees;
 - management expectations based on connection/presence;
 - management's ability to motivate, support and manage remote human resources.
- ✓ **the nature of the job/occupation, namely:**
 - degree of interdependence of teleworkers' tasks with other tasks;
 - the extent to which teleworkers' tasks can be performed independently.

3. TPACK Model

In education, the acquisition of digital competences comes with significant challenges, although some existing projects and planned initiatives aim to improve the situation. Romania's Skills Agenda 2025 lists digital competences as a priority for connectivity and the labour market, as well as essential life skills. In general, adults have to pay to acquire or improve their digital skills if they do not participate in dedicated projects or use open educational resources. Addressing systematically the provision of training for all segments of the population (older people, people living in rural areas or those in other vulnerable situations), including the provision of infrastructure and teacher training for digital skills, remains a challenge. During the crisis caused by the COVID-19 pandemic, steps were taken to make available the available training courses to all because even though at the level of the 2017-2018 school year teachers' confidence in their digital skills was quite high, the sudden shift to online teaching-learning activities proved the opposite (Figure 1.).

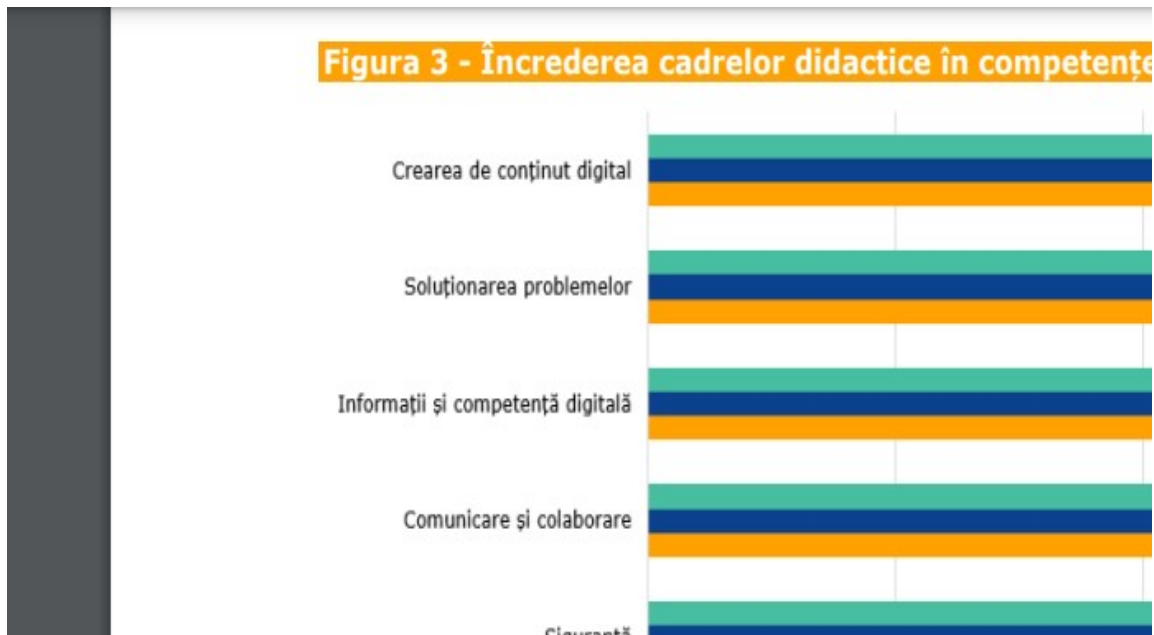


Figure 1. Teachers' confidence in their digital skills, 2017-2018

Source: 2nd Survey of Schools: ICT in Education, based on the DigComp framework

Education research has shown that in-service teacher training is one of the important factors influencing student outcomes. In the pandemic context, the need to use information and communication technology in the educational process has become even more evident and the possession of specialist and pedagogical knowledge is not sufficient if it is not combined with technological knowledge.

In order to analyse the dependence between these three types of knowledge, the international literature has devised various conceptual frameworks, the best known being the one synthesised by Koehler and his collaborators, namely the TPACK (Technological Pedagogical Content Knowledge) Model. They, starting from Shulman's model which considered only pedagogical knowledge in the implementation of effective educational activities, highlighted the need for the whole package of knowledge to improve the teacher education process.

Therefore, the three types of knowledge that are considered in the TPACK model are (Figure 2):

1. Content Knowledge (CK) - refers to that knowledge specific to the subject the teacher is teaching;
2. Pedagogical Knowledge (PK) - this refers to the teacher's knowledge of the methods, theories, practices and processes needed to carry out the educational act;
3. Technological Knowledge (TK) - refers to teachers' ability to use ICT and its associated resources.

All these types of knowledge interact and are in a close relationship of interdependence and thus result in three types of components that the TPACK Model integrates.

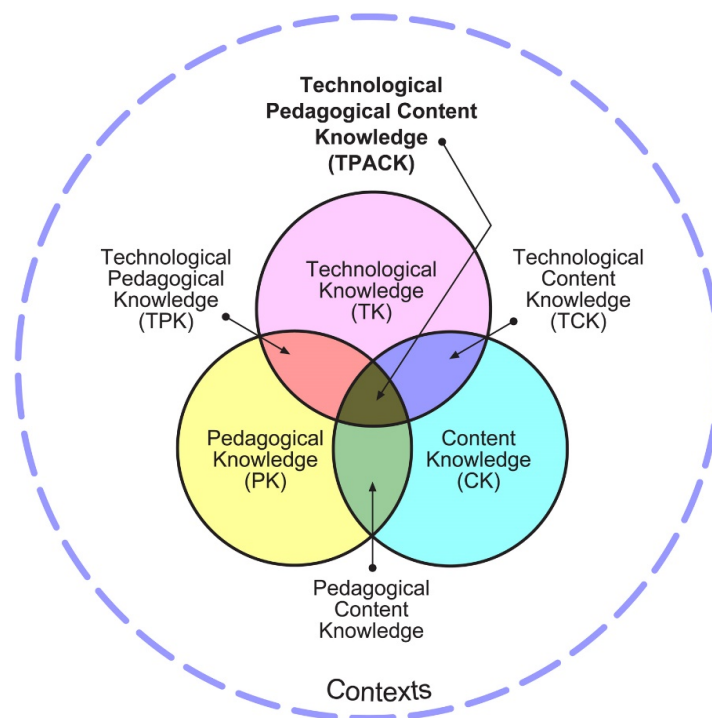


Figure 2. TPACK Model

Source: <https://educationaltechnology.net/technological-pedagogical-content-knowledge-tpack-framework/>

The first component is Technological Content Knowledge (TCK) which refers to the suite of technological knowledge that is in a reciprocal relationship with the knowledge of the specific subject the teacher is teaching (specialist).

The second component is the knowledge of the teaching of the subject – Pedagogical Content Knowledge (PCK) and considers the package of subject-specific teaching knowledge that a teacher must possess in order to teach a specific subject.

The third component is Technological Pedagogical Knowledge (TPK) and looks at issues that explain how technology can be useful in making certain pedagogical practices more effective.

4. Conclusions

In addition to all the measures taken at national level to support effective online teaching and learning, the success of distance learning is influenced by the way in which instruction is delivered, but also by the level of clarity, access and suitability of technological equipment, the time, motivation and support provided by teachers and trainer to deliver online learning.

The TPACK model results from combining these three components in different ways and thus creates a solid knowledge base for the instructional process. The adaptability of this model makes its use in teacher training imperative, given the well-known need to develop the skills required for the use of ICT in education today.

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THE GENERATION MIX IN ORGANISATIONS, CHALLENGE AND INSPIRATION FOR MANAGERS OF ORGANISATIONS +2023

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***Abstract:** The present times, subject to a complex of crises: health, economic and political, are subtly changing the optimal management approach. At the same time, the employer-employee relationship based on the principle of reciprocity, rewarding employee loyalty through career development opportunities, continuous training and job stability, is no longer relevant. Rapid economic and technological change, questionable political ethics at European level, structural changes in the EU, the consequences of the war in Ukraine, etc. are all sources of insecurity felt by the current generation. They are forced to adopt new career concepts that make it easier to adapt to jobs characterised by reduced stability and security. In this context, employees are forced to "reset their skills to suit the changing work environment in order to remain profitable", says Hall D.T. They value freedom, and the tendency to continuous learning and flexibility are their hallmarks. Given the current social, economic and political context, the paper explores what the values and characteristics of each generation active in the labour market are, and what the business environment needs to adapt to them.*

***Keywords:** ethical, moral, change, responsibility, adaptability, sustainability.*

***JEL Classification:** Q56, M14.*

1. Introduction

"The greatest danger in troubled times is not the trouble, but continuing to act according to the logic of the past." Peter Drucker

The world is in a continuous process of change, and the dynamics of change over the last 50 years are overwhelming.

The third industrial revolution, centred on digital technology, has changed the relationship with knowledge and, with it, paradigms, understandings and behaviours.

Today's Boomers (1943-1960) work alongside Generations X (1960-1980), Y (1980-2000) and Z (1995-2010), people "immersed in digital practice since childhood, accustomed to converse and exchange through digital networks," "eager for autonomy and freedom, for whom the power of expertise no longer justifies a position of authority, but rather the ability to disclose, challenge and encourage personal and professional growth."

On the horizon are the young employees of tomorrow, born after 2000, i.e. Generation Z. So, in the context of the shift from imposed to elected authority, it is in the interest of companies to understand the real changes in people, the main resource involved in the development of any business.

Today's world is different from yesterday's, and in order to have well-prepared companies that can cope with economic fluctuations, technological change and social conflict, their managers need to understand how they can act constructively.

This paper seeks to identify the new approach that competitive and sustainable companies should take to the challenges of today and tomorrow, from the perspective of the business ethic of +2023 applied to the complex of generations: Boomers, X and Y that now form the most important resource, the human resource.

The topic is important because the lack of managerial knowledge needed to adapt to the new paradigms of the business world drastically reduces the chance for companies to resist the pressure of change and, therefore, to keep their position in the market or even not to leave it.

3. Problem Statement

Morality is a social code, a set of rules, laws, norms with an imperative role, accepted in a society, ethics refers to behaviours and habits.

"The moral code seems to perform two vital functions: to temper internal conflicts that could destroy the group and to protect the long-term interests of the group against the short-term impulses of individuals."

Ethics, on the other hand, is truly activated after an act of renunciation occurs that certifies that the will of the other is respected and their freedom is similar to one's own. Thus, it manifests itself when the being and self-esteem are affirmed, but without governing the relationship to the detriment of the other but, on the contrary, mediating the two freedoms.

"Mediation allows coexistence: your freedom to be as good as mine.

Values are thus protected from the arbitrariness of each individual. Hence Ricoeur's trilogy: <<my freedom, your freedom, the rule>>.

The relationship between ethics and morality, as Ricoeur defines it, seems perfectly applicable to business. The employee is autonomous (the "I" pole), but must ensure the trust of other employees (the "You" pole) by adapting his project to that of the institution that employs him."

By making known the ethics of actions taken, as well as key words downstream or upstream of ethics such as: exemplarity, respect for others, mutual trust, social responsibility, justice, companies no longer have to define the actions to be taken.

Whether they will appeal to informal ethics (corporate culture, ethical climate, ethical spirit, shared values) or formal ethics (set of value judgments and rules of conduct, codes, social works), or both, the business environment thus ensures its medium- to long-term sustainability.

Of major importance, however, and by no means negligible, are their consistency and employee participation.

However, as we pointed out at the beginning of the article, change has affected everything in its path: people - through the industrial revolution centred on digital technology, but also through increased education and international mobility, economies - through the restriction or suspension of some economic activities during the SARS pandemic - CoV2, - through the uncontrolled rise in utility prices after the outbreak of war in Ukraine and other imbalances unfolding around the world.

In this context, the research focuses on determining the new paradigms that govern the people of the present and the future, and how business ethics can align with them in a healthy way.

"Unlike their Generation X parents, who were born into a fast-paced world and needed to reassure themselves through possession, and unlike Generation Y young adults, who advocate hyper-individualism and therefore access to possession, Generation Z relies on collaboration, places sharing at the forefront of its values, and prefers experiences over ownership."

In this context, faced with real human resource management problems, more and more managers have realised that the solution lies in the specific analysis of each generation group, i.e. focusing on the psychological traits and global behaviours attributed to each generation in the workplace, as well as the potential conflicts between these generations.

"Research on intergenerational differences in work attitudes falls into three major categories: (1) work centrality and work ethic; (2) workplace characteristics and work preferences; and (3) perceived changes in work attributes."

According to Twenge, J.M., Campbell, S.M. (2012), in the Twenge study conducted in 2010, the preferred characteristics of the workplace were analysed and the conclusion was that the main change in the new generations is that of leisure-related values.

Employer availability for more holidays, an easier pace of work and less supervision have become important criteria in the choice of workplace.

Other changes included:

- intrinsic(1) and extrinsic(2) values, respectively:

(1) an attractive job where you can see results - is of less importance to millennials (generations Y and Z)

(2) "status and prestige, salary, respect and opportunity for advancement and promotion" scores lowest for Boomers, moderate for Millennials and highest for GenX.

- social rewards, such as having contact with many people and making friends, which have declined, with millennials scoring at the low end of this value

- altruistic rewards, such as helping others and being of value to society, saw a slight decrease

- interest in entrepreneurial careers has seen the biggest change among women, especially

"interest in realistic (mechanical and outdoor activities) and investigative (problem solving or research) careers declined among men"

- interest in social careers, often described as helping others, increased.

"The appropriation of mobile phones by Generation Y has led to practices whose effects have shaped their social lives. The main features are autonomy, group and immediacy."

The same authors consider that the autonomy generated by mobile telephony has made a strong contribution to the development of an intense friendly sociability which, however, has taken a special form, that of immediacy.

The experience, whatever its importance, must be transmitted live, and what matters is being able to talk to a chosen interlocutor about your immediate situation.

On the other hand, argue Morley, V., Figueiredo, M.B., Baudoin, E., Salierno, A. H. (2012), digital games, having a stimulating effect, have developed three characteristics of practice: "a search for performance, a community dimension and an interweaving of temporalities."

At the same time, they say, accustomed to networked games where they are encouraged to progress and their efforts are rewarded, Generation Y employees have the same expectations in their professional lives.

Other changes highlighted by Morley, V., Figueiredo, M.B., Baudoin, E., Salierno, A. H. (2012) are "distancing from the enterprise, assertion of individuality, demand for recognition of one's own skills, dream of quick success, etc". but also "a common attachment to collective forms of work (teamwork, project work, mutual adaptation between colleagues, etc.)".

As far as Generation Z is concerned, what characterises it, according to Gentina, E., Delécluse, M.-E., (2018), is the search for authenticity, the need to co-create, a new relationship with knowledge.

Soussin F., APM expert, appreciates that this generation is self-taught, completely autonomous, knows how to search and obtain knowledge, is able to find people to learn from, knows how to look for information where it is. "Z has the intuition that collaboration is the way out."

These people "seek to discover the world around them by exploring new experiences, which usually leads to unpredictability and uncontrollability, and therefore to risky behavior."

Recent studies, with 409 French teenagers aged 13 to 18 as respondents, indicate that "digital social networks seem to help young people expand their circle of friends, and the use of Facebook contributes to the development of teenagers' social and cognitive skills."

The added value of the article lies in identifying the values that motivate Romanian employees today and the specificity of each of the Boomers, X, Y and Z generations.

The role of this knowledge is to help companies to become aware of what employees' expectations are and the mechanisms that drive their behaviour.

By overcoming stereotypes, managers can better accept and anticipate the new challenges they will face, and companies can indicate what the code of conduct is, tailored to their own team.

By moving away from current management models and towards those of the future, companies can remain competitive in a market under pressure from competition, pandemics and war.

3. Research Questions/Aims of the research

Studies highlight the concern of young Y and Z people to maintain a work-life balance.

They are extroverted, they want to develop relationships where they are valued, they seek experiences that satisfy their need to combine work with pleasure, training and of course autonomy.

They are naturally mobile, like to combine several activities, familiar with moving quickly from one social network to another or from one video game to a new one, and prefer 'self-employed' status, which in their view is equated with a significant, fast-paced income.

Given the complexity of the context in which the business environment is developing, the research problem is to identify the particularities of the new generations of employees.

The research objectives are:

1. Recognition of the main values of the active generations +2023
2. Distinguishing the characteristics of these generations

The research question is:

What are the current particularities and expectations of employees from the world of work forcibly shaped by the socio-political-economic reality of the present?

The hypotheses of the paper, drawn from the literature presented, are:

1. Generation X emphasizes the desire for property, an attractive job, status, prestige, salary, respect, opportunity for advancement, contact with many people, desire to make friends

2. Generation Y wants access to possessions, hyper-individualism, autonomy, immediacy, performance, access to the group, rewards, recognition of own skills, distance from enterprise, quick success, attachment to collective forms of work (team/project work)

3. Generation Z values: experiences instead of ownership, more holidays, easier pace of work, less supervision, autonomy, authenticity, need to co-create, easy access to knowledge, self-learning, social and cognitive skills, collaboration.

4. All generations aim for altruistic rewards (helping others, being valuable to society, etc.) and interest in social careers (those that help others).

In order to check the validity of the research questions, the following questions were structured:

*The job must be attractive, *In choosing a job, the number of vacations is a deciding criterion, *The easier the pace of work, the better, *Work is just for living, *Quick success is best, *Success belongs only to genuine people, *Supervision is not necessary, *Status is important, *Prestige is important, *Autonomy is important, *Performance on the job is important, *Opportunity for promotion is important, *It's best to be individualistic, *I offer respect (greet people, volunteer to help them, use nice vocabulary, don't beard...), *I like to get in touch with lots of people, *I like to make friends at work, *When I initiate a conversation or an action, I want a response as quickly as possible, *I think collective forms of work (teamwork/project work) are best, *I like to be rewarded as often as possible, *Altruistic rewards (helping others, being valuable to society, etc.) are more important than material ones, *I like to be recognised for my skills as often as possible, *I am very creative, *I am self-taught, *I find it very easy to access the information I need in my profession, *I am interested in an entrepreneurial career, *I am interested in a social career (helping others).

4. Research Methods

Research methods are quantitative and comparative.

The quantitative method consisted of a survey carried out in 2022 on 41 people, all of whom were employees.

Of these, 20 people work in the private sector and 21 in the public sector.

The means used were electronic (questionnaires and responses were sent) and paper (questionnaires were printed and given to respondents).

The answer variants: - not true at all (low level), - true (medium level), - very true (high level) were marked with points from 1 (not true at all) to 5 (very true).

The weight of each answer was calculated by relating the score obtained/generation to the total score per question asked.

To simplify access to the conclusions, answers with one point were considered to correspond to 'not true at all' while answers with two and three points corresponded to 'true'.

'Very true' was awarded to answers with four and five points.

Answers were awarded two and three points.

The answers were processed in Excel.

6. Discussions

This chapter discusses the issue of validity, credibility, study limitations, data generalizability, etc.

The credibility of the data is given by the human and professional quality of the respondents. 68.29% of them have higher education and 31.71% have secondary education.

The limitations of the study are generated by the number of respondents, which could be significantly increased to improve the accuracy of the conclusions.

The research has several areas of interest that examine the perception of the employee belonging to the target group respectively:

	1943 - 1960	1961 - 1980	1981 - 2000
The job must be attractive			
- not at all true (low level)			
- true (medium level)		12%	
- very true (high level)	100%	88%	100%
In choosing a job, the number of vacancies is a deciding factor			
- not true at all (low level)		9%	4%
- true (medium level)	100%	53%	53%
- very true (high level)		38%	43%
The easier the pace of work, the better			
- not true at all (low level)	25%	3%	1%
- true (medium level)	75%	61%	69%
- very true (high level)	0%	37%	30%
Work is just for living			
- not at all true (low level)		11%	6%
- true (medium level)	43%	74%	57%
- very true (high level)	57%	15%	37%
Supervision is not necessary			
- not at all true (low level)		3%	4%
- true (medium level)		38%	61%
- very true (high level)	100%	59%	35%
Job performance is important			
- not at all true (low level)		6%	5%
- true (medium level)	100%	94%	95%
- very true (high)			
Opportunity for promotion is important			
- not at all true (low)		38%	8%
- true (medium level)	100%	62%	92%
- very true (high)			
I think collective forms of work (team/project work) are the best			
- not at all true (low)		32%	21%
- true (medium level)	100%	68%	79%
- very true (high)			
Table 1 - employee's relationship with work			
I am interested in an entrepreneurial career			
- not true at all (low level)	0%	12%	4%
- true (medium level)	100%	73%	40%
- very true (high level)	0%	15%	57%
I am interested in a social career (helping others)			
- not at all true (low level)		2%	3%
- true (medium level)	100%	41%	31%
- very true (high level)		56%	66%

Table 2 - employee interest in an independent career

Quick success is best			
- not true at all (low level)		4%	11%
- true (medium level)	100%	96%	68%
- very true (high level)			21%
Success belongs only to genuine people			
- not true at all (low level)		15%	9%
- true (medium level)		41%	43%
- very true (high level)	100%	44%	49%
Status is important			
- not true at all (low level)		6%	4%
- true (medium level)		66%	49%
- very true (high level)	100%	29%	48%
Prestige is important			
- not at all true (low level)		7%	
- true (medium level)		76%	40%
- very true (high level)	100%	17%	60%
Autonomy is important			
- not at all true (low level)			
- true (medium level)		39%	33%
- very true (high)	100%	61%	67%
It is best to be individualistic			
- not at all true (low level)	100%	25%	16%
- true (medium level)		57%	59%
- very true (high level)		18%	25%
I give respect (greet people, volunteer to help them, use nice vocabulary, don't beard...)			
- not true at all (low level)			1%
- true (medium level)			5%
- very true (high level)	100%	100%	94%
I am very creative			
- not at all true (low level)			
- true (medium level)		27%	40%
- very true (high level)	100%	73%	60%
I am self-taught			
- not at all true (low level)			
- true (medium level)		17%	43%
- very true (high level)	100%	83%	57%
I find it very easy to access the information I need in my profession			
- not at all true (low level)			
- true (medium level)		18%	12%
- very true (high level)	100%	82%	88%

Table 3 - perspectives from which the employee acts

I like to get in touch with a lot of people			
- not true at all (low level)			
- true (medium level)		12%	16%
- very true (high level)	100%	88%	84%
I like to make friends at work			
- not at all true (low)			
- true (medium level)		30%	5%
- very true (high)	100%	70%	95%
When I initiate a conversation or action, I want a response as quickly as possible			
- not at all true (low)			
- true (medium level)		41%	34%
- very true (high)	100%	59%	66%

Table 4 - employee social behaviour +2023

I like to be rewarded as often as possible			
- not true at all (low level)		3%	
- true (medium level)		63%	19%
- very true (high)	100%	34%	81%
Altruistic rewards (helping others, being valuable to society, etc.) are more important than material rewards			
- not true at all (low level)			1%
- true (medium level)		32%	22%
- very true (high)	100%	68%	77%
I like to have my skills recognised as often as possible			
- not at all true (low)			2%
- true (medium level)		38%	34%
- very true (high level)		63%	63%

Table 5 - employee expectations regarding rewards

It is important to have properties			
- not true at all (low level)			
- true (medium level)	100%	66%	40%
- very true (high level)		34%	60%

Table 6 - employee relationship with stability vs. flexibility and adaptability

6. Conclusions

After centralising the answers given by employees from the 1943 - 2000 generations, we obtained the following results, some of which confirm and others refute the hypotheses from which the research started:

Hypotheses	Study confirmation	Study infirmation
Boomers get the lowest scores for:		
- status		
- prestige		
- respect		
- opportunity for advancement and promotion		

Table 7 - Boomers









Generation X gets average scores for:	
- status	
- prestige	
- respect	
- opportunity for advancement and promotion	

Table 8 – Generation X

Generation Y adults:	
- advocates hyper-individualism	
- have as criteria in their choice of job:	
*more holidays	
*an easier pace of work	
*less supervision	
An attractive job is of less importance to Generation Y	

Generation Y gets minimum score for:

- Social rewards (altruistic, such as helping others and being valuable to society, they say)
- contact with many people
- making friends

Table 9 – Generation Y

For generations Y and Z have grown up:

- the need for autonomy
- the quest for performance
- community dimension
- the need to be rewarded for efforts
- the demand for recognition of one's skills
- the dream of rapid success
- interest in social careers
- sense of immediacy
- openness to teamwork
- ability to be self-taught
- ability to access information needed for the profession

Table 10 – Generations Y și Z

The responses also indicate that younger generations:

- have a different relationship with work, which becomes much more than a means of livelihood; it is intertwined with private life, including through social networks,
- are more interested in entrepreneurship,
- they consider it important to own property.

In this context, business ethics require adaptation. Adaptation to work environments that have different expectations but, like their predecessors, want status, prestige and the opportunity for advancement and promotion.

Thus, it remains for managers to understand the ethical constants and variables that apply in their own organisation.

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PUBLIC COMMUNICATION IN THE PANDEMIC

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Abstract: *In general, communication is the key to solving organizational problems, including any type of organization, whether public or private, national or international. Adequate communication in a pandemic is vital to society. The way governments communicated with citizens determined how they developed their behavior in the crisis situation generated. The communication strategies used by the leaders of the states dictated the directions of action of the governments and, at the same time, influenced the reaction of the target audience. In the pandemic, when the priorities of all entities suddenly changed, organizational communication proved to be a key element in maintaining social distancing at work, but also in the private life of workers, who found information and answers at work.*

Keywords: *communication, digital, the pandemic.*

JEL Classification: *H12.*

1. Introduction

Organizations play a key role in society, and their success is a key ingredient in a nation's well-being. Public organizations need to focus on openness, transparency, equal treatment, impartiality and predictability.

Communication in public administration is subject to the same theories and practices of communication as any other type of organization, although the public environment involves different actors involved in the communication process.

Within any type of organization, the purpose of the communication or customer relationship process is to gather and disseminate information in order to perform certain actions following this communication (Luță, 2003).

The most difficult form of communication or the one that raises the biggest problems is, as a rule, direct communication between the civil servant and the dissatisfied citizen. However, dialogue is the most appropriate way to disseminate and gather information at the same time, but also to address the specific needs of each employee and to overcome the personal barriers specific to each person involved (Luță, 2003).

Communication is not exclusively a voice action. Verbal communication represents a small percentage in the whole process of transmitting a message. Nonverbal communication accounts for most of this process.

Therefore, when we communicate, in order to convey the desired message, we want the other participants in the communication process to be able to perceive the transmitter's gestures, tone of voice and facial expressions. An important factor in this process is the physical presence of the interlocutors and the emotions and messages transmitted nonverbally through direct contact.

The health crisis and the economic effects generated by the pandemic have also spread problems in the communication process, both at the organizational level, at the governmental level, and in people's private lives.

If society has changed and adapted its way of life to the new measures imposed by the rules for health safety, we deduce that the way in which individuals communicate has adapted to this new reality.

Given that we can no longer make direct contact with the people around us as we used to, we, as a society, have suddenly embraced all forms of digital communication provided by the online "universe".

We now use social networks, applications, platforms, IT devices to communicate with the family, at work, in the relationship with the state, for essential shopping or for moments of relaxation. In each of these areas of everyday life, the way we communicate has been forced to adapt and digitize.

Forced digitalization at government and labour level has produced the most important effects of the pandemic crisis in the field of communication.

2. Public communication during the pandemic

Communication is a manifestation, a form of human expression. Because this expression satisfies in addition to a personal and a social need of others, communication must be learned, and from the amount of knowledge gained, results education and management of communication that corresponds to the value of present and future attitudes and behaviours (Cheney et al, 2010).

The communication accompanies the activity of the public institutions, contributing to its realization in good conditions. Public communication refers both to the exchange and sharing of information of public utility, and to the maintenance of the social bond (Zemor, 1995).

The external communication of the public institution contributes to the notoriety and image of the organization. It also fulfills the function of promoting the public institution. Institutional communication is an extra-organizational communication through which the institution seeks to strengthen its image.

It is very important that public institutions, regardless of the nature of their activities, use precisely the essential elements necessary for effective communication, especially in the institution-citizen relationship.

The citizen must be informed about the existence and functioning of public services, he must be listened to when he expresses his dissatisfaction, his wishes and needs must be taken into account.

Professional life in public services in the postmodern era, in short, is very different from what it was in the more secure and predictable era of modernity, with subtleties of difference and depth between position, career and department-based systems (Fenwick et al, 2010). Now, mass communication is a form of public communication, achieved through the media, so through a set of different media channels, from books and print media to television and the Internet (Lesenciuc, 2017).

Electronic communication is a fast and popular way to communicate with citizens. The technology allows a considerable variety of applications and platforms to facilitate direct communication between citizens and public administrations.

Over time, electronic communication has been embraced by leaders, presidents, politicians, or rulers. An example of this was given by President Barack Obama in 2010, when he delivered a speech via YouTube, where he answered questions directly from citizens. Another example of effective communication between citizens and local councils is the FixMyStreet website, where UK citizens can report all sorts of community management issues (graffiti, missing pavers, mud, asphalt holes, stray dogs, etc). The administrators of this site receive the information from the citizens and pass it on to the local council of the area to which they belong (Romanian Cities Association, 2011). Since the beginning of the pandemic, the Estonian government has used a unique approach to the problem and organized an event called "Hack the Crisis" through which it gathered ideas

from citizens. Ideas were gathered on: e-health care, art, culture, workplace reforms, community volunteering (Accelerate Estonia, n.d.).

The pandemic has managed to change the way people have communicated so far. Since the beginning of the pandemic, many public or private organizations have implemented work models at home to provide safety for the employees. Telework has become the new "normal" for large companies and the trend shows that people will not return to the office too soon, even after the eradication of the pandemic.

During this period, leaders and managers are forced to deal with waves of crisis, including global protests, which affect workplace productivity, mental health and the economic status of employees. On the other hand, employees have to deal with irregular cycles of disruption to public health and the reorganization of the workforce.

The pandemic has forced a dramatic shift in the way professionals or officials practice their jobs, including the way they communicate.

The trend for the coming years for all companies, as well as for governments and public institutions, will be to improve digitization programs and invest in artificial intelligence (Wittbold et al, 2020).

Just as it is crucial for a company to communicate with its customers, it should be just as important for a public administration to communicate with the citizens it represents (Romanian Cities Association, 2011). Local governments should communicate as effectively as private companies to meet the needs of their "customers", to provide them with the products and services they need to the standards they want (Romanian Cities Association, 2011).

In order to overcome this period of crisis, clear and inspiring communication is needed in any field of work. Leaders need to support the workforce and build confidence in a more stable future. In some cases, the employer has been the most reliable source of information for employees, especially where public entities have failed to provide appropriate answers (Honigmann et al, 2020).

In an article published in 2020, McKinsey & Company is trying to come to the aid of leaders, building a communication model to help people overcome this moment of crisis. The model aims at communication in 4 steps: laying the foundations, honoring the past, marking the transition and looking to the future, transposed in the specific context of any organization (Honigmann et al, 2020).

A 2021 study (Thompson et al, 2021) of 240 U.S. adults found that social anxiety symptoms significantly increased during the COVID shutdowns. The society has forgotten how to behave around people, feel anxious about how social patterns have shifted, or find that conversation that used to flow easily is now exhausting.

According to the Labor Department, in USA, a record 4 million people quit their jobs in April 2021. More than 740,000 people who quit in April worked in the leisure and hospitality industry, which includes jobs in hotels, bars and restaurants, theme parks and other entertainment venues (Hsu, 2020).

Tsedal Neeley, a professor at Harvard Business School and author of the book „Remote Work Revolution: Succeeding From Anywhere” (Neely, 2021) claims that during the pandemic, the people have changed, Work has changed, the way we think about time and space has changed. As a result, workers now want the flexibility given to them in the pandemic.

Governments need to plan for the new form of labor. The measures taken in the short term have achieved their purpose, but in the long term, a clear vision is needed. Without it, public services risk an involution (KPMG, 2021).

The COVID-19 crisis has accelerated the adoption of digital tools in all areas of society. During a call on his company's revenue in April 2020, Microsoft CEO, Satya

Nadella, said we had witnessed two years of digital transformation in two months. This phenomenon has occurred at all levels of government, worldwide (KPMG, 2021).

Old-fashioned governance, which has slowed down the digital transformation, has transformed rapidly in the last year. As a result, national, regional / state, and local government departments are now doing things they would have considered impossible just a few months ago, such as virtual meetings (online communication) or entire services that are developed and delivered online (KPMG, 2021).

The very large number of teleworkers in the last year has led to a growing demand for broadband, which would allow them to work from home in optimal conditions. This creates an impetus for faster delivery of 5G infrastructure. 5G technology seems to be the next step in the evolution of technology, and therefore in the evolution of mobility and global communication. Governments have a key role to play in delivering infrastructure for 5G networks (KPMG, 2021).

Governments must avoid reverting to old models of government. The public sector should recognize that the digital transformation can provide not only long-term savings and huge efficiencies, but also better experiences for citizens and the workforce (KPMG, 2021).

3. Communication in crisis

The communication strategy should be carried out with great responsibility, by going through well-defined steps (Romanian Cities Association, 2011):

- Defining the problem;
- Analysis of the situation;
- Setting the objectives;
- Identifying the public;
- Carrying out the business plan;
- Setting the necessary timetable and resources;
- Developing the evaluation procedures.

To design a suitable pandemic communication strategy, it is important to have a clear narrative, to ask questions about how and when to communicate, as well as who should communicate and to what kind of audience. Audience is the key point of the strategy. The audience is different for each state, which means that the communication strategy is not universally valid. It must be adapted to each state, depending on the cultural context, the political system, the media system (Bodenheimer et al, 2020).

Crisis communication has the following characteristics (Wingen 2019): true and cautious (factual, transparent and without speculation); Understandable (short, simple, and catchy messages); Fast (active and early); Consistent (uniform, coordinated, and continuous); Explanatory (committed to gaining knowledge); Addressing different target groups via appropriate channels.

If communication during a crisis combines these characteristics, it can meet the need for people to have reliable information and can significantly increase the interest in expertise (Keyworth 2020). This directive applies not only to information on how to overcome a disaster, but also to questions about its origin and how similar situations can be avoided in the future. Consequently, crisis communication is appropriate to provide the narrative linking COVID-19 and the need for sustainability transitions (Bodenheimer et al, 2020).

The right time for crisis communication is always the same: as soon as possible (Wingen 2019). Communication during a crisis can help people understand it better. Isolating people allows them to seek out and address the causes and effects of the pandemic, to understand and learn how they can help prevent such an event. In times of

crisis, people are generally more sensitive to what experts say and also more open to new ideas, as new answers to previously unknown questions and problems are needed. In such situations, providing the correct information should be a priority. In doing so, rapid crisis communication could help prevent the spread of rumors or conspiracy theories that result from a lack of information, or at least counteract its dissemination and provide more clarity on the real situation.

Rapid reactions also have downsides, as they leave less time for reflection. Therefore, communication should be restricted, fact-based and openly address knowledge gaps. (Caspari 2020).

This is an important aspect in building the trust of the target audience. Once the crisis is over, it is advisable to return to classical scientific communication. Academic communication takes place within the scientific community, but its perspectives are also summarized for the non-scientific public (Bodenheimer et al, 2020).

Another aspect of communication in crisis situations is "who" should communicate. In this case, the scientific field proves to be the most reliable subsystem of society, which can provide valid information. For example, in Germany, the most wanted personality for pandemic communications is virologist Christian Drosten. He became known to the public after the COVID-19 pandemic broke out, when he suddenly became the most sought-after expert in Germany and even launched his own podcast (Kenya et al, 2020). A similar situation occurred in Italy, with the virologist Roberto Burioni in 2016. He explained that the language used on social networks must be different from the language used in conferences, with colleagues or even with patients. Therefore, he tried to use simple and easy words, concrete, non-medical metaphors that were easy to understand and addressed to the general public (Starr, 2020).

These examples show that in crisis communication, scientists elected as "public ambassadors" support the correct dissemination of scientific messages.

Once it has been determined who should communicate, the next question is "who will be the target audience of the communication". In order to answer this question, we need to know what the objectives of communication are. In this situation, the objectives are: to provide the public with information on the causes of the pandemic and to increase the public's desire to change their behavior in a sustainable manner. To achieve these goals, the most appropriate communication channel is the mass media.

4. Conclusion

Nowadays, information is everywhere and power belongs to consumers. Anyone who owns a laptop or smartphone can document a specific incident, share their experience or give opinions in the public space, and the consequences can be significant. The pandemic added an extra layer of complexity to what was already a challenge.

During the pandemic, people tend to turn to established channels of communication with expertise on the public health and economic crisis (Koeze et al, 2020). Television news or print media are an example of reliable classic communication channels (Greb, 2020). However, they also contribute to an excessive supply of information. because it naturally follows specific rules, selecting news based on features such as unexpectedness, controversy, the location of an event, or continuity. That is why it is necessary to take these factors into account when designing a scientific communication strategy.

In any kind of organization there should be an established plan for crisis situations, represented in 3 general phases: planning a crisis situation (pre-crisis planning) - through which they find and establish possible ways of action in such situations; crisis - which establishes the team that will manage the crisis, as well as the person who will handle the communication of key messages; post-crisis learning - after overcoming the crisis, the

management team shares the key elements that helped overcome the crisis and improves the action plan for even better results in the future.

The crisis communication plan must have: the crisis management team; the spokesperson; the stakeholders mapping (who are the target groups that need to be informed on the developments and how will they be reached); the approach (proactive / reactive / both); the key messages; the monitoring and reporting procedures.

In order to design the best crisis communication strategy, the selected spoke person must know all the details related to the situation and must have a good grasp of the key messages. This person needs to be a professional in every way possible. The language the spokesperson uses must be simple and fact-based. Technical terms, twisted phrases or personal assumptions should be avoided. Another quality a spokesperson needs to have is empathy. The absence of it may add generate pressure and negative reactions.

It is very important that the public administration, both local and central, uses precisely the essential elements necessary for effective communication, especially in the relationship between public administration and the citizen.

An administrative communications system is an attempt to ensure in all relevant points of an organization the ability to detect, understand and respond appropriately to information. Today, a new decision-making technology greatly facilitates the collection, storage, retrieval and use of data and the determination of appropriate data. However, the major communication issues are still administrative or organizational, rather than technological. In other words, technology is now far ahead of the administration (Thompson, 2006).

Social media will not disappear. Its presence has grown and will continue to grow as technology continues to advance. Social platforms offer the ability to share posts and videos from one platform to another. It is safe to assume that the presence and penetration of social networks will increase only in the coming years.

In the face of a pandemic, it is important that governments are transparent and provide the public with clear and honest information. Public confusion leaves citizens unprepared to fight a public health crisis. In addition, it is dangerous for politicians to politicize this pandemic. At such times, the message of government leaders must be consistent so that the public regains confidence in civil servants (Mian, Khan, 2020).

Cooperation with social media platforms is a key element in developing a comprehensive communication strategy. People need relevant local information about COVID-19 in a timely manner. Also, the institutions involved are overwhelmed by the situation and must use mass communication to reach everyone. Any communication strategy must use redundancy by obtaining the same information through as many different channels as possible.

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INCREASING THE LEVEL OF INTEGRITY IN THE STRUCTURES OF THE NATIONAL AGENCY FOR FISCAL ADMINISTRATION

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Abstract: *Increasing the level of integrity within the structures of the National Agency for Fiscal Administration (ANFP) is a priority that involves strict compliance with the rules of integrity in carrying out specific activities, as well as creating the necessary mechanisms to prevent their violation and maintain an adequate level of implementation. The General Directorate of Integrity (DGI) was set up at this level in order to ensure the record of the measures for the prevention of corruption and the evaluation indicators. which contributed to strengthening the levers of ensuring and consolidating integrity through actions of identification, prevention of corruption risks, monitoring, supervision and control of the activity of civil servants. The objective of this study is the qualitative assessment corruption in the Romanian tax system. For this purpose, as a research tool I will use as a method the opinion poll based on the questionnaire, which over time has proven to be one of the most frequently used techniques, the population being more and more familiar with this research method. With the help of the questionnaire we can obtain useful information regarding the attitudes, knowledge, interests, motivation, inclinations of the persons who are part of the researched population. Identifying the risks and vulnerabilities regarding the integrity in the fiscal field and the measures to diminish them, constitutes a point of a major importance in the realization of a responsible fiscal policy.*

Keywords: *management, consolidation, corruption, integrity, risk identification, vulnerabilities.*

JEL Classification: *D81, D83.*

1. Introduction

The year 2020 was a year of unprecedented challenges for Romania, for the European Union and for the whole world. The COVID-19 pandemic has generated a health crisis with a negative impact on society and the economy as a whole. citizens by providing tax facilities, providing accessible online services, and by combating tax evasion. Also at the level of the institution must be ensured the objectives and procedures that are in accordance with the mission but also with the amount of risks that can be accepted.

The Agency's interface was developed around the concept of integrated risk management and active monitoring of business processes. Integrated risk management and corruption prevention aims to ensure the proper functioning of public institutions and authorities, to contribute to increasing the quality of public services and the level of trust of public service beneficiaries in public institutions and authorities, as well as in the business environment , leading at the same time to the successful achievement of the objectives.

At the level of ANAF, through the establishment of the General Integrity Directorate, an important step was taken, a step that contributed to strengthening the levers of ensuring and consolidating integrity through actions of identification, prevention of corruption risks, monitoring, supervision and control of civil servants. The agency manages a large amount of information, but not all of it is used in the monitoring process.

2. Literature review

Scientific research is a dynamic process and an analytical approach that allows the examination of phenomena, to solve a problem and / or to obtain precise answers based on

investigations (Durkheim, 1982, p.36). This process is characterized by the fact that it is systematic and rigorous and generates new knowledge for both researchers and the target audience. The types of research are determined by the researcher's objectives and are quantitative, qualitative or mixed. Research methods, regardless of their purpose, can only work properly if they have explicit procedures and have been shown to work over time. The application of qualitative and quantitative research methods in the field of public administration is changing the way researchers analyze open data and information of public institutions.

3. Research methodology

The objective of this study is the qualitative assessment of the danger posed by corruption in the Romanian tax system. Glass and Strauss-based theory is an easy but powerful qualitative method based on facts directly observed by researchers - in this case, authors - during an analysis of an event over a period of time (Strauss, Corbin, 1990, p.12-16). For this purpose as a research tool I will use as a method the opinion poll based on the questionnaire. On April 14 I participated as a civil servant in the caravan-type action carried out in Dâmbovița County Ministry of Finance - The control body whose main objective was "Increasing transparency, ethics and integrity in public authorities and institutions" with the application of the QUESTIONNAIRE method whose main purpose is the level of perception / knowledge of the phenomenon of corruption in public institutions and the business environment. The questionnaire method has proven to be one of the most frequently used techniques over time, with familiar with this research method. With the help of the questionnaire we can obtain useful information regarding the attitudes, knowledge, interests, motivation, inclinations of the persons who are part of the researched population. a point of major importance in pursuing a responsible fiscal policy.

Innovation is often compared to a bet, where the institution or public organization that uses it has to assess some risks (Alter, 2000, p.27-28) in order to achieve its goals.

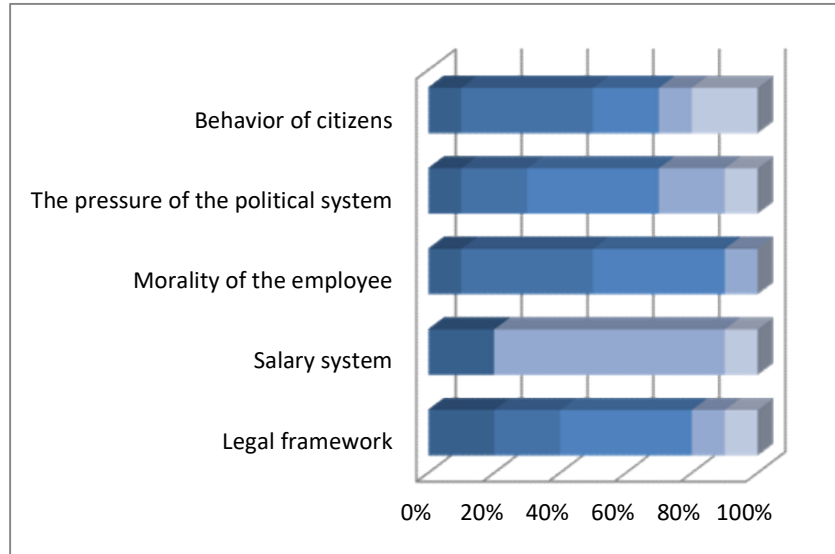
ANAF employees are trained in anti-corruption issues and on ethics and integrity, training and information activities are organized regarding the observance of ethics and the prevention of corruption for employees in all categories of positions.

4. Findings

The work on the basis of the approached questionnaire proposes to highlight the sensitive areas in order to measure the degree of knowledge and involvement of the participants in the "caravan" type events regarding the phenomenon of corruption perceived at the level of public institutions and business environment. The persons with management positions in the public institutions, authorities and enterprises must ensure that at the level of their own structures the criteria in the field imposed by the normative acts in force are respected, doubled by the rallying to the standards of internal managerial control. National Anticorruption Standards, the degree of implementation determining a means of assessing compliance with legal standards and revealing a proactive attitude. For this we chose a group of 20 civil servants and 5 business people who answered a number of 15 questions . In this presentation I bring to the attention of a smaller part of the questions but significant for the research.

1. Elements that favor corruption

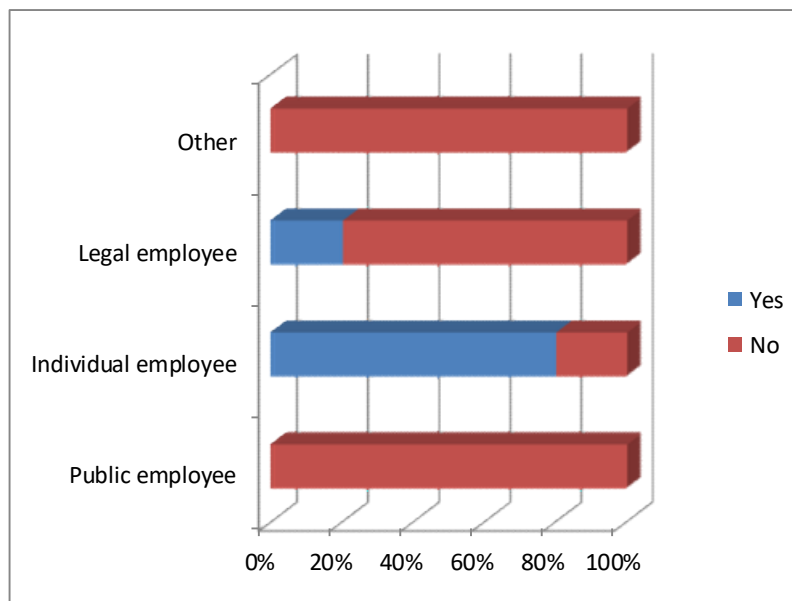
Legal framework	Salary system	Morality of the employee	The pressure of the political system	Behavior of citizens
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* -% reported to the total number of respondents (N = 25)

2. How do you interact with public institutions to solve a problem?

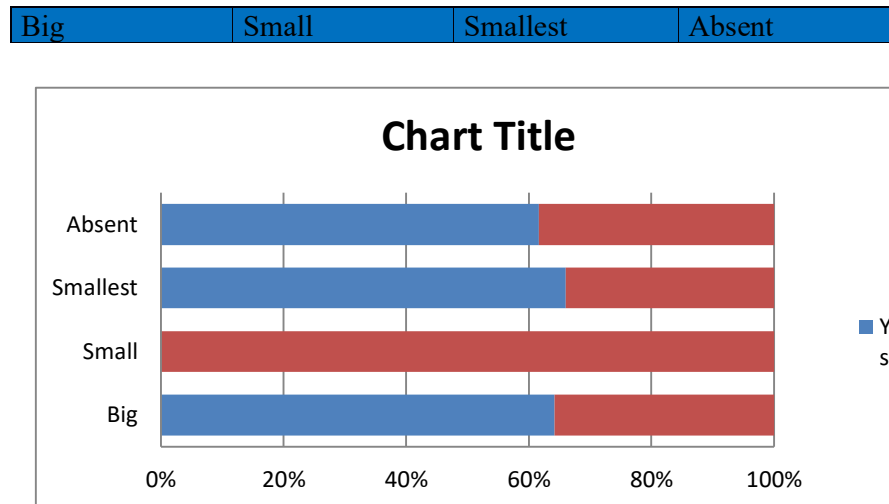
Individual employee	Individual employee	Legal employee	Other
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* -% reported to the total number of respondents (N = 25)

- civil servants as individuals, business environment as a legal entity

3. Appreciate the degree of corruption of civil servants as:



* -% reported to the total number of respondents (N = 25)

Formula of Corruption (Robert Klitgaard, Controlling Corruption, University of California Press, Berkeley, C.A. 1988):

$$\text{CORRUPTION} = \text{MONOPOLY} + \text{DISCRETION} - \text{RESPONSIBILITY}$$

From the answers of those questioned both at the decision-making level and in terms of execution function, the presence of corruption is noted as a particularly negative factor, with direct influences on current activities and the reform process in general. appearance:

-The legal framework still largely favors what recommends speeding up the revision of the legislation.

- The salary system is a determining factor in the occurrence and maintenance of corruption in the conditions in which the salary level is not in accordance with the responsibilities and is not unitary.

-The morality of civil servants aspect with a lower weight, the explanation of this factual situation can be found in a reduced development of the organizational culture as well as mentality not in accordance with the current requirements.

- The pressure of the political system is a determining factor, the explanations can be offered by the pronounced instability of the public function, especially of the leadership, due to the electoral cycles and the functioning of the political clientelism.

-Citizens' behavior has a moderate influence and can be considered more of an effect than a cause of corruption

5. Conclusions

In order to prevent acts of corruption, multiple activities can be undertaken aimed at:

- organizing training and education activities, the target group being represented by the staff of public institutions and authorities, in order to inoculate the official's desire to protect his own integrity;
- conducting analyzes of the dynamics of corruption, opinion polls at institutional level and / or at the level of public service beneficiaries;

- elaboration of strategies and programs to prevent corruption, in collaboration with specialized structures and / or civil society;
- initiating and conducting prevention campaigns to raise awareness of the causes and consequences of corruption;
- conducting studies on the phenomenon of corruption, in order to identify the causes that generate it;
- identifying, assessing and highlighting the risks, risk factors, vulnerabilities and conditions that favor the commission of acts of corruption;
- elaboration of proposals for concrete measures to limit the commission of acts of corruption;
- verifying and evaluating the implementation of the measures established by the corruption prevention strategies and programs;
- initiating partnerships with other public entities that carry out activities in the field of the fight against corruption and monitor the way in which they are carried out;
- making informative materials and disseminating them;
- informing and educating citizens in order to be aware of the need to comply with the law, the consequences and costs of corruption, as well as the importance of adopting an active behavior in reporting corruption.

Fundamentally, the mission of governments and public institutions is to serve the public interest. Citizens' expectations of officials are respectable requirements for the performance of their duties in an honest, fair and impartial manner.

It is very important for each employee to properly understand their own role, the organization's risk strategy and how specific individual responsibilities fit into the overall framework of the organization. No organization can control all the risks, nor is it possible, from the perspective of the costs / resources involved. It is important to control what is really a priority (significant / strategic risks).

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QUANTIFYING THE SUSTAINABILITY OF THE WINE SECTOR THROUGH LIFE CYCLE ASSESSMENT (LCA)

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Abstract: *At present, the economy of the Republic of Moldova is largely linear. Although there are circular initiatives, a very small share of waste and by-products is reintegrated into the economy. The new strategic framework of the Republic of Moldova provides for the increase of sustainable practices, from which can be listed: National Development Strategy "Moldova 2030", Moldova-EU Association Agreement, New Association Agenda for 2021-2027, Environment Strategy 2030. They focus on the prevention and management of waste, which is intended to drive economic growth and environmental responsibility. It's certain that the industry has a key role to play in making specific commitments on sustainable production and cooperation along value chains. In this regard, companies need to reconsider their current business models by adopting resource-efficient production. Actually, substantial amounts of resources such as secondary raw materials are transformed into waste, reaching landfills. Only the national wine industry annually generates about 60 thousand tons of by-products, most of which remain unrecovered. Therefore, this study aims to analyse the resulting waste / by-products throughout the value chain and to quantify the sustainability of the wine sector by using the LCA (Life Cycle Assessment) instrument.*

Key words: *sustainability, Life Cycle Assessment, environment, waste, wine sector.*

JEL Classification: *Q01, Q5.*

1. Environmental impacts of economic sectors

A major challenge facing humanity in the 21st century is climate change, which undermines the ability of all countries to achieve sustainable development and achieve the Millennium Development Goals. The Republic of Moldova is committed to achieving these objectives through the legislative framework, including: National Development Strategy (NDS) "Moldova 2030", Strategic International Commitments: Association Agreement with the European Union and the 2030 Agenda for Sustainable Development, Environmental Strategy for 2014-2023, the Energy Strategy of R.M 2030 and others. The 2030 Agenda for Sustainable Development is very complex, comprising 17 general objectives and 169 concrete objectives, covering areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice. The SDGs are interconnected, so the full mobilization of all sectors, the community, is crucial. What is certain is that full awareness and commitments are needed at several levels, which would involve central coordination at the Government level, the involvement of all public authorities, but also the private sector and NGOs.

It is gratifying that in recent years the awareness of business sustainability has increased, more and more companies are producing more efficiently, have sustainable waste management and, in general, implement activities in line with the principles of environmental protection. The 12th SDG Sustainable Development Goal addresses this issue, referring to sustainable consumption and production, which involves strengthening the scientific and technological capacity to apply sustainable, circular production and consumption models through prevention, reduction, recycling and reuse. On the one hand, these initiatives can generate opportunities for economic transformation, providing greater sustainability, and on the other hand, the ecological footprint will be reduced.

Wine sector and its impact on the environment through Life Cycle Assessment (LCA). According to Kramer et al., (1999), food production is one of the most

environmentally harmful activities, accounting for 15-20% of the world's total energy consumption.

Moreover, the report "Circular Economy and Environmental Priorities for Business" developed by the members of ECOFYS at the request of the European Commission, includes detailed information on the impact of economic sectors on the environment.

It should be noted that a significant impact is on the food, beverage and tobacco production sector, which generates 18% of the total amount of waste, emits 16% of the total greenhouse gas emissions into the atmosphere, consumes 28% of water resources and uses 20% of land resources.

Table 1. Economic sectors and their impact on the environment

Economic sectors	Greenhouse gas emissions	Water consumption	Land use
Agriculture, hunting, forestry and fishing	9%	37%	35%
Mining	0%	0%	1%
Production of food, beverages, tobacco	16%	28%	20%
Textiles, leather and clothing	2%	2%	2%
Wood, paper	0%	0%	3%
Petroleum, chemicals and non-metallic minerals	4%	2%	3%
Transport	1%	1%	1%
Services sector	15%	18%	17%
Electricity, gas and water	1%	1%	1%
Construction	36%	5%	9%
Manufacturing of metals, machinery, wiring	17%	5%	8%
TOTAL	100 %	100 %	100 %

Source: elaborated by source (Ecofys, 2017, p.21)

The environment impact of wine sector

The food, beverage and tobacco production sector includes the wine industry, which accounts for a substantial part of this waste. Even if at first sight it would seem that wine production is a "friendly" process with nature, at a more detailed analysis, we notice its connection with other industries (glass production, transportation, energy production) that have a negative global impact on the environment. Therefore, the wine industry contributes to many global environmental problems such as global warming, ozone depletion, environmental pollution, soil degradation etc.

Numerous studies show that the production of wine results in waste of 1.3-1.5 kg per 1 liter of wine produced, of which 75% is wastewater and 25% are by-products, CO₂ greenhouse gas emissions, organic compounds volatile, inorganic wastes such as clay, bentonite and perlite. It should be noted that in Europe the amount of waste from wine production amounts to over 4.5 million tons per year (Sergi Maicas et al., 2020, p.3).

Globally, the wine sector accounts for around 0.3% of annual global greenhouse gas emissions, and the water footprint of wine production varies between 0.5 and 20 liters per liter of wine (Gianni et al., 2015).

Production and non-recovery of residues and by-products such as pomace, seeds, bunches, yeasts, etc. is currently a major problem for the environment, causing on the one

hand the loss of materials and energy, and on the other hand - negative effects on nature, health and quality of life. Therefore, their reintroduction into the food technology circuit must be one of the main objectives of a sustainable wine industry.

For these reasons, it is very important to evaluate wine production in terms of sustainable development. Such an assessment is crucial as in the not too distant future, sustainability will also become a mandatory requirement for producers, distributors and importers. It is certain that economic growth remains a priority, but this growth must be sustainable.

In this respect, the industry has a key role to play in making specific commitments on sustainable supply and cooperation along the value chains. The first step is a common awareness of the need for the transition and implementation of sustainable, circular business models that would reduce the environmental footprint. According to the European Commission, circularity is an essential part of a broader transformation of the industry in the transition to climate neutrality and long-term competitiveness, thus generating substantial savings in all value chains and production processes.

Therefore, this study aims to illustrate the impact of wine production on the environment through Life Cycle Assessment (LCA), starting with viticulture, vinification and bottling, packaging manufacturing, and ending with domestic and international distribution.

2. Life Cycle Assessment in the wine sector

According to ISO 14040: 2006, "life cycle assessment" is defined as: "a technique for determining the potential environmental impact associated with a product, service or process by assessing inputs and outputs throughout the life cycle" (ISO 14040: 2006).

In other words, the LCA tool examines the impact of manufacturing a product/service from raw material extraction, manufacturing and consumption to the end of its life cycle - either disposal or recycling. Most studies assess the impact of wine production on the environment using the LCA environmental management technique based on 4 impact categories: carbon footprint (CF), abiotic depletion (AD), acidification potential (AP) and eutrophication potential (EP) (Ferrara and Giovanni, 2018, p.6).

Table 2. Environmental impact indicators

Environmental Impact	Unit of Measure	Description
Carbon footprint (CF)	Kg CO ₂ eq.	Greenhouse gas emissions from production and consumption, which condition global warming.
Abiotic depletion (AD)	Kg Sb eq.	Depletion of the total supply of abiotic resources including water, air, land, heavy metals, minerals, etc.
Acidification potential (AP)	Kg. eq. SO ₂	Loss of the ability to neutralize soil and water as a result of sulphur and nitrogen oxides discharged into the atmosphere, which return to the surface as acids.
Eutrophication potential (EP)	Kg. eq. de NO ₃	Excessive growth of algae population due to artificial enrichment of river water and reservoirs due to the massive use of fertilizers and detergents. This generates a high oxygen consumption of the water.

Source: Fernández et al., 2017; Wiedmann et al., 2007; Van Oers et al., 2016.

This study mainly examines the carbon footprint of wine production in distinct phases. Through the LCA perspective, the wine production chain can be divided into 4 phases: viticulture, vinification, packaging manufacturing and distribution. Each main phase of wine consists of several stages, the inputs (chemicals, energy, water, fuel, raw materials, infrastructure, etc.) and outputs (by-products, emissions, waste, etc.) must be

taken into account. Fig. 1 illustrates the main “inputs” of resources and outputs in the form of emissions, waste, by-products.

According to research on the estimation of the carbon footprint of wine production, carried out by one of the most experienced companies in terms of sustainability, can be notated that the biggest impact has the phase "Manufacture of packaging", where the production and use of glass causes 29 % of total greenhouse gas emissions, followed by the production of cardboard boxes - 6%, and other packaging materials (corks, capsules, labels, etc.) - 3% (see fig.2). What is certain is that some inputs to wine production can have a significant or non-essential impact on the environment. Among those with a major impact on the environment can be listed: fuel, electricity, inorganic fertilizers, pesticides, copper-containing substances, glass containers, corks, metal, capsules, cardboard boxes.

It should be noted that from the point of view of the carbon footprint, the use of cork stoppers in winemaking seems to be a "correct" practice, although we cannot say the same thing if we look at it from the perspective of the water footprint. Consequently, numerous studies identify a significant impact of cork production and use on marine depletion and ecotoxicity.

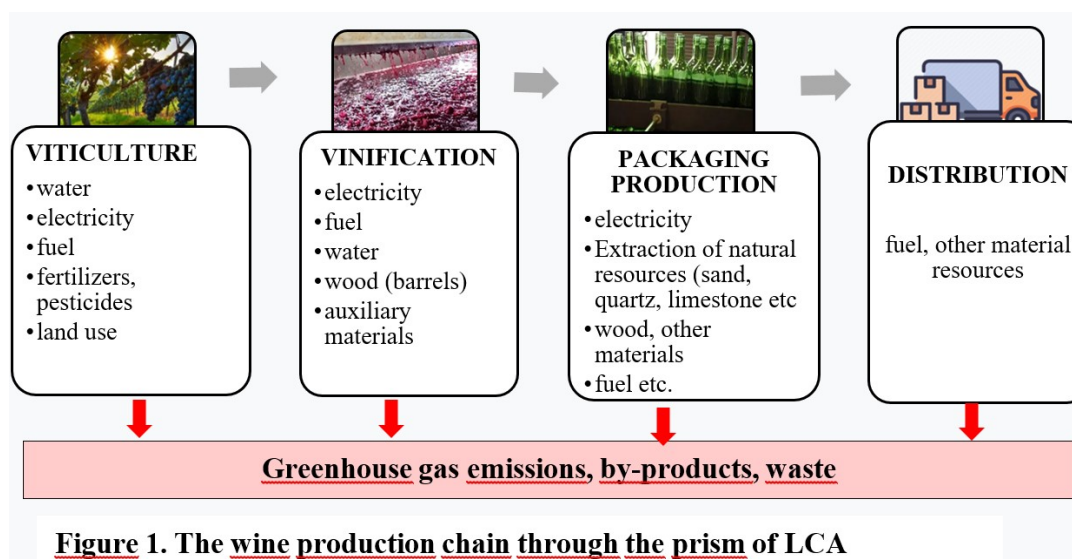


Figure 1. The wine production chain through the prism of LCA

Glass packaging and cardboard boxes have the biggest impact on the environment. For every liter of wine, wineries use on average over 650 grams of glass and 50 grams of cardboard. "Packaging manufacturing" is followed by "Viticulture" being responsible for 34% of total greenhouse gas emissions, of which the production of chemicals, pesticides, fertilizers is in the first place (17%). Greenhouse gas emissions from vineyards are largely caused by emissions of nitrous oxide (N₂O) released from the soil by the application of nitrogen-containing fertilizers (Gianni et al., 2015).

In "Vinification" the largest contribution on the carbon footprint can be attributed to the energy resources (electricity, diesel, fossil fuels) required in the wine production process, having a cumulative impact of 15%.

The fourth distinct phase of the production chain - "Distribution" causes 13% of the carbon footprint of the wine, mostly from the burning of fuel.

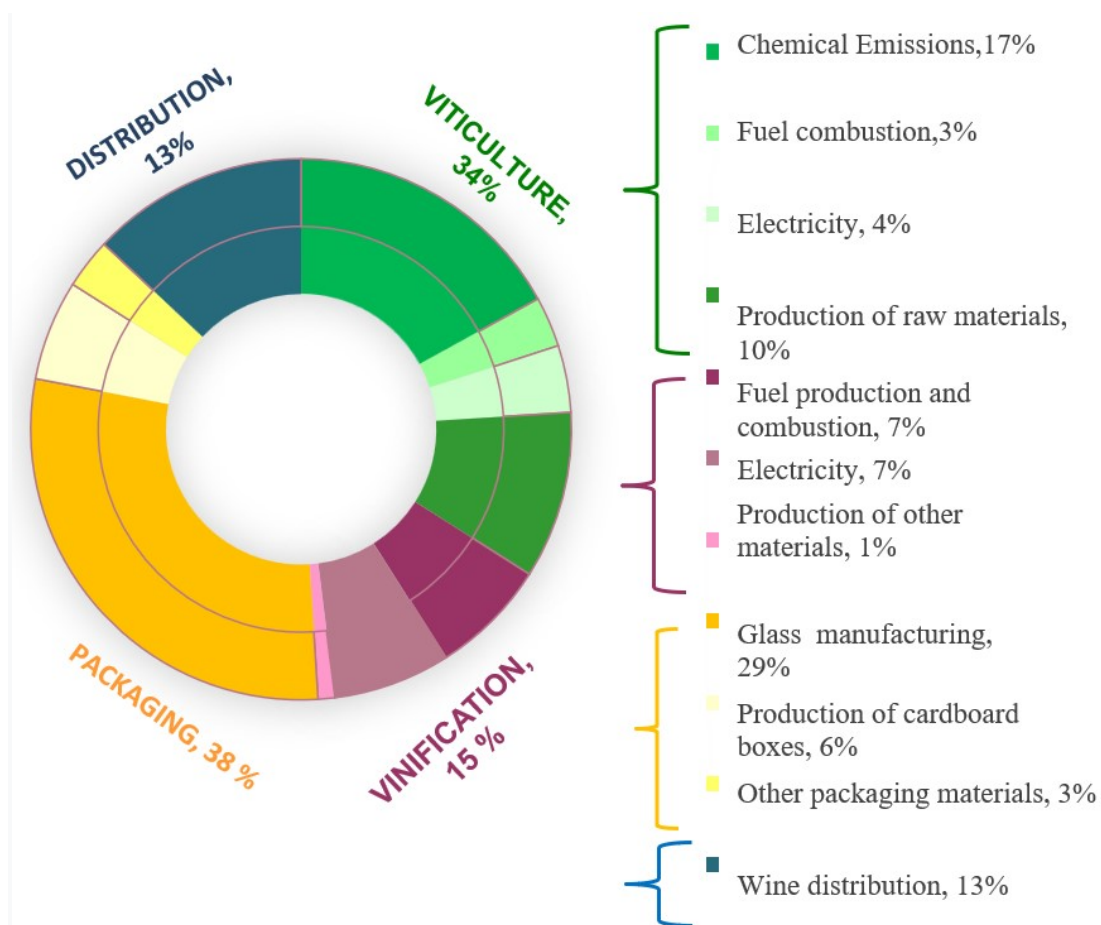


Figure 2. The carbon footprint of wine production

Source: elaborated by source (In International, 2011)

According to the above, the impact of wine production on the environment is significant. So, the wine industry must update its performance values taking into account the principles of sustainable development. The producer, distributor, consumer must behave rationally, conscientiously, thus reducing the environmental impact.

A sustainable practice that would reduce the carbon footprint is the use of low CO₂ packaging. Studies have shown that the packaging with the least environmental impact is canned wines and bottled wines.

CO₂ emissions by type of packaging (Alko, 2018):

- Traditional glass 0.75 L - 675 g CO₂e per liter
- Lightweight glass bottle 0.75 L - 525 g CO₂e per liter
- Plastic container 0.75 L - 245 g CO₂e per liter
- 0.33 L aluminium can - 190 g CO₂e per liter
- Wine in a bag 1.5 L - 96 g CO₂e per liter
- 1 L cardboard box - 85 g CO₂e per liter

Certainly, small sustainable changes to the traditional business model at the enterprise level can have a major impact on the environmental footprint of the industry as a whole, if they are to be considered by most manufacturers. Only the replacement of traditional glass packaging with lightweight glass bottles at the country level (Republic of Moldova) would condition the reduction of CO₂ emissions by more than 20%, in absolute terms by more than 7000 t CO₂.

3. Conclusions

Sustainability in the wine sector refers to the conservation of the environment, the reduction of water and energy consumption, the recovery of by-products and the efficient management of waste. In order to preserve and use natural capital rationally, the whole life-cycle resource system must be addressed, including production methods, demand patterns, supply chains, waste management and the possibility of capitalizing on them.

The life cycle assessment (LCA) of wine production has outlined the major impact on the environment through significant CO₂ emissions, high water consumption, energy, soil. Most studies highlight 2 major stages with the highest CO₂ emissions in the wine production process - the production of glass packaging and the production / use of chemicals, pesticides, fertilizers at the stage of establishment and maintenance of vineyards.

Unfortunately, at present, globally, glass is the most common material used in wine packaging. This practice needs to be urgently improved by moving to more sustainable, more environmentally friendly packaging.

Therefore, in order to conserve natural capital and identify sustainable solutions, a joint effort is needed at all levels, both on the part of the producer, distributor, consumer and key players to identify strategies and find the right path to conservation. the resources of our planet.

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PERFORMANCE OF NATIONAL ROADS IN THE REPUBLIC OF MOLDOVA

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Abstract: *The article represents a research on the significant importance in the economic activity of road quality management, based on performance. In this regard, the author made a concrete estimate of some indicators that influence the development and economic growth by ensuring the implementation of quality road management, which was made by identifying the elements of progress in order to review the efficient use of resources. The factor generating economic growth and emancipation for the development of a society is the existence of modern and quality road networks that are able to ensure trade links at national level between various regions, but also internationally, in this way contributing to intensifying relations between states, connecting localities to the national network, thus facilitating the free movement of citizens and increasing mobility. Road quality management establishes and in fact transposes the quality policy through pre-established and systematic activities, so as to prevent non-quality, to ensure the achievement of the required quality of the road infrastructure. Investments in transport networks increase the capital invested compared to that realized in other fields of activity, based on direct and indirect effects, which result from saving costs and time by attracting the necessary resources to build modern road infrastructure. Progressive road management is based on the performance of both the programming and the implementation of maintenance and operational activities, as determined by the defined performance indicators. The scientific methods used are: analysis and synthesis, induction and deduction, critical analysis of materials, etc. The main results obtained from the investigations refer to the assessment of the indicators regarding the efficient management of the road quality by applying the progress performances in view of the users' access to qualitative public roads.*

Keywords: *management, transport networks, public roads, quality, modern infrastructure, performance.*

JEL Classification: *H54, H83.*

1. The role and importance of the quality management system in road modernization

Quality assurance management is a major component of the quality system in the construction of public roads and represents a significant aspect within the management system of economic operators in construction. Quality management establishes and in fact implements the quality policy through pre-established and systematic activities, thus still preventing non-quality, ensuring the achievement of the required quality and providing confidence in the capacity of the unit.

Within the new European approaches to the construction / rehabilitation of public roads, economic operators in construction must adopt, implement and maintain an efficient Quality Management System, as a component part of the general management system of the unit, which guides and coordinates the activity of the unit in terms of quality.

Quality is a widely used notion, which makes it extremely difficult to give a definition from a scientific point of view. An older definition states: the set of properties of a product or service that gives it the ability to meet expressed or implied needs. Other informal definitions mention: - prevention is cheaper than repair; - or it is cheaper to do everything right from the start; - quality is the minimum cost that a product imposes on society.

Seen as a concept, the notion of quality includes two aspects:

- an aspect of a *technical characteristic*, compliance with the specifications set out in the documents;

- an *aspect of value*, a value of the product, that ability to be according to needs and to satisfy certain needs.

According to the international standard issued by the International Organization for Standardization, EN ISO 9001: 2015, "quality is the extent to which a set of engineering characteristics meets the requirements". ISO 9001: 2015 provides a better understanding of the organizational process and the efficient functioning of quality management by contributing to the clear definition of responsibilities, creating a framework for continuous improvement and application of the requirements of the standard. The quality management system contributes to the improvement of internal and external communication, efficient use of resources to reduce costs.

Quality within roads' construction is defined and regulated by law no. 721 of 02.02.1996 entitled "Law on quality in construction". The provisions of this law apply to constructions of any category and their related installations, regardless of the type of property or destination, including rehabilitation, major repairs of public roads, hereinafter referred to as constructions, as well as modernization, modification, transformation and consolidation works.

Construction quality means a set of properties that must be possessed by an object to be put into operation, which meets the modern requirements for its construction, operation and economy.

Construction quality of the installation, of the infrastructure network, depends on the quality of the project, the quality of the construction materials, constructions, semi-finished products, parts and the quality of the construction and installation works.

In the Republic of Moldova, the state quality control in constructions is exercised by the Agency for Technical Supervision, which is the successor of rights and obligations of the Main State Inspectorate for Technical Supervision of Dangerous Industrial Objects, State Inspectorate for Construction, State Inspectorate for Geodetic, Technical and Regime Surveillance.

The Agency for Technical Supervision subordinated to the Ministry of Infrastructure for Regional Development, aims to perform several functions, including those in the field of construction and urban planning:

- a) participation in the works of the commissions for the final reception of the constructions and the afferent installations, financed from the state budget or from the local budgets;
- b) establishing the degree of damage to the constructions and, in case the constructions present a danger, prohibiting their exploitation;
- c) submitting to the Attestation Commission the proposals regarding the cessation of validity or cancellation of the certificates of technical-professional attestation of the technical managers, site managers, designers, project verifiers and other specialists involved in the construction process;

However, major importance in the operation of the entire road infrastructure quality system is designed to achieve *the process of receiving the works performed*. Thus, the procedure for receiving the works starts by forming a reception commission.

Another aspect that is no less important in ensuring the quality of road infrastructure is the *quality of materials used in construction*, rehabilitation, repair of public roads, the tests of which are examined in laboratories of analysis and construction tests, authorized and accredited.

Accreditation of construction analysis and testing laboratories means the official recognition that a construction analysis and testing laboratory is competent to perform analysis and testing in this field.

Most road construction and rehabilitation companies take steps to obtain certificates of conformity for materials in accordance with the requirements of harmonized standards in collaboration with testing laboratories abroad.

Among those 20 laboratories for analysis and testing in construction, authorized and accredited in the Republic of Moldova according to SM EN ISO / IEC 17025: 2006 / SM EN ISO / IEC 17025: 2018 is also the Test Laboratory of the State Enterprise, State Administration of Roads”.

The basic field of the Laboratory is the testing of road construction materials for objects managed by the State Enterprise "State Road Administration", as well as providing services to construction product certification centers and requesting third parties. It is aimed at determining the physical-mechanical and physico-chemical indices (organic binders) of the following materials: Organic binders (fluid bitumen, viscous, bituminous emulsion); Aggregates (sand, savory, crushed stone, gravel, filler); Mixture of aggregates, soils processed with organic / inorganic binders; Earth; Asphalt concrete made of granular materials; Asphalt concrete (hot, warm, cold); Cement concrete; Non-slip material (sand with salt, salt).

The basic objectives of the laboratory are represented by the following:

- Examining the quality of road construction materials, applied to the repair and maintenance of the public road network;
- Quality control of the execution of the repair and maintenance of the public road network;
- Proposing and implementing new ways of quality control.

The laboratory employs specialists with extensive experience in the field, licensed engineers, competent master students, with a high level of qualification.

However, given the capacity of the available expertise works to be performed by the Test Laboratory of the State Enterprise "State Road Administration", it is revealed that it has the possibility to examine the samples taken only from the concrete surface layers - asphalt, not having the capacity for the expertise of the layers for the foundation which is an integral part, directly of the built road.



The laboratory is currently in the process of transitioning to harmonized European standards, with modern test equipment and high-level measuring instruments that ensure the accuracy, succession and integrity of the tests performed. The laboratory systematically cooperates with the Moldac National Accreditation Center and provides services to construction product certification centers, having collaboration contracts with the CertMatCon Certification Organization, the Technical Center for Industrial Safety and Certification, the Center for Applied Metrology and Certification, the National Institute of Metrology and CVALIMETRITOT Certification Organization.

It is estimated that in order to ensure the transition to EU road standards, about 100 million lei will be needed, which should be allocated by contractors. This change would develop research methods in the use of modern materials for road construction and maintenance, which would ensure the quality of road infrastructure.

During 2021, the opportunity to use the “Road Recorder” application was examined, in order to digitize the way of verifying the quality of the construction, repair and periodic maintenance works, executed on the national roads of the Republic of Moldova. This action is to take a broader perspective in helping technical managers to ensure the quality of the works audited and to eliminate conflicts of interest.

2. Implementing performance-based management

Outcome-based or performance-based resource management was actually recommended by the Hoover Commission of the United States in 1949. In the 1950s and 1960s, many countries, including the United States, began evaluating institutions using some performance indicators not on how much they spent, but on what they actually produced. Ultimately, these systems did not deliver the expected results because they were too rigid to account for uncertainty and unpredictability and because they failed to identify the limits of formal systems that influence people's behavior.

As a result, performance measurement declined in popularity in the late 1970s and mid-1980s, but has seen a renaissance during the last 30 years as a result of changing economic environments as well as the ever-increasing demands of citizens for quality infrastructure. Thus, the strongest trend for performance improvement is to use resources through performance-based management and reporting. Australia and New Zealand were the first countries to implement performance indicator performance management in the late 1980s, followed by Canada, Denmark, Finland, France, Sweden, the United Kingdom and the United States in the early 1990s. In the late 1990s - In the early 2000's we find Austria, Germany and Switzerland.

Governments have introduced performance-based management due to four main reasons:

- to improve efficiency;
- to improve decision-making;
- to transparently improve accountability;
- to make savings.

Some countries have focused on only one or two of these goals, while others have embraced all four, with the aim to introduce performance-based financial resource management and the responsibility of the legislature and citizens. Australia, Denmark, the Netherlands, New Zealand, the United Kingdom and the United States are pursuing this approach.

In countries such as the United States, ministries have developed strategic plans that include performance targets. Others have adopted performance contracts, for example, between a ministry and a subordinate institution. The purpose of these contracts or agreements is to facilitate greater understanding and strengthen bargaining power within the public sector.

This approach has the advantage that it tends to clarify the responsibility of each party to the contract or agreement, informally specific on the performance in the allocation of resources as well as the specification of sanctions and rewards.

There have existed different approaches to implementing performance management. Some countries - for example Australia, the Netherlands, New Zealand, and the United Kingdom - have implemented the top-down approach, others, such as Finland, have adopted a bottom-up and ad hoc approach in which institutions are free to develop their own methods based on performance and less mixing of the top management bodies.

The main goal is to move from an input-based system to a results-based system. This can be achieved by clearly defining the objectives and methods to be followed.

Therefore, there are higher demands for results but at the same time more freedom is given to the methods used to obtain them. But the central point is the responsibility, who and how is responsible for the results.

A stronger emphasis on responsibility allows for the limitation, even exclusion, of day-to-day inspections of the higher management bodies. It is therefore important to develop appropriate means of measurement that fully ensure accountability, with the aim of both promoting greater operational freedom and effective strategic control.

In the Republic of Moldova, the management of resources in the field of road management focuses on the results to be obtained from the activities planned / carried out by the authorities / institutions, by establishing performance indicators in program budgeting.

Program performance is a method of presenting and substantiating budgets, based on programs with goals, objectives and indicators to evaluate their performance at all stages of management. High-performance program management is also an effective road management tool, which ensures that priorities are set and decisions are made on the allocation of resources needed for road rehabilitation and modernization. It is also based on the allocation of resources in programs according to planning and prioritization, highlighting the connections between the allocated budgetary resources and the results to be achieved, through the activities funded by these resources. It is a tool to strengthen the increased responsibility of public authorities / institutions in the process of spending the resources allocated to the maintenance and rehabilitation of road infrastructure and the achievement of progressive performance.

For the field of roads, financial means were used for the implementation of the Program "Development of transport and road management", Subprogram "Development of roads". The sub-program included maintenance, repair and rehabilitation of national and local public roads, road condition monitoring, and actions to increase road safety. The objectives of the sub-program were implemented by the State Enterprise "State Road Administration", the total length of national roads being 3336 km, and local roads - 5475 km.

3. Conclusions

It is concluded that in the Republic of Moldova the challenge is to review the performance of requirements and indicators set by developed countries around the world. In addition, performance-based road maintenance and rehabilitation management is closely linked to the selection of appropriate performance indicators with successful progress, as it is the most modern approach to obtaining sustainable financing for the maintenance and operation of road infrastructure.

In order to ensure the quality of the road infrastructure, the level of performance of the management of their administration must be high enough. Road degradation causes discomfort, additional costs and waste of time. The correlation of the efficiency criteria with the criteria of capitalization of the economic resources requires a differentiated treatment of the roads and an efficient distribution of the resources.

The road quality management system of the roadway is the most important part of the road maintenance and modernization management. The fundamental goal of a road management system is to obtain the best possible solution for the available funds and to provide quality roads to users with a high degree of comfortable and economical satisfaction. This can be achieved by comparing investment alternatives, coordinating design, construction, maintenance and evaluation activities, and making effective use of existing field practices and knowledge.

The road infrastructure quality management system must carry out comparative cost estimates and economic evaluations for different options for maintenance, rehabilitation, for a specific project, a group of road sectors or for the whole network. Improving the road infrastructure management system and safety conditions by efficiently amplifying the implementation of complex reform programs and large-scale investment promotion campaigns intensifies the development of transport networks by providing users with quality roads.

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RESTRUCTURING AND DEVELOPMENT OPPORTUNITIES FOR PUBLIC HEALTH SERVICES BEYOND THE PANDEMIC CRISIS

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***Abstract:** The shock produced by the pandemic crisis on the public sector had a strong impact both on access to services of general interest and on their quality. The Coronavirus Pandemic has hardly hit the states of the world, forcing them to react beyond traditional limits - in an effort to protect their citizens - and to fight not only with a virus but also with their own shortcomings and dysfunctions and forcing them to reset their public services - especially health services - extremely quickly, in response to the crossed context. In Romania, the level of unsatisfied needs in terms of medical assistance has increased, but new opportunities have also appeared that can lead to the recovery and modernization of medical services.*

***Keywords:** pandemic, medical services, resilience, opportunities, recovery.*

***Clasificare JEL:** I12, I18, H11, H12.*

1. Introduction

The management of public services is an often discussed and debated topic, however, in society there is a strong need for better management, with a proactive orientation in the relationship with citizens, of a more performing administration, flexible in relation to everyday challenges and able to generate sustainable development plans, commensurate with the challenges of future times. The need for a more efficient public management has already been recognized in highly developed countries; this recognition came as a response of the public system to the multiple social, political and economic changes it was facing. Priority, before the public sector reform was launched, was the effort to ensure the scientific premises, the informational infrastructure, the human and technical-material resources necessary for this extensive transformation process. Citizens' access to quality public services - and here we mention education, health, social assistance, housing, public utilities - has a significant impact on the quality of their lives (Quality of Life Research Institute, 2018); as a consequence, a direct relationship is born between public services and citizens' trust in the administrative system (Eurofound, 2019). The Coronavirus pandemic has hit the world's states hard, forcing them to react beyond traditional limits - in an effort to protect their citizens - and to fight not only with a virus but also with their own shortcomings and dysfunctions.

2. The effects of the pandemic crisis situation on public health services

The times we are going through are characterized, more than ever, by uncertainty: technological changes, consumer demands in continuous changing, climate changes (Rafalski, Mullner, 2022), political changes: the crisis of energy, the war in Ukraine. We are the witnesses of a culture of risks and threats. This health crisis offered us an negative image (imperfection, unknown, rapacity), but also a positive image (caregivers, helpers, even heroes) (Salgues, Barnouin, 2022).

In such contexts, public services must be able to automatically regulate the resources that ensure equal and universal access to services for all citizens. In Romania, the idea that the state is a necessary evil has become axiomatic (probably because of the image of a totalitarian state from the communist period that still persists in the collective mind); periodically, in the public space, the waste generated by personnel expenses in the public sector comes back into discussion and the idea of oversized and inefficient public services

is revived. However, the crisis we went through proved that, in extreme situations, the state is the "solution" (Zamfir C., Zamfir E., 2020). Periods of deep crisis require complex - and sometimes radical - measures, starting from legislative regulations, allocation and relocation of financial, material and human resources, the restructuring of public institutions and services, up to international cooperation; the state is the only one that can operate at such a deep level, given the major economic and social implications and more than that - having the obligation to do so, as stipulated in the Romanian Constitution (Romanian Constitution, 2003).

COVID-19 crisis has evolved rapidly worldwide, crossing borders (Shabsigh, 2022) and affecting global communities and people health; the monitoring of epidemiologic state being important to overcome the collapse of health care system (Tran, Hwang, and Do, 2022).

The experiences of the recent past have shown us that, at least at the European level, some essential public services (health, education, social protection) had to reinvent themselves extremely quickly, in response to the context they were crossing. In such a situation, the challenge was represented by the reaction of the public services to the felt shock, a reaction that depended on their capacity for resilience. A resilient system has two alternatives to react to crisis situations: adaptation or shock resistance (Manca, Benczur, Giovannini, 2017). Resistance, as a form of response, involves absorbing the shock and concentrating all the capabilities available to the system to overcome, with as few losses as possible, the crisis situation; this approach is, however, only valid when the shock is not of extreme intensity and does not manifest itself over long periods (Giovannini, Benczur, Campolongo, Cariboni and Manca, 2020). Adaptation is the second option, which becomes a possible solution when the system is flexible, used to support changes. Health and social protection are key services, through which the state must ensure, in a dynamic and continuously changing environment, social cohesion and inclusion; this is only possible in the presence of quality and accessible services that meet the varied needs of citizens.

During the pandemic crisis, precisely these attributes - accessibility, quality, diversity - were deeply affected. The pandemic has put immense pressure on health services everywhere. Many medical services, considered non-essential, have been interrupted, postponed or significantly modified, and the endless flow of coronavirus cases has put extraordinary pressure on health care staff. In Romania, the management of the crisis caused by the coronavirus pandemic was centralized in the beginning; the central administration assumed the coordination of the decision-makers at the county level, the latter having the task of implementing local measures. At central level, new support structures were established consisting of representatives of the Ministry of Internal Affairs-Department for Emergency Situations, the General Inspectorate for Emergency Situations, the Ministry of Health, the National Institute of Public Health, the National Center for Surveillance and Control of Communicable Diseases and of the Ministry of Defense. After three months, through the decentralization of management, the responsibility for the implementation of measures decided at the central level returned to the sphere of county and local authorities (OECD/European Observatory on Health Systems and Policies, 2021).

In order to ensure the necessary funds to cover all the services provided in this context, but also the financial incentives for the staff in the medical and social assistance services, the government operated a legislative adjustment of the budget (O.U.G. no. 201, 2020); additional funds were added to these budget reallocations, coming from the European Commission, funds that were used for the purpose of purchasing personal protective equipment (masks, coveralls, protective glasses, visors, gloves, etc.), tests,

reagents and other medical equipment, medical and social services at home for the elderly and disabled and the provision of bonuses for health and social care workers.

Every health system or hospital, no matter its size, must increase their competencies and abilities necessary for an adequate emergency management: personnel, financial resources, necessary equipment (Dowling, Kenney, 2020). These changes needed important resources, as for example, people and recovery funds, based on increasing the organization and the supply of community services (Lega, Castellini, 2022), competent government, trust in this government, and efficient leadership (Pieterse, Lim, and Khondker, 2021).

In the medical services the situation was dramatic; despite all these efforts, the very large number of patients diagnosed with COVID-19 and requiring consultation/hospitalization, as well as the introduction of measures to limit the spread of communicable diseases during the pandemic brought them close to the threshold the collapse of the health system in Romania, greatly reducing its ability to offer services to patients with other pathologies, especially patients with chronic diseases (Ipsos, 2021). On this background, the level of unmet needs in terms of medical assistance has increased. Official data available until the end of August 2021 show that 29% of Romanians interviewed in a Eurofound survey said that, in the first year of the pandemic, they did not use healthcare services, while, at the level of the European Union, their percentage is 21% (OECD/European Observatory on Health Systems and Policies, 2021). From the period of the pandemic until today, the unsatisfied needs for medical assistance have increased, the largest share being represented by the need for hospitalization and specialized medical services (Ipsos, 2021).

According to Eurofound data, citizens' trust in the health system, at the European level, at the beginning of the pandemic, was different; on a scale of 1 to 10, Malta and Denmark had the highest confidence in their health systems (8.1 and 8.0 respectively); in the most affected countries (especially Spain, Belgium, Italy and France), trust in the health system was higher than the EU average; Hungary had the least confidence in its own health system (3.9); Romania recorded the fourth lowest level of trust (around 4.5) (Eurofound, 2020). What should be noted - considering the time when the data were collected, namely the first pandemic wave - is that these figures highlight, to a large extent, the trust of the population in the medical services of their own state, before the outbreak of the pandemic crisis. Citizens of countries with strong healthcare systems (in terms of quality and accessibility) trusted that the healthcare system would manage to serve them in the best possible way, under the given circumstances. At the opposite pole, in countries where citizens already had dissatisfaction with medical services (and this includes Romania), the low level of trust is also a mirror of the lack of horizons. The COVID-19 crisis has brought radical transformations, even in health policy and care services (Waring., Denis, Pedersen and Tenbenschel, 2021). The European Commission is currently building a governance framework in which a better use of health data and digital health infrastructure is promoted, leading to improvement of research, innovation and better health policies (OECD, European Union, 2020).

3. Limits exist to be overcome and to take advantage of opportunities

In Romania, the pandemic gave a new impetus to the development of electronic information and communication systems in the field of medical services: new electronic information systems appeared, with the aim of supporting the management of highly requested resources, as well as an electronic information system that facilitated communication between laboratories, public health departments, family doctors and patients (OECD/European Observatory on Health Systems and Policies, 2021); to have a

daily picture of hospital bed occupancy and facilitate resource management, the Ministry of Health created the Operational Coordination Center - a centralized electronic system. In support of the vaccination campaign, a special section for COVID-19 was created in the National Electronic Register of Vaccinations.

Limiting access to medical facilities has enhanced the use of remote care solutions (GD no. 252, 2020), offered through technology: telemedicine, telediagnosis, e-triage. Also, new approaches have emerged regarding the provision of medical services: drive-through testing points, temporary/mobile vaccination centers (Order No. 2171,2020).

These developments represent points gained and the starting point for Romania to align its own development strategy in the field of digital health with the European Health Data Space initiative, which aims to promote the exchange of medical data and support research on new strategies for prevention, as well as on treatments, medicines, medical devices and outcomes (OECD/European Observatory on Health Systems and Policies, 2021).

Even though Romania has significantly increased its health expenditure, it still remains one of the European Union countries with the lowest health expenditure, both per capita and as a percentage of GDP, which shows that even before pandemic, public health was underfunded and underperforming (OECD/European Observatory on Health Systems and Policies, 2021). The recovery and resilience mechanism of the European Union offers Romania, through the health component of its own recovery plan (PNRR- Romania's National Recovery and Resilience Plan, 2021), funding opportunities aimed at increasing citizens' access to preventive, diagnostic and treatment medical services early, with a particular focus on reducing rural/urban inequalities in access to medical services, especially for rural communities that are insufficiently or not at all served (PNRR, 2021). Another chronic problem of our healthcare system is the human resource; even if Romania trains a large number of specialized personnel for the medical field (doctors, medical assistants), the pandemic crisis has brought back into focus the problem of the shortage of personnel in medical units. This deficit is due to the migration of the specialized labor force and places Romania below the European Union average in terms of the number of doctors and medical assistants per capita (OECD/European Observatory on Health Systems and Policies, 2021). It is obvious that this has a negative impact on the quality of medical services offered to the population and must be regulated by responsible human resources policies with sustainable impact.

Table 1. The state of the health system in Romania during the COVID-19 pandemic

Strong points	Weak points
The intervention of the Romanian authorities at the beginning of the pandemic was quick, immediately imposing strict preventive measures (OECD/European Observatory on Health Systems and Policies, 2021)	Testing capacity was low, compared to other European states (OECD/European Observatory on Health Systems and Policies, 2021)
Guidelines on the prevention and control of suspected infections with the new Coronavirus were drawn up early (INSP-CNSCBT, 2020) and permanently updated	The staff in the hospitals was insufficient, especially in the intensive care units (OECD/European Observatory on Health Systems and Policies, 2021).
Budget corrections were made in order to ensure the necessary funds to cover all the services provided in this context, as well as the financial incentives for medical services staff (O.U.G. no. 201, 2020)	Poor equipment of intensive care beds with mechanical ventilators.
Temporary employment, without organizing a competition, of medical personnel, both in medical units and in public health departments, in the event of a shortage of specialized personnel (Law no. 136, 2020) (Law no. 55, 2020)	The stagnation of the vaccination campaign, due to the distrust of the population in vaccination
The provision by the public authorities (central or local) for the people in quarantine or isolation of the necessary treatment and food, if necessary, with the expenses from the budget of the Ministry of Health (Law no. 136, 2020)	Significant reduction in the capacity of the medical system to be able to offer services to patients with other pathologies, especially patients with chronic conditions (Ipsos, 2021)
In order to carry out the vaccination against COVID 19 in good conditions, the rules for the operation of the vaccination centers were established and approved, including: fixed vaccination centers, mobile vaccination centers, mobile vaccination teams, drive-through centers, offices of family medicine (Order no. 2171, 2020)	Accentuation of the population's mistrust in the health system (Eurofound, 2020).
During the state of emergency, patients also benefited from remote medical consultations (HG no. 252, 2020)	The pre-existing vulnerabilities of the medical system made the pandemic situation difficult to manage.
The whole society agreed to support the fight against COVID 19 and direct resources to support the health system (Romanian Presidency, 2020)	Deficient monitoring of people who returned to the country from areas designated as yellow and red - approximately 250,000 (Romanian Presidency, 2020) - and who opted for voluntary quarantine
Modular hospitals were set up to supplement the number of beds for COVID patients	Repeated changes in the leadership of the Minister of Health, in the midst of a pandemic crisis
Government decisions and actions were in accordance with the dynamics of events;	The inability of some of the county public health departments to properly manage the

immediate and medium-term epidemiological management strategies were adopted as an emergency, aiming to protect citizens and reduce the burden on the health system, by restricting the existing outbreaks of infection and preventing the emergence of other new outbreaks (Romanian Presidency, 2020).	volume and complexity of the work, thus generating delays in conducting epidemiological investigations, reporting errors and errors in communication with the population and family doctors/specialists
The care of the COVID patients was free, regardless of the treatment or the period of hospitalization and regardless of the existence or not of the patients' insurance status (OECD / European observatory on Health Systems and Policies, 2021).	Insufficient production capacities for the health sector

4. Conclusions

At the moment, - still feeling - the echo of the pandemic crisis, going through a strong energy crisis and with a global economic crisis on the horizon, the main characteristic of these times is uncertainty. Health, as a system, must have the ability to adapt quickly, which is possible only in the presence of a flexible system, capable of increased resilience.

The changes brought to the health system by the pandemic crisis are irreversible, and it is desirable that the lessons learned during this period are constituted as examples of good practices, so that when new unforeseen situations arise, changes can be much faster and with results as predictable as possible.

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FINANCIAL MARKET MODELS. A LOGICAL ASSESSMENT

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Abstract: *The paper aims to analyze, from a logical and epistemological perspective - the possibility of knowledge, on the one hand, and the testability of knowledge, on the other hand - the main models developed and (some of them) operationalized in the financial transactions market. In this context, it is proposed to classify these models according to the „target” pursued and, based either on the statements of the creators of the models in question or (if such statements are missing or only implicit in theoretical developments), according to the fundamental principle (or the basic mechanism) specific to the models examined. The paper also examines the typology of the concepts of financial market efficiency, as it results from the logical and epistemological examination of the models in question. Finally, the paper analyzes the empirical testability (in the sense of Popper's falsifiability) for each of the financial market model considered (a number of six such models).*

Keywords: *financial market, efficiency, model, testability, principle, hypothesis.*

JEL Classification: *G10, G14, G29.*

1. Preamble

The concept of the model, as it has become „established” in the scientific community, is quasi-equivalent to that of theory – a set of theoretical/conceptual, methodological, and instrumental principles, regarding a field of knowledge (in natural sciences, in spiritual sciences or in the social sciences).

Conceptually, of the three possible categories of models (of discovery, of corroboration, of refutation), financial market researchers have constructed only corroboration/refutation models.¹ Although it is possible that in each researcher's personal laboratory, discovery models also worked – absolutely idiosyncratic – they were not made available to the scientific community or, if they were made, they do not prove to be anything other than corroboration/refutation models;

- (i) *formally*, of the four possible model categories (opaque/black-box, functional/evolutionary, behavioural/impact, decision/choice), two are the categories proposed and used in the financial market analysis: a) behavioural/impact models; b) functional/evolutionary models. Thus, the Efficient Market Hypothesis (**EMH**) model is a behavioural/impact model: any available past information is necessarily incorporated into the price (or other variable of interest in the financial market). The Behavioral Market Hypothesis (**BMH**)² model is also a model from this category. As for the Adaptive Market Hypothesis (**AMH**) model, it is a functional/evolutionary model. From a practical point of view (more precisely, praxiological one), analysts – either theorists or actual actors in the financial market – use many methods and techniques that, however, claim to be (or can be subsumed by) models or

¹It should be noted that the distinction between corroboration models and refutation ones is somewhat pedantic because a model that has the ability to corroborate hypotheses has it, *eo ipso*, and that of refutation. Popper's falsification implies either one result or another (but never implies an indecision – of course, only if we disregard with Duhem-Quine's thesis, according to which we cannot, in principle, have an indubitable decision from the empirical testing of a hypothesis/conjecture).

²Which, in our opinion, is not completed in a „round” form (*Nota bene*: based mainly on perception, we believe that the phenomenological approach should be the methodological basis of this model).

theories as such.¹ The hypotheses proposed by this research are part of the category of models called functional/evolutionary;

- (ii) from the point of view of the *principles/axioms* on which the financial market models are built, we can say the followings:
- even if they are sometimes conceptually diametrically opposed approaches, financial market models are based, either explicitly or implicitly, on a single principle ;
 - a brief examination of the two categories of models currently developed leads us to identify (or formulate, if we are dealing with an implicit treatment) the fundamental principles of the main models of the financial market discussed in the specialty literature or operated on the financial market.

2. Brief logical examination of financial market models

2.1. Behavioral/impact models²

In the author's opinion, there are three financial market models that are of behavioral/impact type: (a) Efficient Market Hypothesis (EMH); (b) Fractal Market Hypothesis (FMH); (c) Cost Matters Hypothesis (CMH).

- (a) **EMH (Efficient Market Hypothesis)** : the fundamental principle is explicitly formulated by the initiator of the model (Fama *et al.*, 1969) : *the future price is independent of the past price, it is equal to the current price*. The basis of this principle lies in the very assumption of the information efficiency of the (financial) market – all past information (available and of interest/impact) is necessarily, immediately and without cost integrated in the price (or in the command variable in the financial transactions in question). All other behavioural/impact regularities of the model represent logical inferences from this principle (respecting, of course, the rules of valid inference);
- (b) **FMH (Fractal Market Hypothesis)**: the fundamental principle is explicitly formulated by the initiator of the model (Peters, 1994) : *the level of risk*,¹

¹All the „circulating” versions in financial theory and analysis can be subsumed under one of the two approaches. Thus, the so-called fractal approach to the financial market (*Nota bene*: some even call it Fractal Market Hypothesis – FMH, a name we also used here), introduced by Edgar E. Peters in 1994 (*Fractal Market Analysis: Applying Chaos Theory to Investment and Economics*) is an extension of EMH, trying, like the latter, to identify predictors in the „hope” that the kinematics of the financial market (more precisely of the records in the time series in question) behave fractal – it should be noted that we are in fact dealing here with a chaotic approach, in the sense of Chaos Theory, of the functioning of the financial market. It should be noted that the fractal approach is kept in the neoclassical „paradigm” of economic theory. Even the famous Black-Scholes model is based on martingale (fair game theory), that is. it works similarly to EMH. In essence, all these techniques, (to which is added Capital Asset Pricing Model – CAPM, as well as Modern Portfolio Theory) built under the „umbrella” of neoclassical economic theory claim the principle of equilibrium (imported from Newtonian mechanics) and presume the equivalence between investment and speculation, maintaining the analysis of the financial market in the game area (Peters, 1994) .

²Some authors (Lo , 2019) consider that the theory of rational expectations (the concept of rational expectation was introduced by Muth in 1961) is part of ... the paradigms of the financial market (theory). In our opinion, although EMH seems to verify the model criteria *qua* paradigm, we consider that the theory of rational expectations which, like EMH, is a necessary consequence of the neoclassical economic theory, based on equilibrium, has a lower span than that required by a paradigm. (*Nota bene*: however, the equilibrium theory is a paradigm!). As is well known, the theory of rational expectations (*Nota bene*: in our opinion it should be called as the theory of rational anticipations) has at least four deviations from its own assumption (Lo , 2019) : a) aversion to loss; b) overlapping on the probability – that is, on the behavior of the environment (see here the author's point of view, from the specialty literature, concerning the implicit information); c) the law of small numbers; d) heuristic representativeness (introduced by Kahneman).

scaled to different time horizons, is the same. One of the direct consequences is that the liquidity of the financial market is stable, that is, smooth and continuous, which makes the frequency distribution of the market return be the same for different time horizons. The foundation of this principle lies in what we can call (*Nota bene*: Peters did not provide such a wording) the liquidity efficiency of the financial market² – the large number and having different expecting horizons of investors ensure the smoothness and continuity of liquidity in the financial market.³ Although Peters strongly insists that FMH rejects the Gaussian distribution associated with time series, a closer look will reveal a crack in this insistence: the large number of investors (or players), as well as the large number of different expecting (that is, trading), horizons required for the operation of the fractal market hypothesis, implies, in principle (in the background), although indirectly, the hypothesis of perfect competition, that is, the Gaussian phenomenal distribution. However, FMH is much more empirically testable than EMH;⁴

- (c) **CMH (Costs Matters Hypothesis)**: this model was proposed by John Bogle (2003) which formulates, explicitly, his fundamental principle as follows:⁵ *investors as a whole will earn the gross return of the total stock market before costs but will only share the amount of that return that remains after costs*. The model emphasizes the important fact that success in the financial market depends not only on the return obtained (for example, the price) but also on ... the price of obtaining that return, that is, the cost involved in the transaction in question. In our opinion, this model is superfluous, only emphasizing one aspect of the cost-benefit analysis, which is, however, a common place in the investment decision. However, the CMH indicates a certain change in perspective of assessing the causality and conditionality of financial market behaviour:
- (i) *first of all*, it should be noted that, unlike EMH, CMH does not refer to the gross return (for example, the price) brought by a trading strategy operated on the financial market, but to the net return, that is, to the profit (difference between price and cost);

¹ The evoked author maintains standard deviation as a variable for measuring risk, although he also points out that this indicator varies faster than the square root of time (standard deviation is the square root of variance, which in fact is considered to „generate” volatility). It should be noted that, unlike the EHM model, the FMH one is empirically testable precisely by the way it formulates its guiding principle (*Nota bene*: from a logical point of view, for a financial market model to be scientific – that is, empirically testable, which is the same thing – the guiding principle, or alternatively a „theorem” inferred from this principle, must allow experimentation or experiencing, as the case may be, of the conjecture in question; this conjecture is, of course, in the form of a prediction (predictive statement).

²Such liquidity efficiency is fractal due to the self-similarity of the frequency distribution of the return of the financial market to different time horizons (expecting horizons) of investors.

³This phenomenon is, in turn, based on the essential feature of the fractal model of the financial market, namely that there is, at all times, a functional structural combination between microeconomic (local) randomness and macroeconomic (global) determinism. *Nota bene*: obviously, this idea is an application of the Prigoginian principle of the genesis of order (macroscopic aspect) from fluctuations (microscopic aspect).

⁴One of the most convenient conjectures that can be made here is to change the frequency distribution of the return, when the distribution of time horizons becomes uniform (that is, market liquidity decreases). This does not mean, *eo ipso*, that FMH is a paradigm – in fact, verifying that it is (or is not) a paradigm is a further research task.

⁵In original: *Investors in aggregate will earn the gross return of the total stock market before costs, but share only in the amount of that return that remains after costs*.

- (ii) *secondly*, this model is perfectly compatible with EMH (so, with the *homo oeconomicus* model generated by neoclassical economic theory), although the author insists on the idea that CMH must replace EMH. Consequently, the information efficiency of the market is accepted, but the validation (or selection) of a certain trading strategy is no longer external (that is, at the level of the financial market) – where, as a result of information efficiency, economic agents are indiscernible from the return (price) perspective but becomes internal, at the level of cost-benefit analysis of each economic agent;
- (iii) *thirdly*, the model is consistent (but only at a superficial level) with my own proposal (see APH below) because the *ex post* cost-benefit analysis of each trading strategy will lead to a change in the cost associated with that trading strategy, in the sense of reducing it;¹
- (iv) *fourthly*, based on the point immediately above, CMH interferes (but only at a superficial level) with Andrew Lo's proposal (see below AMH), because the change in cost associated with a trading strategy that can only bring an average return market will lead to a change in that strategy, that is, to a negative selection by the selector (*Nota bene*: as mentioned above, Lo considers the financial market itself as a selector, which introduces some logical inadvertences regarding the evolutionary aspect);
- (v) *fifthly*, the model is not continuously operational: for example, if there is no market information efficiency,² there is no need to change the cost associated with the trading strategy in question (unless an improvement in the net return of that strategy is desired, as independent of the functioning of the market);
- (vi) it can be said that CMH is a simple and credible explanation for the fact that EMH cannot function in a real financial market – thus, representing the second argument, in addition to the Grossman-Stiglitz paradox, against the EMH model (*Nota bene*: there is, however, a significant difference between the two arguments – while the Grossman-Stiglitz argument highlights the *inconsistency*, that is, the *self-contradictory* nature of EMH, the CMH argument highlights the *incompleteness* of EMH.³

2.2. Functional models of evolution

With regard to financial market models such as functional/evolutionary ones, I consider that they are the following: (d) Adaptive Market Hypothesis (**AMH**); (e) Adaptive Preference Hypothesis (**APH**); (f) Autopoietic Market Hypothesis (**APMH**).

- (d) **AMH (Adaptive Market Hypothesis)**: this model is (relatively) developed, especially, by Andrew Lo (2019), as a reaction, not too radical, to EMH, which he aspires to combine with behaviorism.⁴ The fundamental principle of

¹The superficial aspect of this consistency (or, rather, family resemblance, in Wittgenstein's syntagm) consists in the following: while, in the case of CMH, operates the practical rationality, in that of APH operates the theoretical rationality (*Nota bene*: any practical rationality implies a background of theoretical rationality).

²As is well known, the information efficiency of the market is „forbidden” by the Grossman-Stiglitz paradox.

³From another perspective, it can be said that the Grossman-Stiglitz argument examines the functioning of the EMH from inside, while the CMH argument examines the functioning of the EMH from outside.

⁴In this regard, Lo is ambiguous: sometimes he says that AMH makes a mix between EMH and behaviourism, other times he states that AMH is a generalization of EMH. In my opinion, EMH, on the one part, and any theory that leaves the canons of neoclassical economic theory (such as behaviourism), on the

this model (not explicitly formulated by the author, however) can be the following: *the price is dependent on the path (it has memory) and is established at the level of satisficing provided by the financial environment.* Some clarifying comments are needed here:

- (i) the concept of *satisficing* is the one created by Herbert Simon from the combination of the terms *satisfy* and *suffice* or to a sufficient extent;¹
 - (ii) *satisficing* no longer represents a price level neither at the level of the fair price nor at the level of the best price – the last one implying the optimization, i.e. maximizing the sale, respectively minimizing the purchase –, but represents the price that ensures, as a rule, the economic survival of the agent in question (trader);
 - (iii) it is quite obvious that the formulation of the fundamental principle of AMH, as done above, leads, *prima facie*, also to the idea of an efficient market – the state of the market in which no one can get more from the market than s/he needs for own survival. However, we guide the reader to notice a conceptual difference in market efficiency (or, equivalently, efficient market) between EMH and AMH: EMH refers to information efficiency, according to its own fundamental principle, while AMH refers to behavioural efficiency;²
- (e) **APH (Adaptive Preference Hypothesis)** : this model is the author's proposal on the functioning of the financial market, by „extracting” this functioning from the constraints of the *homo oeconomicus* model and placing it within an evolving market paradigm (Dinga *et al.*, 2022) .However, unlike the AMH model, I also propose a structural mechanism – the variation of adaptive preference (generated by *propensity* in the form of *proference*), under the impact of the selection of symbolic social fitness made by *cultural geodesic*. The fundamental principle of this model can be formulated as follows: *the distribution of the return of the financial market on trading strategies follows the distribution of the proference* (*Nota bene*: which obviously leads directly to the concept and process of co-evolution on the financial market – co-evolution is taking place between the return on a trading strategy and the propensity that generated the preference for that trading strategy). We present some clarifications regarding this model:
- (i) although it seems to be a commonplace that the economic agent chooses on the basis of his own preference (as it is modeled as a *proference* in the author's proposal), the *primary* qualification used in formulating the fundamental principle peremptorily shows that the cost-benefit analysis is secondary (or, if you will, complementary in logical and chronological order) to the preferential „analysis”;³

other part, are ... conceptually immiscible. However, behaviourism, in itself, is compatible with an evolutionary approach, as AMH is trying to do.

¹In the Romanian language we have the combination between (*satisfacere*), that is, *satisfying* and (*suficientă*) that is, *sufficiency*, so *satisficientă*, that is *satisficing*, reversing, however, the order from that of Simon's proposal, for reasons of both pronunciation and evidence of significance in Romanian.

²In fact, we believe that the very replacement of information efficiency with behavioral efficiency essentially expresses the basic pattern of this proposal.

³We can identify, here, a very interesting aspect regarding the economic choice, namely that this choice is one of the types of theoretical rationality, not of practical. Indeed, the theory of choice shows that theoretical rationality is based on belief (*Nota bene*: some authors consider that these are rational beliefs, based on justification or justifiability), while practical rationality is based on calculation) (Welton , 2012) .

- (ii) therefore, far from denying the rationality of choice or, more precisely, of making choices based on a model of rationality, APH emphasizes even more on this rationality, indicating, as its basis, the theoretical rationality, based on belief (or, in the terminology of this paper, on propensity that turns preference into proference), not the practical rationality, based on cost-benefit analysis;
- (iii) obviously, the proposed model requires for a permanent inter-action between theoretical rationality and practical rationality, which is, in fact, the essence of the hypothesis itself;
- (iv) this clarification is consistent with and underpins the construction of the behavioral efficiency of the financial market, as opposed to the information efficiency proposed by neoclassical economic theory; not even AMH focuses on this key issue of economic decision-making, but on the financial market's selection of the trading strategy ;
- (f) **APMH (Autopoietic Market Hypothesis)** : this model is the second proposal that the author makes in the context of this research. The fundamental principle of this model could be formulated as follows: *the distribution of the return of the financial market on the trading strategies follows the distribution of the replicability of the fitness of those strategies* . The following considerations develop, in a more analytical way, this fundamental principle:
 - (i) APMH does not need either EMH or CMH to explain (justify) the distribution of return on active trading strategies in the financial market;
 - (ii) conceptually, APMH is part of the evolutionary model, like AMH but, unlike the latter, it goes beyond evolution (and even co-evolution), namely it aspires to shape the financial market as a self-evolutionary system or, using a term that appeared in biology but later expanded into almost all fields of science that claim to be evolutionary, an *autopoietic* system;
 - (iii) the autopoietic model of the financial market takes over self-organization, considered proper to biological systems and „imports” it into the economy (Foster, 1997); (Vromen , 2007), (*Nota bene*: two crucial hypotheses are also considered for the functioning of economic systems/processes: the continuity hypothesis, respectively the autonomy hypothesis. Of course, this approach requires what has been called a generalized theory of Darwinism – all these elements, together with the concept of entropy and in their interconnection, will be addressed in other communication;
 - (iv) the autopoiesis of the financial market requires two interconnected „circuits” (although with a certain mutual autonomy) of validation/adjustment – one at the level of the phenotype – environment relationship, another at the level of the internal environment – external environment relationship.

3. Short discussion

3.1. Regarding the type of efficiency of the financial market

All models of the financial market, discussed above, aim at or relate to the efficient financial market or, equivalently, the efficiency of the financial market – of course, each model comes with its own definition or acceptance of the attribute of efficient (or efficiency), as follows:

- (a) *EMH*: information efficiency

Information efficiency refers to that state of the financial market that no longer allows any gain above the market average (unless additional costs are incurred to ensure this gap above the market average, but which gap will ultimately do nothing else than to cover only that additional cost mentioned).

(b) *FMH*: scale efficiency

Scale efficiency refers to the invariance of the gain in relation to the scale (size, frequency, and other similar characteristics). In other words, whatever scale we choose for the financial transaction performed, the (unitary) gain returned by the market will be the same.

(c) *CMH*: structural efficiency

Structural efficiency refers to the fact that, although it is possible (as in the case of EMH) to earn above market average at the „price” of additional costs (for example, to take risks, or to find niches of opportunity), eventually the net gain will not be above the average net market gain.

(d) *AMH*: behavioural efficiency

Behavioural efficiency refers to the gain obtained (or obtainable, in potential situations) as a result of the memetic imitation of successful behaviours on the financial market, on the one hand, respectively of the inferring of implicit information from observing the behaviours of other financial market participants, so the implicit information then being used to adjust the observer's own financial behavior.

(e) *APH*: adaptive efficiency

Adaptive efficiency refers to the gain obtained (or, symmetrically, to the avoided loss) as a result of the adaptation of the trading strategy to the changes occurred in the market (opportunities, net profit margins, new economic actors, etc.). Although adaptation is a commonplace in any behaviour, the adaptive efficiency refers to the abandonment (or limitation) of strictly or exclusively rational models (*homo oeconomicus*) who have proven their inadequacy to real behaviors and favored behaviors based on empirical rules (*rules of thumb*).

(f) *APMH*: reproductive/replicative efficiency

Reproductive/replicative efficiency further carries the concept of adaptive efficiency, namely through the concept of autopoietic efficiency – autopoieticity ensures not only the preservation of efficiency but, to a certain extent, its improvement.

3.2. Regarding empirical testability

Regarding the testability (in the sense of factual falsification), we make the following statements:

Testability can be ensured both from the perspective of theoretical rationality (or rational belief or simple belief, equated in the present paper with the propensity that generates the preference), and from the perspective of practical rationality (equated in the present paper with the cost-benefit calculation).

Therefore, in order for testing to be possible, financial market models must provide at least a methodological anchor (either of the nature of theoretical rationality, or of the nature of practical rationality, or of both natures) that underpins the issuance/formulation of conjectures which will function as predictions or predictive statements.

From this perspective of testability, the six selected models regarding the functioning of the financial market are characterized by the followings:

- (a) *EMH*: this model is not testable – in its fundamental principle there is no reference to theoretical rationality or practical rationality. Besides, the specialty literature clearly notes this feature of the EMH model – its empirical non-testability (Berk, 2008) – the underlying explanation for this non-testability is, of course, the very substance of the hypothesis underlying

this model: a hypothesis not only unrealistic but, in many respects, erroneous;

- (b) **FMH**: this model is testable – based on its fundamental principle, conjectures can be issued which, then, through a careful organization of the experiment or observation,¹ can be either corroborated or rejected. It should be noted that the rationality on the basis of which it is possible to formulate predictive statements is of a practical nature (it does not refer to the beliefs, possibly rational, of the economic agents);
- (c) **CMH**: this model should logically be part of an extended EMH model that refers to the information efficiency of the financial market not from the perspective of price (that is, gross return), which has no significance for the economic agent, but from the perspective of net income/gain – that is, the difference between price and cost. In the absence of this „melt”, the model is a warning of the need for a more in-depth analysis than that allowed by the exclusive examination of price. From the point of view of testing, it can be considered that the model is non-testable, because the fundamental principle, although aimed at practical rationality (cost-benefit calculation, in other words) does not offer the possibility of formulating conjectures that can be observed and evaluated empirically;
- (d) **AMH**: this model is testable based on the arguments that any evolutionary model is testable. Its fundamental principle requires theoretical rationality, because *satisficing* is directly related to the (possibly rational) belief of the subject. Of course, from a technical point of view, the design, organization, conduct and observation of an experiment (either *in vitro* or *in vivo*) requires much more care for the correct capture of the co-evolutionary relationships that take place on the financial market . Although, in the vast majority of cases, the tests performed in the specialty literature are also performed from a perspective that we can call „objectual” (that is, one that focuses on facts, not behaviours), the model allows a test of behaviour, namely by capturing the aspects of choosing the second-best solutions;
- (e) **APH**: this model is currently in its infancy (Dinga *et al.*, 2022). However, its fundamental principle allows testing, from the perspective of theoretical rationality, because the adaptation of preference is done by changing the propensity (or, as I proposed, the preference as a dyad propensity – preference). Therefore, the formulation of conjectures (or predictions) should be made from the perspective of comparing the distribution of the preference, respectively the distribution of the return of the financial market;
- (f) **APMH**: this model, as such, is being developed and is part, in the present, of the scientific interest of the author of this paper. However, the approach of autopoieticity in economics is quite rich in the specialty literature, especially in the field of conceptual transfer from biology, with the founding contributions of Maturana and Varela (Maturana and Varela, 1980). Its fundamental principle is claimed both in theoretical rationality (originated in belief or propensity) and in practical rationality (cost-benefit analysis – also at the level of second-best solution, as in the case of AMH or APH). Therefore, there is a large possibility of formulating conjectures/predictions to test this model of the financial market.

¹*In vivo* observation/observation is also called as a *natural experiment*.

Some conclusions

The main conclusions that can be drawn from the previous analysis are the followings:

- (i) from the perspective of the degree of elaboration (both theoretical and methodological-instrumental) there are six basic models of the financial market (or financial theory), namely those examined in this study;
- (ii) each model of the financial market is based on its own type of market efficiency – financial market efficiency means, in all cases, the state of maximum market entropy from the perspective of that type of efficiency;
- (iii) in general, the development of financial market models has followed the path from the hypothetical-deductive type (i.e., EMH) to the co-evolutionary and autopoietic type (i.e., APMH);
- (iv) the methodology of improving the financial market theories/models is anchored in human psychology (both cognitive psychology and behavioral psychology);
- (v) as financial market models „move” from the hypothetical-deductive type (*homo oeconomicus*) to the co-evolutionary/autopoietic type, the degree of testability (empirical) of these models increases, which implicitly increases their scientificity (according to the separation criterion proposed by Karl Popper).

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AN ANALYSIS ON COMMUNICATION AND PERSONAL CONFLICT RESOLUTION STYLE IN BUSINESS ORGANIZATIONS

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Abstract: Considered as a real psychosocial phenomenon, which might involve intra and intersubjective oppositions and confrontations, the organizational conflict highlights a series of characteristics and properties that may be objective, which can be analyzed and evaluated both quantitatively and qualitatively. The communication style of a business organization refers to the set of characteristics that may manifest in the communication process of said enterprise. This whole process involves both the way of receiving and decoding a message, while engaged in communication, and the way of processing and interpreting it. These characteristics of speech and communication are closely related to the uniqueness and individuality of both the transmitter and receiver, being an outlet of self-expression. Through the data presented, this paper aims to perform an analysis on the communication style of three distinct business managers and the way they may reach a conflict resolution within their organization. Quantitative methods were used as the primary research method.

Keywords: communication style, conflict, style of conflict resolution, managers.

JEL classification: M21.

1. Introduction

The communication style refers to the set of particularities characteristic to a person in the act of communication. The style designates: the specific ways of receiving / decoding a message; personal ways of processing / interpreting messages; specific ways of expressing an answer and feedback. All these derive from the uniqueness and individuality of the human being, being the expression of the human personality.

The concept of a style of communication can be applied only where the formal, generally valid characteristics of the communicative act can be associated with certain personal ways of receiving, processing, or sending messages. The modes of communication formed during an individual's development can be stable and characteristic. They can also be relatively independent of the communicative content conveyed and of the concrete context in which they operate (see people who communicate "elegantly" in any circumstance / people who communicate vulgarly, aggressively, in any situation).

The communication style is primarily an indicator of how a person structures their world of social relationships. Secondly, the communication style is an indicator of the way information is processed and transformed into behavioral facts and into practical, social, and evaluative judgments, etc.

The communication style is fundamentally determined by three elements:

1. the attitudes of the person, as a constant way of placing themselves in a balance between their social life, peers, and self.
2. learned communication models - assertive, non-assertive, aggressive (with their passive-aggressive variant), manipulative.
3. temperament, as a type of nerve cell reactivity.

Thus, according to Stroe Marcus¹, communication styles can be non-assertive (passive), aggressive, assertive and manipulative.

¹ Romanian psychologist with important contributions in the study of the empathic phenomenon

The personal effort to solve conflicts is based on the research done by Thomas and Kilmann. Researchers Kenneth Thomas and Ralph Kilmann have identified five general styles of conflict management, resulting from the combination of two fundamental dimensions: concern for the other or cooperation and concern for the self or assertiveness. The five main conflict resolution strategies are: competition, collaboration, compromise, de-escalation, and avoidance. Avoidance - Turtle; Competition - Shark; De-escalation - Chameleon; Compromise - Fox; Collaboration - Owl.

2. Research methodology

The purpose of this research is to identify the style of communication of a manager and how they might behave with their employees. The research methods used were: Questionnaire S.C. Communication style analysis (Stroe Marcus) and the Thomas-Killman Questionnaire on behavior in conflict situations.

In the current context, the following hypothesis has been formulated: We assume that the desired style of communication influences the desired way of solving conflicts.

The main objective of the research is to highlight the communication style of the analyzed people, as well as their personal style of conflict resolution.

The paper has been written as an exploratory research that took place in February 2020 and uses as the main research method the quantitative methods, more precisely the S.C. Communication style analysis (Stroe Marcus) and the Thomas-Killman Questionnaire on Behavior in Conflict Situations.

The S.C. Questionnaire - An analysis of the communication style (Stroe Marcus) includes 60 questions, which can be answered with True or False.

The Thomas-Killman questionnaire on behavior in conflict situations includes a number of 35 questions, which can be answered thus: 5 points - very common; 4 points - frequently; 3 points - sometimes; 2 points - rarely; 1 point - never.

This paper tries to demonstrate that the way of solving conflicts depends on the style of communication and the behavior that managers have when solving conflict situations.

3. Data analysis and research results

In order to highlight the communication style within an organization, as well as the conflict resolution techniques, we chose to research three Heads of Office with different jobs: the head of a Communication Office; the head of an IT Office and the head of an Internal Audit Office.

For confidentiality of personal data, we have made the following change:

A = Head of the Communication Office

B = head of the IT Office

C = Head of the Internal Audit Office

The Head of the Communication Office is male, 38 years old and has been working for 16 years.

The Head of the IT Office B is male, 36 years old and has been working for 14 years.

The head of the Internal Audit Office is male, 48 years old and has been working for 24 years.

The subjects were informed that their responses would form the basis of a confidential study used in a profile research.

The subjects have been asked to answer all the questions and avoid neutral answers as much as possible. The questionnaire was given to the participants at their workplace. They were instructed to answer the questions honestly.

After completion, the questionnaires have been collected, and the results interpreted through reference to the standard of the applied questionnaire.

Table no.1. Scores obtained by the Head of Office A-Communication

	Non-assertive style	Aggressive style	Manipulative style	Assertive style
Head of Office A	3	2	4	12

Source: created by the author based on the gathered information

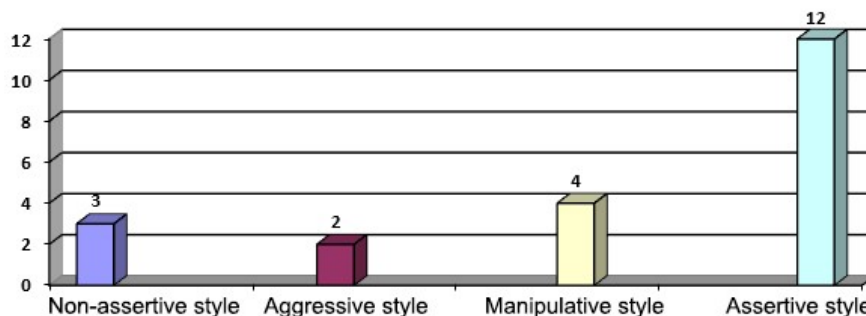


Chart no. 1. Communication style of Head of Office A-Communication

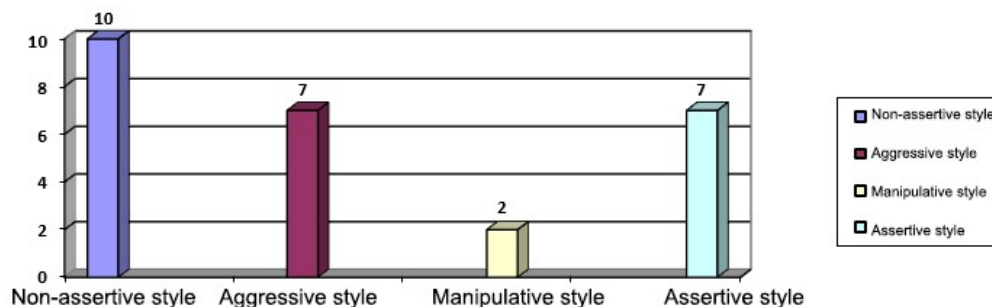
Source: created by the author based on the information gathered

We note that, according to table no. 1 and chart no. 1, the behavior of Head of Office A can be matched to an assertive communication style, which encompasses the capacity for self-affirmation, for an honest, direct and clear expression of one's opinions and rights without aggression and without harming the others and for the ability to pursue one's own interests without violating the needs of others. The person knows how to listen and is willing to understand, knows how to be themselves (without simulations and "role-playing games") and to rely on themselves. It is the best attitude because it allows them to achieve their goals without provoking the resentment of others. It might even lead to gaining the sympathy of others.

Table no.2. Scores obtained by the Head of IT Office B

	Non-assertive style	Aggressive style	Manipulative style	Assertive style
Head of Office B	10	2	7	7

Source: created by the author based on the information gathered



Graph no.2. Communication style of the Head of IT Office B

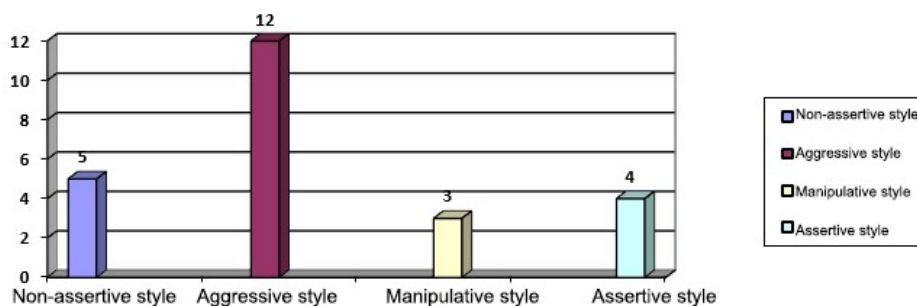
Source: created by the author based on the information gathered

According to table no. 2 and graph no.2 the communication style of the head of Office B is non-assertive (a passive attitude) - they have the tendency to hide, to run rather than face people. It can be manifested by an excess of kindness and conciliation, by the tendency to postpone making decisions and often by the impossibility of making them, accompanied by giving others the right to make decisions. At the root of these manifestations is an unhealthy fear of being judged by others, as well as the intense anger felt in the event of failure - in order to avoid them, the individual prefers to submit to the judgement of others. This can also include a feeling of resentment and smoldering anger.

Table no.3. Scores obtained by the Head of the Internal Audit Office C

	Non-assertive style	Aggressive style	Manipulative style	Assertive style
Head of Office C	5	12	3	4

Source: created by the author based on the information gathered



Graph no.3. Communication style of the Head of the Internal Audit OfficeC

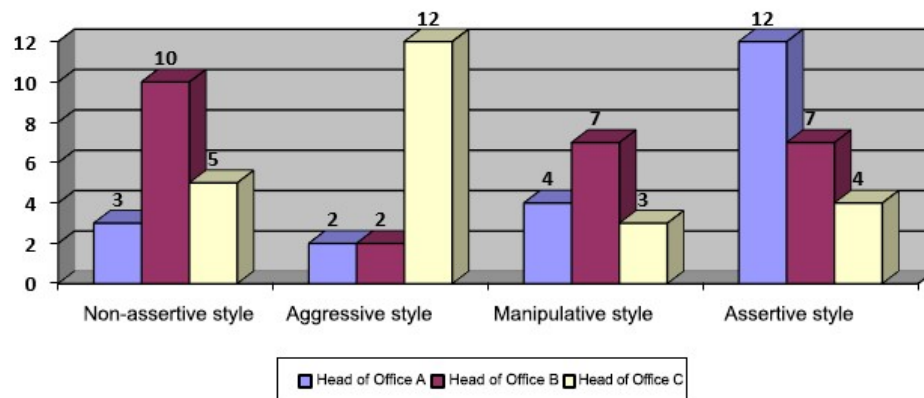
Source: created by the author based on the information gathered

According to table no. 3 and graph no.3 the communication style of the head of the Internal Audit Office - C, is an aggressive style, which involves the tendency to always be at the front, to have the last word, to impose oneself with any price, even at the cost of harming and upsetting others. To dominate by any means necessary, to use fear, contradiction, humiliation, compromising others, shocking attitudes and behaviors, revenge and taking excessive risks. This attitude amplifies the aggression and antipathy of employees and leads to the feeling of not being loved, respected or appreciated for the manager in question, making them become even more aggressive - a real vicious circle of aggression being created.

Table no.4. The scores obtained by the three managers

	Non-assertive style	Aggressive style	Manipulative style	Assertive style
Head of Office Communication A	3	2	4	12
Head of IT Office B	10	2	7	7
Head of Internal Audit Office C	5	12	3	4

Source: created by the author based on the information gathered



Graph no.4. Distribution of the 4 communication styles pertaining to the 3 office managers

Source: created by the author based on the information gathered

From the table and graphno. 4we observe that the assertive communication style, which is also a desired communication style overall, is used by the head of office A.

We notice that the assertive communication style, which is the most desired style in achieving organizational goals and in solving conflict situations, has been used by the heads of office B and C, but not with happy results.

The non-assertive communication style is used by the head of office B. The other heads of office, A and C, have scored low on this style.

The manipulative style of communication is also practiced by the head of office B. People in this category aim for others to do what they want, but without involving open confrontation - be it rational, constructive - assertive or conflicting - aggressive; it is more of a matter of waiting for the situation to turn in their favor. Often these people "play various roles", as a sign of insufficient social maturity and a weak, precarious and unsatisfactory social status. The problem of manipulative individuals is that they seek to hide their weakness, to not be discovered, as they are afraid of the judgment of others and of not being marginalized.

The aggressive communication style is practiced by head of office C. Head of office A and B have scored low on this style.

Regarding the investigation of certain behaviors in conflictual situations, following the application of the questionnaire on the use of conflict strategies, the following can be stated.

Table no.5. The scores obtained by the Head of the Communication Office A, regarding conflict resolution strategies

	Avoidance	Competition	De-escalation	Compromise	Collaboration
Head of Office A	27	20	35	26	31

Source: created by the author based on the information gathered

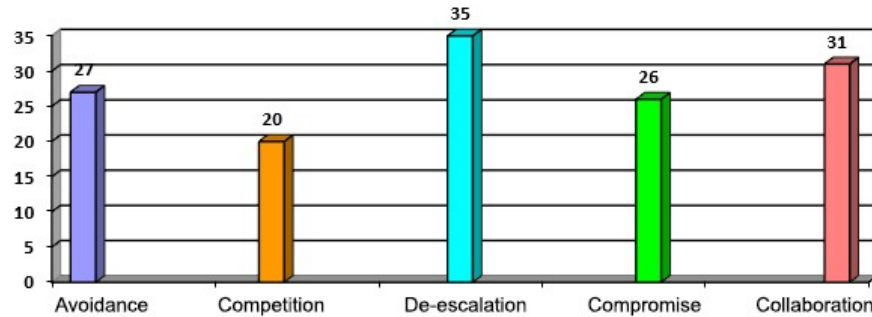


Chart no. 5. The Conflict Resolution Strategy of the Head of the Communication Office A

Source: created by the author based on the information gathered

According to table and graph no. 5, we notice that the strategy used by the head of Communication A, regarding the behavior they have in conflict situations is De-escalation (Bear), meaning: I lose, you win. For the bear, interpersonal relationships are very important, while their own goals are of little importance. The bear wants to be liked and accepted by others. They believe that a conflict should be avoided in favor of harmony, and also believe that people cannot argue adversely without damaging relations between them. It is feared that if a conflict continues, someone will suffer, and this might compromise the relationship with that person. They are able to give up personal goals in order to maintain a relationship with someone. The bear says: "I give up my goals and interests and I let you get what you want, just so that you might like me". The bear tries to settle the conflict for fear of endangering the relationship with someone.

Table no.6. The scores obtained by the Head of the IT Office B, regarding conflict resolution strategies

	Avoidance	Competition	De-escalation	Compromise	Collaboration
Head of Office B	17	19	23	30	26

Source: created by the author based on the information gathered

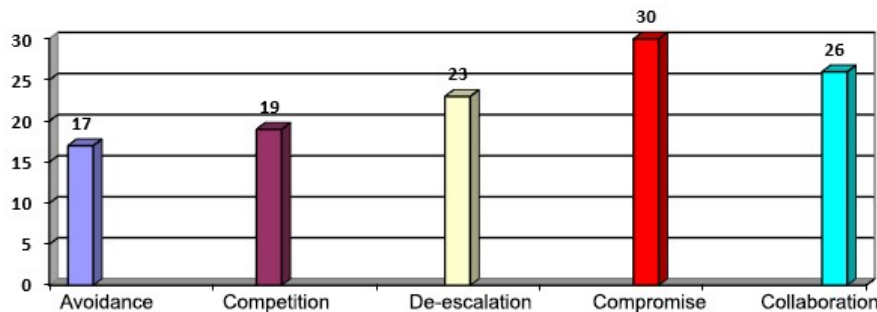


Chart no. 6. Conflict Strategy - Head of Office B

Source: created by the author based on the information gathered

According to table and graph no.6, we notice that the strategy used by the Head of the IT Office B, regarding the behavior they have in conflict situations is Compromise - Fox, meaning: You bend down, I bend down. The fox is equally interested in their personal

goals as well as their relationships with others. The fox tends to compromise: they partially give up their goals, convincing the other side to do the same. In a conflict situation, the fox's solution will be that each involved party must win something - the middle ground between two extremes. They are able to partially give up their goals and relationships in order to reach an agreement.

Table no.7. Scores obtained by the Head of the Internal Audit Office C, regarding conflict resolution strategies

	Avoidance	Competition	De-escalation	Compromise	Collaboration
Head of Office B	21	23	23	22	27

Source: created by the author based on the information gathered

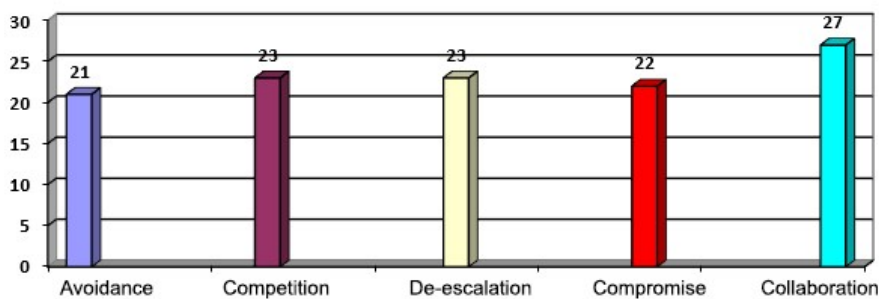


Chart no. 7. Conflict Strategy - Head of Office C

Source: created by the author based on the information gathered

According to table and graph no. 7, we notice that the strategy used by the head of the Internal Audit office C, in conflict situations is Collaboration - Owl, meaning: I win, you win. The owl values highly both personal goals and interpersonal relationships. They see conflicts as problems that need to be solved and are looking for solutions that satisfy both their own interests and those of the opposing camp. The owl sees the conflict as a method of improving relations, by reducing the tension between two people. They try to start a discussion in order to identify the conflict itself as the problem. By looking for solutions that satisfy both parties, the owl maintains relations. The owl is not satisfied until the tensions and negative feelings have been fully resolved.

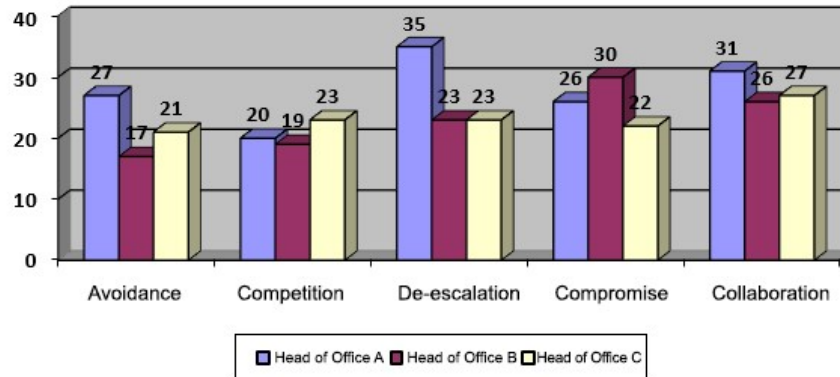


Chart no. 8. Conflict Strategy - Heads of Office A, B, C

Source: created by the author based on the information gathered

Graph no.8. shows us the choices of each leader in the conflict resolution strategy. Thus, head of office A chose de-escalation, head of office B chose compromise, head of office C chose collaboration.

In conclusion, head of office A chose an assertive communication style and their way to solve conflicts is De-escalation. Head of Office B chose the non-assertive style of communication and their way to solve conflicts is Compromise. Head of Office C has an aggressive communication style and their strategy for solving conflicts is Collaboration.

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INTERNATIONAL EXPERIENCE IN THE SUPPORT MEASURES FOR REFUGEE CHILDREN

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Abstract: *One of the consequences of regional conflicts across the globe is the population refugee crisis, in which children are in the most vulnerable position, being in a higher need of social, economic or other type of support. In order to identify the refugee children's issues and solutions for them this paper has the following purposes: mapping population refugee crises, evolution of support measures for refugee children in historical aspect, analyzing current social, economic support measures for refugee children and proposing some ideas for further support in refugee crises. The paper will also cover the Ukrainian population refugee crisis, the focus being on refugee children from Ukraine.*

Keywords: *children, refugees, experience, socioeconomic support.*

JEL Classification: *F22, H5, H72, J13.*

1. Introduction

Refugee is a person that is persecuted, flees a territory and is in need of protection. Mankind has known waves of refugees since the beginning of its existence from prehistoric times due to intertribal warfare, natural disasters, famine or other factors. In essence in the later epochs these causes didn't change, but only the diversity of their sizes and forms. The word "refugee" itself comes from Latin "*refugium*" (hideaway). In Ancient Era, in Ancient Rome a part of the people coming through the barbarian invasions in its western part were refugees due to climate change and due to the war of the steppe tribes that determined other tribes to go in the western direction. Offering citizenship to refugees that lived at the frontier of Roman Empire gave them the right to be subjects to Roman legislation, while if the refugees grew up at the border obtaining Roman citizenship ensured refugees and their families to be free of being captured in slave trading or from suffering because of those that steal children. Three waves of citizenship offering to refugees in Ancient Rome were intertwined with war times of conquest and colonial expansion. Giving citizenship to refugees enhanced public trust in investment and fostered economic growth. Support for refugees was shown in Middle Ages, too. For example, during the Albigensian Crusade (1209–1229) that was a military campaign by Pope against Catharism in Languedoc, in southern France, bishop of Toulouse distributed food to Cathar beggar refugees. People also gave refugees, including orphans, food and temporary shelter in the woods (cabins or tents). French Revolution has determined a refugee movement from 1789 to 1815. The nobility, clergy, rich proprietaries were entitled to asylum and support in Great Britain, due to sympathies of British elites which influenced the British government to offer support. In Great Britain French refugees were also given financial support: men under 16 years and over 50 years, disabled male and soldiers received £1-11s-6d¹ per month plus some additional stipends; women and girls over 14 years would receive the same lump sum. Children under 14 years were given £1-2s-0d per month. This system permitted exceptional supplementary treatments for families, for ill people and older emigrants (Reboul, 2014). In Contemporary Era as in other periods have appeared many refugee crises as well.

¹ £1 – 1 pound = 20 shillings (s) = 240 pennies (d, from initial of Latin "*denarius*")

2. Contemporary refugee crises and socioeconomic measures for the support of refugee children

According to the UNCHR data (UNICEF, 2021), in the world there were more than 33 million children forcibly displaced at the end of 2020, from them 11.8 million children are refugees. Between the 2005 and 2015 this number of refugees increased twice. Children represent the majority (circa half) of world's refugees, while representing less than 1/3 of global population. Syria, Afghanistan and South Sudan offer half of world refugee children, three fourths of all child refugees come from 8 countries (Syria, Afghanistan, South Sudan, Myanmar, Democratic Republic of the Congo, Somalia, Sudan, Central African Republic). 83% from all refugees find asylum in the neighborhood of their region, circa 90% of biggest receiving countries for refugees are in Asia and Africa, but Germany is the only exception. Turkey hosts the biggest number of refugees and also child refugees, in 2020, 1 in 6 from child refugees lived there. Lebanon has the biggest number of refugees compared to its population (128 at 1000 people), it is followed by Jordan (69 at 1000 people) and Turkey (43 at 1000 people). By income level (number of refugees per 1 USD of GNI per capita), Uganda, Sudan and Pakistan have the biggest concentration of refugees compared to their resources. The first 28 countries receiving the biggest number of refugees compared to their resources are all on African and Asian continents.

In recent times as in other periods major refugee crises were caused mainly by political turmoil, war, famine - factors which are interconnected. The recent big refugee crises can be named the following (by the events that caused them) in chronological order of their appearance: Great Irish Famine (1845-1852); World War I (1914-1918); World War II (1939-1945); Indian Partition (1947-1948); Palestinian refugees' crisis (1947-present); Korean War (1950-1953); Algerian War (1954-1962); Bangladesh Liberation War (1971-1979); Indochina refugee crisis (1975-2000); Mozambican Civil War (1977-1992); Soviet-Afghan War (1978-1989); Yugoslav Wars (1991-2001); 1991 Iraqi uprisings (1991); Somali Civil War (1991-present); Great Lakes refugee crisis (1994-1996); Iraq War (2003-2012); Syrian refugee crisis (2011-present); South Sudanese Civil War (2011-2020); First Libyan Civil War (2011); Venezuelan refugee crisis (2014-present); Rohingya genocide (2016-present); Ukrainian refugee crisis (2022-present).

During the Great Irish Famine (1845-1852) circa 2 million refugees from Ireland fled the country to North America. This was caused by infection of potatoes with potato blight, laissez-faire economic policies, dependence on a single crop. At that period children amounted to 45% of the population in workhouses (institutions where the people who couldn't self-support financially were given a job and a shelter) - children with their families, orphans (that lost one parent), abandoned children, deserted children (with fathers leaving the country to work) and illegitimate children. The famine migration generated thousands of orphan children. A more exact number of such refugee orphan children can't be offered since the placement of many of them was informal and wasn't recorded. In this case orphans were not just children the parents of which died, but also those that didn't have someone to look for them. The orphans were supported by public institutions, private charitable organizations and religious communities through such measures as: overseeing by the government of the stations of quarantine and the hospitals where were sick migrants (due to the spread of infectious diseases during the famine crisis); nursing the sick, administering sacraments and founding homes for children; placement with relatives / Irish families for charitable reasons and also for pragmatic reasons (as extra hands for farming or help in the household), but also because of motivation by ethnic solidarity and by Christian charity. The majority of families favored older children for extra hands for the farm or household. As a result, younger orphan refugee children in most cases were institutionalized until the age when they can make a living and earn a place in a family.

Many of the costs for the orphans were supported by the churches raised on charity campaigns and Sunday collections, which were reimbursed in an exceptional and non-recurrent manner by the government, specifically for clothing, for shelter, travelling and for medical help. At the time of crisis, adoption had an informal character and wasn't binding, it was more akin to apprenticeship or foster care. So, in fact, there were no legal claims in the parent-child relationships. Circa 25% of orphans were placed 2 or 3 times, because of mismatches with adoptive parents (Bradburn, 2013). Over time took place the romanticization of orphan stories during famine with depiction of self-sacrificing adoptive parents. But even so, the majority of orphans had proper treatment from the host families, some afterwards inheriting family farms.

The World War I (1914-1918) generated according to some estimates between 7 and 15 million refugees. Support to refugee children was provided by charitable societies from the USA, France and, especially, UK. Help included the provision of social assistance, creating nutrition points, disinfection chambers, hospitals, shelters. A classification of the types of support refugee children received in the World War I time would look like the following: 1) Charity, upbringing and education of children: organization of shelters for permanent residence of children and shelters for the daily maintenance of children; 2) Financial assistance: money for food, clothes, shoes, rent, education, treatment, etc.; 3) Food assistance: canteens for children; dairy kitchens for issuing free food for infants (for young children that due to their helplessness, were not able to fight for their existence, and their weakened, hungry mothers that could not nurse their children, which feeling their impotence, wished for the speedy death of their children); 4) Medical assistance, which was especially needed by refugees, that were exhausted by long tedious journeys and turned into beggars who do not know their fate, with a weakened state or driven to the extreme limit of nutrition, living in unsanitary conditions and was organized through nursery receptions, quarantine houses for children, where children were kept for 18 days, and then sent either to shelters or to temporary small hospitals for various infections (measles, whooping cough, etc.), dispensaries, pharmacies, chemical and bacteriological laboratories; 5) Provision of dwellings: for refugee families with children at a cheap price or even for free; 6) The search for children that was carried out by a refugee registration office, through which refugees could sometimes find their relatives and friends, children were searched for in the forests, dugouts, abandoned huts and found children were evacuated; 7) Legal assistance that was provided so that the population could learn about their rights and benefits in connection with the war.

Due to the World War II (1939-1945) between 40 and 60 million of refugees left their home, but in order to evacuate children from Nazi Germany was organized Kindertransport or children's transport that was a rescue operation, which took place 9 months before the outbreak of World War II. Its purpose was the transportation and placement in the UK of children recognized as Jews on the basis of the Nuremberg racial laws from Nazi Germany, Austria, Czechoslovakia, Poland and the free city of Danzig. The UK has taken in almost 10000 young refugees. They were settled in foster families, hostels and country farms. Most of those children survived the war, but very few were reunited with their parents, as these children were often the only survivors of their Holocaust-destroyed families.

During the Indian Partition (1947-1948) British India was divided into Pakistan and current India. This event is associated with large-scale violence that displaced around 10-20 million refugees and has determined two resettlements: to India and to Pakistan. Food was distributed to children in refugee camps. Pakistan government searched for medical specialists for the hospitals on the field, while the Indian government, through the Indian Red Cross, appealed for medical supplies and other emergency items. Both Pakistan and

India sought help from the Red Cross for immediate supplies of blood, plasma and sulphur drugs to fight cholera and dysentery epidemics and also penicillin for septic conditions and vitamins for malnutrition. The British Red Cross divided the requested items equally between the two countries.

In the Palestinian refugees' crisis (1947-present) due to Israeli–Palestinian conflict has migrated between 0.7 and 5.6 million of people. The biggest issue that is faced by Palestinian refugees is the denial of return to their places of origin. Many Palestinian refugee children aren't given equal opportunities to an adequate living standard consistent with the Convention on the Rights of the Child. They have only reduced access to government services and depend on UNRWA (United Nations Relief and Works Agency for Palestine Refugees in the Near East) for basic education, health and relief and social services. As issues they face inadequate access to basic rights (education and health care); insufficient protection against abuse; accumulation of garbage; living conditions in humid, dark and small houses; lack of space to play as depriving factors of an adequate living standard. Specifically, for Palestinian refugee children as solutions to their issues can be the following: the provision with accurate information on their rights; ensuring of a focal point for children's needs through counseling programs; screening of children's health; repatriating children with school certificates or other acts of education obtained in the country of asylum and offering adequate education without discrimination; including in repatriation programs of social services that assess, monitor and assist returning refugee families in their reintegration and designing activities to counter the marginalization of vulnerable families. UNRWA offers health services (primary health care; nutrition and supplementary feeding; assistance with secondary health care; and environmental health in refugee camps), psychosocial support and education through making primary education free to all Palestinian refugee children through the operation of 644 schools in the five areas of UNRWA operations and through encouraging the development of different forms of secondary education, including general and vocational education, by running eight vocational and technical training centers with a capacity for 4884 trainees; and, in making educational and vocational information available to children through career guidance services and assistance in finding jobs locally or in other Arab countries.

During Korean War (1950-1953) between 1 and 5 million Koreans became refugees, majority being women and children. Many child refugees were war orphans. South Korea used international adoptions of war orphans in order to relieve financially its social welfare budget, while the North Korea had a more active economic interest in sending its orphans abroad. The orphan program was a unique opportunity for the government to grow its human capital stock by letting young people attend foreign schools and learn foreign languages. From 2000 to 2500 orphans were sent to Eastern Europe during the Korean war, circa 30000 orphans were sent to Mongolia, Soviet Union and China after the war. South Korean orphans found permanent homes in the West, but in the late 1950s, the North Korean government called home their war orphans.

Algerian War (1954-1962) generated circa 1 million refugees and as in other conflicts most of them were women and children, but also elderly people, too. At that period many African countries gained independence and had relatively new governments and couldn't offer adequate support to improve the poor living conditions of the population. UNCHR helped more than 200000 refugees with food, clothes, medical support and also helped to facilitate the refugee resettlement in their home land and by 1962 most refugees have been repatriated. The League of Red Cross Societies spearheaded an international relief program in the Algerian border areas to facilitate resettlement to which UNHCR offered moral and policy support.

Bangladesh Liberation War (1971-1979) has caused approximately 10 million of people to become refugees. During the war UNICEF together with other UN agencies offered shelter, food, sanitation supplies, safe water and cooking utensils to the refugees and also supplementary food distribution for 650000 children in the refugee camps. George Harrison's Concert for Bangladesh in 1971 helped concentrate global attention to Bangladesh and raise awareness and funds for refugees. In 1972-1973 UNICEF funds of 30.2 million USD were directed towards distribution of vitamin-enriched, high-protein food supplements for children and for establishing safe water sources (UNICEF, 2018). In 1979 Bangladesh government together with UNICEF begins the national oral rehydration saline campaign (a mix of water, salt and glucose used to treat diarrhea), but initially in 1971 it was used to treat cholera. A program for immunization began in 1979 to vaccinate children against diphtheria, tetanus, pertussis, tuberculosis, measles and poliomyelitis.

Another big refugee crisis is the Indochina refugee crisis (1975-2000) which began in 1975 after communist governments were established in Laos, Vietnam and Cambodia. According to estimates, circa 3 million people were refugees. Many Indochinese refugees were put in temporary camps in the western Pacific area, and afterwards they have flown to US reception centers set up in April and May of 1975. In US reception centers families with children were given by private organizations a series of social services like classes in child care, support in college placement, recreational programs. If refugees couldn't find employment after the resettlement, they could receive cash and medical support for an unspecified period as US citizens. State and local education agencies also were given allocations per capita to help defray the cost of educating refugee children. Children represented 43% of all refugees, but they comprised only 5% of the recipients of SSI (Supplemental Security Income – a federal income supplement program funded by general tax revenues designed to help the vulnerable ones that have insufficient income and provides cash to meet basic needs for food, clothing and shelter). From the 165 Indochina refugee children that were eligible in July 1978, 30% were aged 10-14 years old and 16% were under 5 years old.

Mozambican Civil War (1977-1992) fostered by local dynamics and accentuated by Cold war politics caused 1.7 million refugees, a great part of them being children. It should be mentioned that children as in other African conflicts were used as soldiers. More than 25000 children were separated from their families (ICRC, 2021). Because of the long war the return of refugees, including the refugee families with children, had to be done together with community reconstruction. To help, UNCHR (The UN Refugee Agency) has funded over 800 small-scale development projects for repairing roads, bridges and other infrastructure, improving basic community health and education needs. Returnees received sufficient food for 10 months and also basic supplies like plastic sheeting for temporary shelter. UNHCR also offered 190000 seed kits and over 900000 agricultural tools to help most returned refugees to get self-sufficient on their farms. The Agency offered emergency support, not long-term development and expended circa 1.2 billion USD in 2.5 years, the peak of number of repatriates was in 1994 and was circa 17000 refugees per week.

Soviet-Afghan War (1978-1989) has caused circa 6.2 million refugees, from which three fourths were women and children. To offer relief to refugees, including for families with children, Afghanaid, a British humanitarian and development organization implemented a series of projects. One of them – a tailor project – focused on employing disabled refugees to offer a source of income for their families and to provide refugee children with school uniforms and school bags, foam covers and waterproof canvas for transporting refrigeration boxes with vaccines that were used by the medical charities. At a later point the project became self-financed. The organization provided food, launching a cash-for-food program to convince refugees to stay in Afghanistan, also in poor regions

like Badakhshan distributed 25 tons of wheat from World Food Program, also seeds and fertilizers, when many Afghan families were forced to sell or kill their livestock. 3 from 4 of the wounded would die before they reached Pakistan border and was set up an ambulance service to speed up travel times and provide a lifeline to the injured. Afghanistan helped restore irrigation systems by cleaning and repairing irrigation canals, that brought water back to villages where supplies had been cut off by war damage. A major flood protection and irrigation program was implemented in Kunduz province, a flood protection wall was also built to prevent water seeping out due to the erosion of the river banks. More than 1200 families benefited from this project (Afghanaid, 2017).

Yugoslav Wars (1991-2001) have determined to flee their homes circa 2.4 million of people, making it one of the biggest refugee crises in Europe. In order to help displaced children, keeping into account the multiethnic background of refugees the support offered was based on the needs from neutral ground. Were implemented psycho-social projects (in Croatia, Serbia and Montenegro (before separation), Bosnia and Herzegovina) for refugees who did not know if they can ever return to their homes and had to rebuild their lives from the ground. They received group therapy workshops oriented towards psychological care and engaged in activities in community centers like knitting, sports, and painting. In Croatia was organized a children's theatre in 1994, where were held many performances at local refugee centers, NGO community centers, as well as the children's theatre itself, one of the most popular performances between the children being the parody version of "Little Red Riding Hood" that helped to offer a moment of forgetting their difficult life situations. Japan families themselves handed "dream bags" which were pouches made from handicraft work with toys and stationery to Yugoslavian children, with which sang, danced and played sports (JEN, 2016). Other help to refugee children came from mobile pharmacies in the reality of no public medical system due to political motives, from camps where they received sanitary goods, food. Refugee families from various ethnicities could benefit from programs oriented towards generating income like beekeeping, receiving livestock; from temporary housing; from possibility to access small scale loans without interest for carpentry, auto repairing, beekeeping, poultry farming, monumental masonry.

The 1991 Iraqi uprisings (1991) that were ethnic and religious uprisings generated approximately 1.8 million of people to flee as refugees (Yip & Sharp, 1993). Infant mortality and child malnutrition were acute issues, they were related to diarrhea in infants and younger children of Kurdish refugees, despite the rapid relief efforts, which determined the need of early and comprehensive management of sanitation and sources of water and also diarrhea control programs that could increase the habitual orientation towards relief through food and medication in times of an emergency during a refugee crisis.

Because of Somali Civil War (1991-present) that was associated with political turmoil, floods and food shortages fled Somalia near 1 million refugees. Such a long period of war has determined displacement of generations of people, many children even being born in refugee camps to which a life free from exile was never experienced. Attendance of school and getting the possibility to go to the college, laws and agreements for integration in local communities have been the focus of many international organizations in order to better the Somali refugee children future.

Great Lakes refugee crisis (1994-1996) was caused by the Rwandan genocide against the Tutsi. Circa 2.1 million of Rwandans, including many children, went to neighbor countries of the Great Lakes region. Children suffered from increased mortality due to malnutrition and unsanitary conditions that helped the spread of infectious diseases (like cholera) and also due to insufficient access to basic health services or medication. A dilemma in this crisis with regard to the refugees was to offer assistance or to repatriate

them voluntarily, because they could become killers in the genocide and also because of the violence and exploitation in the camps. The Hutu leaders that were exiled had control over the distribution of food and supply in the camps that determined the support of their allies and punishment of their enemies. NGOs like Save the Children established long-term education support for children, including training of teachers, building schools, lobbying for the abolishment of national school fees.

The next big refugee crisis was caused by the Iraq War (2003-2012) which gave rise to a number of circa 2.2 million refugees, of which half were children. To help children displaced by the war international organizations like UNICEF offered access to clean water for drinking, cooking meals and kits for personal hygiene for circa 800000 people; assisted the rehabilitation of facilities for water, sanitation and hygiene (in short, WASH) in hundreds of schools and in primary health care centers, which helped tens thousands of children; has given to more than 300000 children studying supplies; has trained more than 9000 teachers and also trained hundreds of humanitarian workers in prevention of gender-based violence; has vaccinated more than a half a million children against poliomyelitis and has reached hundreds of thousands of children and caregivers with child protection services and support.

Caused by the Syrian civil war the Syrian refugee crisis (2011-present) has emerged which caused circa 6.8 million refugees, of which children are circa one half of them. Humanitarian organizations and governments in order to help the vulnerable Syrian children established, albeit partly implemented such measures as: keeping the borders open, so children can have access to protection; helping the neighbor countries in order to tackle the supporting hundreds of thousands of refugee children in the spirit of international solidarity, including by building overstrained school systems, expansion of health services, offering support for local communities for their reassurance; stopping the recruitment and exploitation of children; expansion of the resettlement and the humanitarian admissions programs for the most vulnerable, seriously wounded children, unaccompanied and separated children after a careful examination of their best interests; provision of alternative financial schemes targeting refugee families so the children do not need to work; prevention of statelessness by addressing issues with lacking of documents like a birth certificate or other associated acts so children avoid being used in trafficking and exploitation and also for returning home.

Due to the violent South Sudanese Civil War (2011-2020) circa 4.3 million of refugees were displaced, of which circa 63% were children (UNCHR, 2020). Growing violence and deteriorating living conditions determined the situation to become a big emergency of humanitarian character. It can be considered the largest refugee crisis on the African continent. The refugees survived violent attacks, sexual assaults, also many of the children travel solely, have a weak constitution and suffer from malnourishment, during the rain seasons they suffer from floods, insufficient food and diseases. Circa 10% of children die before being 5 years old, a third of children are stunted because of malnourishment, two thirds of children are not frequenting school, 71% of girls of 15 years old and more are having issues with reading and writing. In addition to this, 5% of girls 15-19 years old are married and 1 in 16 gives birth. The majority of children live in camps and only 8% are accommodated in individual dwellings. In Kenyan camps children receive only primary education and in rainy seasons because of reduced road accessibility there are problems with sufficiency of supplies (fuel, cash money). In order to help these refugee children a few directions of support were established: focusing on offering the right to education, special training for teachers working with refugee children, boosting school attendance, protection of uprooted children, reunion of children with their families. In order to offer the right to education with the help of EU and UNICEF were built 69

classrooms, 15 latrine stances with running water for enhancement of hygiene and sanitation measures (like soap hand washing), with access to safe and clean water. Special training for teachers working with refugee children includes life skills for children for survival and thriving and for making informed decisions, teaching methodology, management of the school. Safety, sufficient water, good sanitation, trained teachers help to boost school attendance of refugee children. The protection of uprooted children is taking place through psychosocial support; age-appropriate support; construction of child-friendly spaces for playing, learning, making friends. With the help of UNICEF is taking place the reunion of children with their families or placement of refugee children in alternative family care.

The First Libyan Civil War (2011) has determined the displacement of circa 1 million of people. Children suffered from the unleashed chaos and violence, from being killed, maimed or recruited for fighting. Amidst war also was attacked the infrastructure on which children's wellbeing and survival depends, like nearly 30 health facilities damaged, 13 being forced to close, like schools which has put circa 200000 children out of the classroom. Under attacks were also the water systems determining the collapse of the waste management system augmenting the risk of waterborne diseases like cholera. Those children had reduced access to protection and essential services, but the conflict just augmented the risks they face. UNICEF and their partners have provided the vulnerable children and their families, including those that were held in detention centers, with support in accessing healthcare and nutrition, protection, education, water and sanitation, even though attacks against humanitarian and healthcare personnel undermined humanitarian efforts.

Venezuelan refugee crisis (2014-present) can be considered as the biggest refugee crises in American continent, the outcome of which are circa 6 million of refugees. As causes of this crisis can be considered the hyperinflation, violence, shortages of food and medicines due to political turmoil. According to UNICEF data, over 1.1 million of children fled Venezuela. Refugee children are having issues to regularize the status of their immigration that can increase their access to social protection and child protection, healthcare, development in early childhood, education, livelihood sustainability. Insufficient comprehensive public policies in host countries put children to increased risk of discrimination, violence, exploitation family separation. In order to support these children were created child-friendly spaces for play and rest, were distributed water filters, mosquito nets and hygiene kits for families, were created temporary learning centers in informal settlements and schools, have been done learning activities with mobile character, were trained teachers to offer emotional support, was offered clinical and mental health support, was provided cash transfers for families in need.

Rohingya genocide (2016-present) is the ongoing military persecution of Rohingya Muslims by the Myanmar military and police in Rakhine State, the northwestern region of the country, as a result of which circa 1.3 million refugees left their homes, half of them being children. According to the non-governmental organization Save the Children circa 75% of the babies are born in the unsafe and unsanitary bamboo shelters, near a third of children under 5 have had their growth stunted by lack of food, just 13% of boys and 2% of girls aged 15-18 are in school and also 40% of children are scared of dying or losing a family member to COVID-19. Thus, the NGO actively supports the refugee children through: offering staple food as rice, lentils and cooking oil regularly, creation of learning spaces for children, building safe spaces for learning and playing, integrating health and hygiene activities into education and training teachers in order to support mental health and psychological well-being of children. UNICEF offers to such children access to health care and sufficient quantity of safe water, mental health and psychosocial support, individual

learning materials and educational services, treatment for severe acute malnutrition, vaccination against measles.

Ukrainian refugee crisis (2022-present) due to the Russia's invasion of Ukraine has generated circa 5 million refugees (on April 2022), according to UNCHR data (UNCHR, 2022), of which circa 36.7% are children. Save the Children organization distributed food, water and hygiene kits to children refugees which arrived at the Romania-Ukraine border and also in reception centers. In Poland and Romania services included targeted assistance for unaccompanied and separated children, psychosocial support, and also access to legal services. In Poland which received more than 2.8 million people refugees gave to refugees cash assistance (165 USD per month for minimum 3 months plus additional circa 144 USD for each household member up to a maximum of 605 USD per month) for their needs. Moldova welcomed over 428500 refugees from Ukraine and became host of over 96000 Ukrainian refugees that came and stayed in Moldova, from which over 48000 are children. In Moldova refugee children were enrolled in school; were given access to online learning libraries and online platforms for study; businesses that specialized in children entertainment, education and sports offered free or cheap tickets; non-governmental organizations gave psychological support; informal groups of people with or without the help of NGOs offered baby food kits, food kits for children. Also, every refugee that is eligible is entitled to 2200 MDL/month (circa 119 USD). The grant can be renewed for refugees remaining in the country. Households and individuals with the following characteristics are eligible for the grant: household with one or more dependents; single-parent household; child-run household (under 18 years); household with an unaccompanied or separated child; household run by an elderly person (over 60 years old); household with one or more people with special needs. Each Moldovan household hosting 2 or more Ukrainian refugees can get a unique allowance of 3500 MDL (circa 190 USD). In Slovakia where more than 340000 refugees the government decided to offer an accommodation allowance for refugees, which will be paid by the state to hoteliers or households who accommodate refugees. Adults will have a stipend of €7 per night, and those under 15 years old will get €3.50.

3. Conclusions

Across historical periods and across geographical regions refugee crises have been appeared in diverse sizes, with various issues and with different durations. Political turmoil, war and famine are between the most frequent factors, which are interconnected and don't exclude one another. The children had the biggest share of refugees in most cases. Lack of food, shelter, money, education, sanitation, social protection and of psychological support are between the most pressing issues refugee children have faced and are still currently facing in ongoing refugee crises. International organizations, governments, non-governmental organizations, businesses, religious organizations, single individuals have helped millions of refugee children across the globe through fundraising, offering food and medical kits, cash, building hard and soft economic and social infrastructure and other forms of support. With the social and scientific progress these types of support have grown in diversity and size. As a direction of further development in refugee crises is the digitalization, the intensification of which can be useful. An example would be the following - a refugee child can get a secure a digital identity that can democratize the access to services, to unlock a range of essential services that now are available in online format (financial, health-related services, educational services).

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COMPARATIVE ANALYSIS OF CUSTOMS LEGISLATION IN THE REPUBLIC OF MOLDOVA AND THE EUROPEAN UNION

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***Abstract:** Customs law regulates the economic relations of foreign trade between different states and the way in which goods and individuals cross the border. In order to facilitate international trade, states simplify customs procedures and harmonize the legislative of customs. The interests of the Republic of Moldova, are closely linked to the customs system and accession to the European Union. That is why understanding the two customs systems and harmonizing them is a step towards an easy transition into the European Union's customs system.*

***Key words:** customs, law, European Union, international trade.*

***JEL Classification:** F13, F53, K12.*

1. Introduction

In a traditional interpretation, the customs legislation of many countries, including the Republic of Moldova, represents a combination of norms that regulate the legal relations in the customs field:

- a) which are associated with the circulation of goods and vehicles over the customs border (customs and control, customs and payments, tariff regulation, etc.);
- b) associated with the institutional organization of legal mechanism in the customs domain;
- c) responsible for stopping the crimes in the customs field and the procedure for documenting customs disputes.

In the case of the European Union Custom Law the definition from above may be applied only partially, because the legal regulation of the customs service is the object of constitutional and administrative law of the European Union Member States and this does not refer to the level of the European Community. Also, the subject of the national criminal and administrative legislation of the EU constituent entities is the responsibility for customs offenses, although the provisions of the Maastricht Treaty opens a perspective on harmonizing the customs domain.

2. Literature review

Many foreign and domestic scientists are concerned with studying the legislation of European Union and its Customs part. Of the total number of studies, a few have the object of research – European Custom Law. L. M. Entin (2009) carrying out a general study of European Union law, and pointing out that customs law is one of the exclusive competences of the European Union. M. Romanova, V. Abramovich, T. Tsehanovich (2006) with object of study was the customs legislation of the European Union in the context of its historical development and specific features. S. S. Zhamkochyan (2001) is also focusing on European Custom Law.

3. Customs law of the Republic of Moldova

In accordance with Article Nr. 4 of the Customs Code (2000) of the Republic of Moldova, the territory of the Republic of Moldova is a unique customs territory including territory, the inner waters, territorial waters and airspace above them.

The Republic of Moldova is an active participant in international trade because, "all persons benefit from equal rights to introduce and remove goods and means of transport from the Republic of Moldova", Law Nr. 1569 (2002).

Since 1994, the Republic of Moldova has become a full member of the World Customs Organization, where was contributed to a continuous and stable improvement of customs activity, and being appropriated by modern technologies that are applied on worldwide market.

For example, at the request of the Republic of Moldova, the World Customs Organization (WCO) has successfully presented a virtual international workshop on mutual recognition of the Authorized Economic Operator (AEO-MR) on 2 - 4 December 2020 to the Customs Service in Moldova. The workshop was supported by the Regional Office of Capacity Building (ROCB) for the European Region. Two renowned WCO experts from Malaysia and Italy have been established as key specialists for efficiently conducting of data.

The AEO concept was implemented in the Republic of Moldova in 2014, constituting a condition of the Moldova-Europe Association Agreement under the WCO safety framework for the insurance and facilitation of global trade.

Spring Legislative of the customs conduct rules for the customs authorities of the Republic of Moldova are consists from: the Constitution of the Republic of Moldova, the Customs Code of the Republic of Moldova, the Combined Nomenclature of the goods, the Fiscal Code, the decision on the flag, the povelion and the marks of the customs bodies, law on economic areas Free, Law on Currency Regulatory, Law on Licensing by Licensing of Matching Activity, as well as the legislative and normative acts of the Republic of Moldova in the field of customs activity, including the rules governing social relations in the process of declaring the goods.

The historical evolution of the legal regulations on the customs declaration procedure is directly linked to both international and national regulations, and conducting a research on the development of the entire normative framework also holds the course of the customs system of the Republic of Moldova.

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Receiving the sovereignty of the Republic of Moldova, on 4 September 1991, and the entry into force of the President's Decree no.189 of 03.09.1991 "on the subordination of the customs institutions located in the territory of the Republic of Moldova" (1991), representing the start for the first legal regulations on the creation of National Customs System. The decree in question had the passage of all customs structures in the territory, composed at that time in Customs Ungheni, Customs Leuseni and Customs Internal Chisinau, under the management of the Government of the Republic of Moldova. Also, the State Department for Customs Control was created, which It has as the main objectives of activity as ensuring the exercise of control over the passage of persons and goods across the border, the creation of the control centers and border crossing points, the formation of the customs system of statistics and the settlement of the customs charges.

With the actions described above, the following measures had been undertaken: by Government Decision No.496 of 06.09.1991, on the establishment of customs crossing points and controls (1991). Thus, Ungheni and Leuseni customs offices were reorganized, with four new customs offices at the border with Romania: Sculeni, Costești, Cahul and Giurgiulesti. The basis of the activity of 22 Customs Control Points at the Border of the Republic of Moldova with Ukraine, legalized activity by signing on 20.03.1993 of the Agreement between the Government of the Republic of Moldova and the Cabinet of Ministers of Ukraine. The first express regulations on the customs declaration are stipulated in the 1993 Customs Code, subsequently repealed by Law no.1149-XIV, more precisely in Chapter X, entitled "Declaration of goods and objects".

The Republic of Moldova besides national legislation also joined the World Customs Organization (WCO), which implies the link in national rules with international standards, or at least the lack of normative conflicts. Conventions to which the Republic of Moldova adhered are:

- The Convention on Temporary Admission, adopted in Istanbul on 26 June 1990 (RM acceded by RM Law no. 253 of 05.12.2008). Entered into force on 2 May 2009.
- Issuing association and guaranteed association of temporary admissions (ATA and CPD cards), according to the Convention, is designated by the Government of Government no. 495 of 14.08.2009.
- The Convention on the creation of the Customs Collaboration Council, concluded in Brussels on 15 December 1950 (RM acceded by Parliament's Decision no.164-XIII of 30.06.1994).
- The International Convention on Mutual Administrative Assistance for the Prevention, Investigation and Suppression of Customs Offered at Nairobi on 9 June 1977 (RM joined RM Law No. 275-XV of 21.06.2001).
- The International Convention on the Harmonized System of Description and Coding of Goods, concluded in Brussels on 14 June 1983 (RM joined RM Law No.112-XV of 22.04.2004).

The national interests of the Republic of Moldova involve the accession to the European Union, which provides for the interconnection of national customs legislation with Union law, which is why several agreements have been laughed at Customs legislation with the EU and the UN:

UN Economic Commission for Europe

- The International Convention on the Harmonization of Border Checks, concluded in Geneva on 21 October 1982 (RM joined Cruice RM no. 215-XVI of 23.10.2008). Entered into force on 3 March 2009.
- The Customs Convention relative to the international transport of goods under the coverage of T.I.R. carnets. (T.I.R. Convention), concluded in Geneva on 14 November 1975 (RM joined Parliament Decision no.1318-XII of 02.03.1993).
- The Relative Convention on the International Transportation Agreement on the roads (C.M.R.), concluded in Geneva on 19 May 1956 (RM joined Parliament Decision no.1318-XII of 02.03.1993).

EU

- Protocol on mutual assistance between the administrative authorities in the customs matters of the Partnership and Cooperation Agreement between the European Communities and their Member States, on the one hand, and the Republic of Moldova, on the other hand, signed in Brussels on 28 November 1994.

For example, the International Convention on the Harmonized System of Description and Coding of Goods (Brussels, 14 June 1983) provides:

- The goods nomenclature established by the Convention is applied by most of the world;
- 98% of all international trade is based on the Convention, which, at the same time, simplifies the collection, contraction and analysis of statistical data on international trade;
- The harmonized system can be applied to all goods;
- The document is multifunctional, ie it can be used in different areas: (1) commercial and transport statistics, (2) trade policy, (3) Origin rules, (4) economic analysis, (5) monitoring supervised goods (1983) .

In the Republic of Moldova, as in the European Union there are free zones, free areas, in order to achieve the objectives assumed, preferential regimes are granted to stimulate entrepreneurial activity.

4. Customs Right of the European Union

The establishment of the European Economic Community in 1957 was the prologue of the creation of the customs union between member countries. The main points of this statement were the following: the liberalization of trade through the abolition of customs duties between member countries and the establishment of a common customs tariff towards third countries that are not the part of the customs union, this phase ended on 01 July 1968.

The Community will be based on a customs union, which will cover the entire trade in goods and will involve the prohibition of tariffs for the import and export of products made between Member States of the European Community as well as other similar charges. In July 1968, the cancellation of all tariff barriers as well as restrictions on the volume of trade between the Member States of the MOI formed community took place.

The previously described phase, new and new areas that had not been foreseen to be directly related to the realization of the single market had been incorporated as its components such as such areas such as public procurement, intellectual and industrial property, energy resources, fiscal policy, Payment system, consumer protection, competitive policy, etc.

In 1958, the European Community started a new project of finalizing the European Single Market. "The White Paper for the Perfection of the Internal Market" provided for Nr. 282 legislative measures for the creation of an internal market for all member countries, in which, from 01 January 1993, interborder control activities were canceled. The action was the main step towards the economic integration of the 12 founding Member States. As a result, the unification of national markets in a single market, without commercial barriers and customs duties.

The free movement of goods means removing control at borders between Member States. As a result, there is a total lack of staff employed at the inter-community border. The only products that are ad-hoc verified at different points are drugs and weapons because they are commodities that are subject to international priority control, and furthermore is an economic monopoly domain. But new barriers arise by non-recognition by some states of national rules in certain economic areas. The European Commission has to resolve approximately 300 calls in this area annually. Since 1997, the Member States of the European Union must inform the Commission whenever they refuse the recognition of the rules belonging to other States.

The single market offers citizens the opportunity to supply the necessary goods in any of the Member States of the European Union, with the omission of the Customs Fee and without objection to the fulfillment of customs formalities. In order to avoid fraud in the case of excise products, there are a number of limits in terms of "own consumption", for example: 800 cigarettes, 90 liters of wine, 110 liters of beer, 20 liters of appetizers and 10 liters of hard drinks. These limits may be exceeded if the person presents truthful evidence that the given goods are intended for personal consumption and will not be part of the trade.

Reform since 1989 on V.A.T. consisted of the exemption of obligations regarding the payment of V.A.T. Within the customs point of each state by which the product passed, the rule being that V.A.T. will only be paid once, only to the tax authority in the state in which the product is imported. This meant that companies will be exempt from a total of 60 million customs documents that were drawn up annually for such operations.

"Most companies trading across borders have found that big savings are possible through the abolition of the prepayment of V.A.T. on cross-border imports and the elimination of charges for customs formalities" (1996).

In the single market, quality control is based on the principle of mutual recognition: if a product is recognized as congruent with the quality requirements of a member country, it is automatically accepted in any other Member State, its qualitative features being recognized as satisfactory marketing. This principle ensures the preservation of European diversity as well as the various traditions of member countries, with the presence of the variety of products that are arranged at the choice of the final consumer.

Art.48 of the Treaty of Rome provided for the creation of the conditions for the free movement of persons in the Community. This meant the abolition of discrimination based on nationality in terms of employment, the level of salaries and working conditions. Exceptions were foreseen only in the case of civil servants or in cases justified by national security interest (1958).

5. Conclusion

According to the Constitution of the Republic of Moldova, the country is inalienable, sovereign and indivisible. Which means that the legislation is unique for the whole territory of the country and the customs law is not an exclusion.

The European Union at the same time represents a union of states, first of all from a customs point of view, which includes the free movement of goods and goods between the

Member States, the fact requires the need for a more sophisticated customs code, as well as the elaboration of the different way Customs laws, and not lastly the order of priority.

Because the interests of the Republic of Moldova are related to the accession to the European Union, it is necessary to harmonize the two customs norms systems.

Recommendations for improving Custom Law of Republic of Moldova:

- Improve Custom Law for better harmonization with European Union Law;
- Promote Custom Law reformation;
- Simplification of Customs clearance with European trade partners;
- Support Custom Services management.

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THE IMPACT OF FINANCIAL RISK OF INDUSTRIAL ENTERPRISES ON THE SUSTAINABLE DEVELOPMENT OF THE ECONOMY OF THE REPUBLIC OF MOLDOVA

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Abstract: *The financial stability of manufacturing enterprises and the profitability of their activities are the key to the sustainable development of the industry. For the period of 2015-2020 there is a stable growth of key performance indicators of enterprises (sales revenues and net profit), their financial stability is increasing. Based on the existing structure of funding sources and approaches to asset funding, we compare the actual level of the financial leverage ratio with its normative value. Under the conditions of worsening business climate in Moldova under the influence of inflation growth, increase of interest rates, disruption of supplies, higher prices for energy, etc., it is advisable to increase the financial stability of manufacturing enterprises to a level that ensures business financing from own and borrowed sources in equal proportions. The possibility to form a normal level of current assets reserve will make it possible to reduce financial risks and ensure guaranteed profits. According to the results of the correlation analysis it was possible to conclude that the change of manufacturing enterprises financial profitability has a significant influence on the dynamics of production volume, therefore the optimal structure of the capital and efficiency of its use should be a subject of constant control of the management of these enterprises to provide sustainable development.*

Keywords: *financial stability of industrial enterprises, financial leverage ratio.*

Jel Classification: *G32, L60, O14.*

1. Introduction

Today, the manufacturing industry of developed countries serves as an unlimited space for the introduction of innovation and increasing productivity (Organizatsiya Ob"edinennykh Natsii po Promyshlennomu Razvitiyu, 2016).

Thanks to new technologies, the production of industrial products becomes more efficient and competitive. There is a gradual transformation of processes from labor-intensive to technology-intensive and capital-intensive processes.

New technologies used in the manufacturing industry cause cost minimization and profit growth. This, in turn, ensures the financial sustainability of enterprises and the efficient use of equity invested in property.

In the long term, support and diversification of the manufacturing industry guarantees enterprises to achieve high growth rates and to maintain them for a longer period of time (Organizatsiya Ob"edinennykh Natsii po Promyshlennomu Razvitiyu, 2016).

2. Research methods

The toolkit of the analysis is a kind of stochastic factor analysis - correlation analysis, which allows to comprehensively study and measure the influence of factors on the economic phenomenon, when the relationship between the arguments and the result indicator has a probabilistic nature.

This way of analysis expands possibilities of research due to inclusion of variables, for which there is no functional connection with economic phenomenon.

Thus, by means of correctly chosen mathematical equation of regression it is possible to consider desirable factors and their influence on result indicator.

3. Results and discussion

Moldova's manufacturing industry accounts for a fifth of GDP (Biroul Național de Statistică al Republicii Moldova, 2020b), and its production increases annually by an average of 2.073 billion lei (results of the correlation analysis presented below).

The dynamics of industrial production for the period 2015-2020, as well as a number of key indicators are presented in Table 1.

Table no. 1. Key indicators of manufacturing enterprises

Indicators	2015	2016	2017	2018	2019	2020
Number of enterprises, units	4482	4535	4686	4860	4906	5024
Average number of employees, persons	92518	95097	103531	107962	108369	103880
Sales revenues, mln. lei	43130.3	45944.2	50024.3	52960.7	57061.9	57051.5
Net profit of the reporting period, mln. lei	544.3	2187.7	2462.2	2143.0	2519.3	2471.9

Source: Biroul Național de Statistică al Republicii Moldova, 2020a; Biroul Național de Statistică al Republicii Moldova, 2021

During the period under review, the number of manufacturing enterprises increased by 12.1%, the average number of employees increased by 12.3%. There is a positive dynamics of revenues from sales, which increased by 32.3% for the period from 2015 to 2020. The net profit of enterprises increased by more than 4.5 times in the period under review.

The increase in the key performance indicators of manufacturing enterprises had a favorable impact on the profitability of their activities (Table 2).

Table no. 2. Profitability indicators of industrial enterprises, calculated on the basis of net profit

Indicators	2015	2016	2017	2018	2019	2020
Profitability of income from sales, %	1.3	4.8	4.9	4.1	4.4	4.3
Return on assets, %	1.0	3.9	4.0	3.3	3.8	3.5
Return on equity, %	2.6	9.7	9.8	7.9	8.9	8.7

Source: Biroul Național de Statistică al Republicii Moldova, 2020a.

Positive growth dynamics is observed in general for all profitability indicators. At the same time, it should be noted that their evolution is unstable, and the level achieved in 2020 is insufficient in terms of general recommendations.

To ensure the sustainable development of the industry and its attractiveness from the point of view of investment realization, the level of financial profitability of industrial enterprises should correspond to the changes taking place at the macro level. In particular, if in 2020 the weighted average interest rate on newly attracted deposits for legal entities in the national currency was 2.71 % (Banca Națională a Moldovei, 2020a), and the weighted average interest rate on newly issued loans was 8.49 % (Banca Națională a Moldovei, 2020b) respectively, then taking into account the possible deterioration of the

economic situation on a global scale and the increase in inflation and the prime rate, it is necessary to take a serious approach to the financing of manufacturing industry enterprises, finding the optimal ratio of funding sources, maintaining their financial profitability, etc.

The evolution of the size and structure of capital of manufacturing enterprises for the period of 2015-2020 is shown in Figure 1.

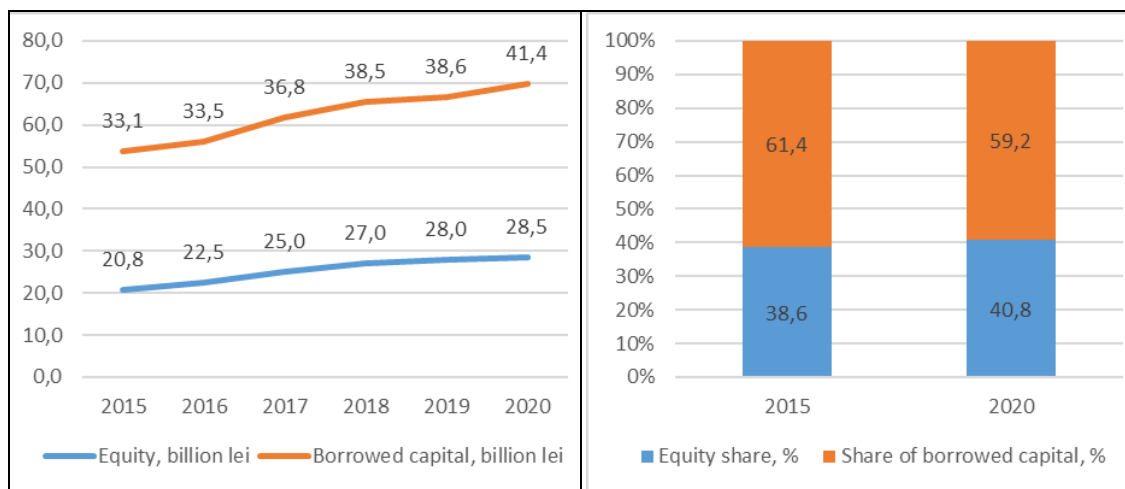


Figure no. 1. Evolution of the size and structure of capital in the manufacturing industry

Source: Biroul Național de Statistică al Republicii Moldova, 2020a

There is a systematic increase in the amount of equity and borrowed capital of manufacturing enterprises, the chain growth rate of borrowed capital in 2020 exceeded the growth rate of equity by 5.5 percentage points (Biroul Național de Statistică al Republicii Moldova, 2020a).

Borrowed funds prevail in the composition of the sources of financing of the property of manufacturing enterprises for the period of 2015-2020.

During the period under consideration the financial independence of the analyzed enterprises from external creditors slightly increased, in particular the share of equity in the total cost of capital was 40.8% in 2020 (Table 3).

Table no. 3. Capital structure coefficients of manufacturing enterprises

Indicators	2015	2020
Financial autonomy coefficient	38.6	40.8
Ratio of debt and equity (financial leverage)	1.594	1.452
Coefficient of total equity coverage	2.594	2.452

Source: Biroul Național de Statistică al Republicii Moldova, 2020a

It seems interesting to estimate the optimality of the structure of the sources of financing the property of the manufacturing enterprise in 2020 on the basis of determining the normative value of the financial leverage coefficient. This indicator is an indicator of financial risk.

For definition of its normative value it is necessary to examine the current structure of assets in interrelation with known approaches to their financing (Savickaja, 2017; Gheorghita, Stratila, 2016).

The greatest focus in the issues of financing the assets of the enterprise is made on the study of the value of current assets (Nalog-nalog.ru, 2018), on which, to a large degree, depends on the operating activity.

The conservative approach creates significant reserves for financing current assets for contingencies, which ensures the maximum protection of the business (Znaniya dlya biznesa KPiLIB, 2014).

The moderate approach ensures the current need for working capital, and also maintains an adequate level of reserves of current assets (Znaniya dlya biznesa KPiLIB, 2014).

The aggressive approach minimizes the size of the reserve stock of current assets in the conditions of business environment stability, which guarantees the highest efficiency of the enterprise property use (Znaniya dlya biznesa KPiLIB, 2014).

Each approach has certain advantages and disadvantages, so the choice of one of the possible approaches should correspond to the specific situation in which the enterprise is constantly monitoring the availability of equity capital.

The calculation of financial leverage coefficient depending on the approaches of enterprise assets financing is presented below:

a) Under the conservative approach

Equity concentration = $42,2 * 0,9 + 22,5 * 1 + 35,3 * 0,5 = 78,08 \%$;

Borrowed capital concentration = $100 - 78,08 = 21,92 \%$;

Financial leverage ratio = $21,92 / 78,08 = \mathbf{0.281}$.

b) Under the moderate approach.

Equity concentration = $42,2 * 0,8 + 22,5 * 0,75 + 35,3 * 0 = 50,64 \%$;

Borrowed capital concentration = $42,2 * 0,2 + 22,5 * 0,25 + 35,3 * 1 = 49,26 \%$;

Financial leverage ratio = $49,26 / 50,64 = \mathbf{0.973}$.

c) under aggressive approach.

Equity concentration = $42,2 * 0,6 + 22,5 * 0,5 + 35,3 * 0 = 36,57 \%$;

Borrowed capital concentration = $42,2 * 0,4 + 22,5 * 0,5 + 35,3 * 1 = 63,33 \%$;

Financial leverage ratio = $63,33 / 36,57 = \mathbf{1.732}$.

The obtained results allow to conclude that with alternative approaches to the financing of assets, the level of concentration of equity and borrowed capital varies in a wide range.

Based on the actual value of the coefficient of financial leverage ($0.973 < 1.452 < 1.732$ in 2020, Table 3) with the existing value of constant and variable parts of current assets (Chernik, 2014; Biroul Național de Statistică al Republicii Moldova, 2020a), it becomes obvious that the manufacturing enterprises carry out a more aggressive approach rather than a moderate approach to the financing of their assets. However, in the context of the current deterioration of the economic situation in Moldova (negative consequences of the Covid 19 pandemic, increase of inflation and interest rates on loans, etc.) (United Nations, 2022), it seems appropriate to reduce the financial risk of manufacturing enterprises in favor of a moderate approach to asset financing.

This measure on the one hand leads to a decrease in financial profitability in the short term (with the unchanged value of profit). On the other hand, in order to ensure long-term functioning of manufacturing enterprises it is necessary to minimize the risks associated with potential bankruptcy in conditions of complex activity forecasting. Thus, increasing

financial stability should be considered as a condition for the stability of production volumes of manufacturing industry enterprises, as well as a guarantee of maintaining an acceptable level of financial profitability.

In the course of the correlation analysis we were able to establish a high degree of correlation between the indicators of production volumes and financial profitability.

The initial data for the correlation analysis is presented in table 4.

The equation of multiple correlation got the following form:

$$Y_x = 49.8687 + 0.4819 x_1 + 2.0734 t.$$

The economic value of the regression coefficients can be interpreted as follows:

- $b_1 = 0.4819$, the regression coefficient at factor x_1 means that a 1% increase in return on equity will result in a 0.4819 billion lei increase in manufacturing output;

Table no. 4. Input data for the correlation analysis

Number of observations	Production volume of manufacturing industry, billion lei (Y)	Return on equity of manufacturing enterprises, % (X1)	Time, years (X2)
1 (2015)	52.9	2.62	1
2 (2016)	57.2	9.71	2
3 (2017)	61.3	8.84	3
4 (2018)	63.4	7.95	4
5 (2019)	66.4	8.99	5
6 (2020)	64.1	8.68	6

Source: Biroul Național de Statistică al Republicii Moldova, 2020a; Biroul Național de Statistică al Republicii Moldova, 2020c

- $t = 2.0734$, the regression coefficient for factor t means that manufacturing output increases annually by an average of 2.0734 billion lei.

Checking the regression coefficients by Student's test showed that their value is considered significant, because all calculated t_{calc} are greater than the tabulated SEB (Table 5).

Table no. 5. Regression coefficients according to Student's test

Parameter	Coefficient	SEB	t_{calc}
b 1	0.4819	0.4534	1.0657
b 2	2.0734	0.6299	3.2917

Source: prepared by the authors.

Value of multiple correlation can be estimated by Fisher's criterion: $F^* = 11,580$. Using Fisher's table depending on number of degrees of freedom $f_1=6$, $f_2=6-2-1=3$ and significance level $q=0.05$, $F_{tabel} = 8.94$ is determined (Novyi semestr, 2019). Assuming that $F^* > F_{tabel}$, the value of the multiple correlation coefficient is considered significant.

The multiple correlation coefficient $R = 0.9409$ indicates the presence of a close correlation relationship between the volume of manufacturing industry and the factors under study.

The coefficient of determination $R^2 = 0.8853$ means that the change of production volume of manufacturing industry by 88.5 % is caused by the influence of the selected factors.

4. Concluding remarks

Ensuring the sustainable development of industry is largely due to the introduction of innovations that ultimately lead to the reduction of production costs and expenses. Over the period 2015-2020, there has been a steady growth in the profitability of the manufacturing industry. The share of manufacturing industry in the gross domestic product (GDP) also remains stable at around 20.0%.

During the period under consideration there was a slight decrease in the financial dependence of enterprises on external creditors, the specific weight of borrowed capital in 2020 was 59.2%. The actual value of the financial leverage coefficient as an indicator characterizing the level of financial risk showed that the aggressive approach was used in financing the assets of the enterprise in 2020 (the actual level of the financial leverage coefficient is close to the normative).

The obtained results allow us to conclude that it is reasonable to reduce the financial risk by increasing the proportion of own capital to 50% in the structure of funding sources in the future. This measure will allow to increase financial stability, to form reserves of current assets, to guarantee stable production volumes.

On the basis of the results received in the course of the correlation analysis we managed to conclude that the production volume of the processing industry is greatly determined by the efficiency of the use of equity capital. In order to ensure a sustainable development of the industry, which contributes substantially to the development of the economy of Moldova, it is necessary to control strictly the size and the share of sources of business financing from the point of view of achieving their optimal ratio and the highest efficiency of their use.

In further research, it seems interesting to assess the optimality of the ratio of own and borrowed sources of financing of the property of manufacturing enterprises of the Republic of Moldova by using some other criteria of optimization of the structure of capital: minimization of the weighted average cost of total capital, maximization of the profitability level of own capital.

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THE ROLE OF STRATEGIC ECONOMIC ANALYSIS WITHIN MODERN SOCIETY

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Abstract: *In opinion of some specialists, the Strategic Economic Analysis represents a science with strict rules, which must be respected sine qua non, without deviating from the methodological rigors specific to an exact science. Those who support this theory are based on the specific characteristics of a scientific branch, regardless of creativity that plays an essential role in the field of the Strategic Economic Analysis. On the other hand, there is the opinion that Strategic Economic Analysis constitutes an art, and the "maker" of the analysis is considered a genuine artist, from his brain resulting in a work in the true sense of the word. Nowadays, considering the amount of economic data and information available online, it is very difficult to product an integrated economic analysis in order to inform promptly managers for taking informed decisions at organizational level.*

Keywords: *Strategic Economic Analysis, analysis, strategic, economic, data, information, evaluation.*

JEL Classification: *C12, O22.*

1. Introduction

According to some economic analysts, *"information analysis is the interdisciplinary scientific field aimed at improving knowledge and understanding of reality, with a view to underpinning decisions through the systematic exploitation of data, information and especially knowledge. Thus, the analysis of the information contributes decisively to the basis of decisions on all levels, from specific decisions that guide the investigation into a complex case under investigation, to the most sensitive decisions taken by the most senior decision-makers of the state."* (Ivan, 2016)

The truth is somewhere in the middle, namely the fact that Strategic Economic Analysis lies on the border between science and art, being applied the rigors of established analytical techniques, but taking extensive account of the imaginative side of the economic analyst. In fact, the Strategic Economic Analysis is the art of combining concrete analytical methods and characterized by scientific coherence, extracting the essence of this information, and predicting possible futures of an economic phenomenon at international level. The economic analyst himself is a curious and perceptive researcher who manages to give meaning to information often contradictory or incomplete in relation to the level of knowledge of an economic niche area or that requires specific economic information.

2. Review of the scientific literature

Economic analysis represents a real challenge of the modern society who is characterized by the abundance of economic information, these tools offered by analysis being available to any person, especially due to the explosion of information technology due to the invention of the Internet, social networks and the translation of media in online environment.

Strategic Economic Analysis has long since been no longer an exclusive area of specialised structures within companies and NGOs, being used also at the level of public institutions, in order to predict some economic disturbance at international and national level.

At present, in view of the very large amount of information available, due to the information revolution generated by the Internet, it is necessary to make economic analysis

at a high level at both government institutions and private entities, and it is necessary to apply a professional analytical process that provides both accurate and timely predictions and estimates, as well as possible solutions for solving problems regarding managerial and organisational nature.

In this context, an integrated approach of two border sciences, management and economic analysis is necessary in order to understand as fully as possible both the internal and external environment in which an organisation operates, and the risks, threats and vulnerabilities that may affect that economic entity. From this perspective we considered it is necessary to conceptualize a new branch of management, namely *the management of economic analysis*, which combines, harmoniously and innovatively, the principles of management with those specific to economic analysis and provides a practical tool through which decisions taken at managerial level are scientifically based by the methods developed at the level of economic analysis.

Thus, at the level of each organisation it is necessary to establish strategies and policies based on which managers can properly and coherently base their decisions, requiring consistent analytical support at strategic levels at all managerial levels. In order to solve this problem, analytical structures have been created at the level of major organisations and companies, even if they carry various appointments, in order to support, decisively, the managerial process and to correctly and coherently argue/fundament managerial decisions at strategic level.

Also, the Strategic Economic Analysis gives the manager a much better knowledge and understanding of the environment in which he/she operates, given the continuous dynamics specific to each field of activity. In this context, the Strategic Economic Analysis allows the manager to allocate, judiciously, the resources at his/her disposal, on scientific and rigorous basis and not based on insufficiently substantiated assumptions. At the same time, the Strategic Economic Analysis enables it to achieve its objectives in a proactive manner by making fair and timely decisions concerning the organisation, the policies developed at its level and the activities carried out.

Furthermore, because resources at the level of each organisation are limited, it is necessary to carry out effective planning and prioritisation of the activities carried out, based on the results and conclusions provided by the Strategic Economic Analysis, in order to achieve the objectives of the organisation. This activity is even more important in the situation of budgetary constraints, and it is necessary to plan and allocate the limited resources available correctly and efficiently. In this respect, the Management of Economic Analysis allows the judicious allocation of the organization's resources to achieve strategic institutional objectives.

At the analytical level, managers are also considered to be obliged to make decisions at the analytical level *"on the organisation of the activity with or without analytical support. However, in order to make scientifically correct decisions, the manager needs an information analyst and an analytical product containing accurate information, presented in a coherent, clear and explicit manner and, perhaps most importantly, in due course"* (Ivan, 2015).

Currently, analytical methods rely heavily on economic analyst thinking and less on innovative mathematical algorithms that reduce uncertainty and arbitrariness within analytical products. This approach appreciates the need to create a model that achieves the unification of analytical techniques by linking them with mathematical algorithms that allow analysts to create comprehensive lists of warning indicators and assign values to support the process of identifying the best solutions for managers and decision makers.

To date, strategic economic analysis has been specific to companies and less than that for public institution, although the information explosion generated by the

proliferation of the Internet network and social networks gives managers of commercial organisations the possibility of rapidly guiding the offer in relation to the increasingly dynamic requirements of customers.

In this context, although many analytical methods come from the economy (e.g. SWOT analysis, PORTER Five Forces, PESTLE), there is a certain reluctance in their application in the decision-making process at the level of company management. One explanation for this reticent approach is the lack of effective tools based on integrated analyses that assess both the external environment of the organisation and, in particular, the internal environment.

In today's society characterized by a marked dynamism and radical changes in very short intervals, very little is taken into account those unlikely but strong-effect events (called "*black swan events*" in the scientific literature). In this respect, it is necessary that the analytical methods applicable to the business environment consider not only the economic elements, but also the political, social, legislative, demographic ones. Another element that has not been considered to date is the evolution of the international security environment, which directly affects economic developments. Relevant to mention in this respect is the effect that the evolution of the terrorist phenomenon or illegal migration that induces economic losses in some states by decreasing their tourist potential (e.g. the case of Turkey which, in the context of terrorist attacks and the migration crisis, has lost a significant share of tourists). Another relevant example is represented by the pandemic phase caused by COVID-19, which affect largely World Economy and economies of all countries.

In order to mitigate the predictability of the global economic situation, it is necessary to find new management solutions based on analytical tools that take into account new sets of variables (e.g. internal state security, regional conflicts, terrorism, proliferation of weapons of mass destruction, illegal migration).

At the same time, certain decisions at the political level (e.g. BREXIT) can be negatively affected at the economic level, which will also affect the business environment, with managers needing new integrated tools to enable them to correctly predict these events in the short, medium and long term.

Thus, by adapting and integrating existing analytical techniques, it will be possible to achieve the correct anticipation of developments in political, economic, social, technological and security terms, which will allow managers to have fair and effective, scientifically based measures that allow them to maximise the results, while at the same time making the resources used more efficient.

In this context, it is very important to apply the main existing analytical techniques and methods and to adapt/integrate them within a management model that allows the correct anticipation of phenomena that may have negative impact at the level of an organisation. Finally, the application of integrated information analysis management model will enable managers to make correct and timely decisions to enable them to achieve their operational and strategic objectives, while at the same time as the judicious allocation of the resources available. For concreteness, the thesis aims *to create a crisis management model based on information analysis*, thus *an information management model for crisis identification and management*.

3. The Strategic Economic Analytical Process

The analytical process includes certain steps that allow the analyst to correctly evaluate the data and information available, as well as to make predictions:

- **Definition of the problem** (which event/problem needs to be considered and evaluated)

This stage gives to the economic analyst the opportunity to identify the best analytical methods to enable him to achieve his results. A project may require the use of one or more economic analytical techniques.

- ***Generating a list of variables, indicators, historical precedents, actors, sources of information, questions to be answered***

This list must be prioritised in order to identify the most important elements to be analysed and evaluated for setting up a valuable economic analysis.

- ***Generating hypotheses in order to identify possible developments***

Based on the data collected, an analysis begins by identifying the main assumptions and other secondary values that will support the economic analyst to structure his ideas and understand or predict future developments and in particular what are the reasons behind them.

- ***Testing hypotheses***

This step is intended to validate the assumptions identified based on a process of denial or confirmation, considering the selected evidence and opinions based on the data collected. The analysis is a process where, if deemed necessary, the economic analyst returns to a previous stage and accesses other data sets when he realizes that the data and information available is not sufficient/relevant to validate or disprove the initial assumptions.

- ***Creating possible developments*** - developing scenarios, based on collected information and indicators.

- ***Assessment of the possibility of error*** - can be achieved by developing and implementing a mental model and trying to visualize other perspectives.

- ***The formulation of action conclusions in order to support the decision-making act***

Analytical instrumentation is extremely broad and is available to anyone who wants to know and deepen the field. Without realizing each of us, we do test every day. For example, if we want to purchase a particular product, we look in detail at that market, the prices, the characteristics of similar products existing on the market, the decision to purchase it being made based on an analysis often carried out mentally and empirically, according to those needs.

This work aims to present the analytical methods frequently used in practice and to combine the managerial principles with those of economic analysis, creating the prerequisites for the formation of a new branch of management, namely *the management of economic analysis*.

Economic analysis management is a science that aims to organize economic analysis activities in a pragmatic and practical way, providing favourable premises for the creation and development of new analytical methods adapted to the current economic environment. The classical analytical methods no longer correspond to the current expectations of the managers, who need in-depth knowledge of the causes of phenomena with negative impact, but, above all, viable options to mitigate as much as possible the risks to the organization in which they operate.

At present, departments/structures responsible for economic analysis have been created at the level of private or public organizations, the collection of data/information from open sources being an extremely important source against the background of the information explosion. Currently, the information produced in a year in the online environment exceeds in volume all the information produced up to that time.

In this context, the role of economic analysis becomes necessary, first to select the information and data relevant to that analysis, as well as to carry out the analytical instrumentation necessary for the production of valuable analytic products, which

contribute to the foundation of the strategic decisions to be taken at the level of the management of the organization.

Economic analysis is no longer the exclusive preserve of private companies, the analytical instrumentation that is available being used at the level of public organizations, to maximize results, with the allocation of minimal human, financial and logistical resources.

The investment made in information analysis allows substantial savings to be achieved in the medium and long term by avoiding risks that may have negative effects on the organization. Some companies, especially multinational ones, have outsourced the activity of information analysis to specialized companies that assume the analyses carried out and that have specialized personnel and dedicated software. In this context, an important human resource is currently found within the companies of economic intelligence analysis ("business intelligence"), the majority of which are former employees of the intelligence services, who apply or adapt the analytical methods specific to the field of intelligence to the business environment.

In the same context, given that *"the 21st century can be called the century of social explosion, these, in particular Facebook and Twitter, essentially contributing to the organisation of actions to change dictatorial regimes and to the relatively easy organisation of street protests. In recent times, there has been an unprecedented increase in online activity, blogs, but especially social networks, with an effect on how communication is carried out in this century."* (Ivan, 2016)

In this respect, it is necessary to reset the current situation conceptually and to guide economic analytical methods in order to meet the challenges generated by the generalization and globalisation of the Internet and communication 2.0 carried out through social networks.

In order to prove its effectiveness and usefulness, the Economic Information Analysis Management System must be connected to other systems applicable in real life. In this context, in the case of this paper, compatibility between the economic information analysis management system and the economic crisis management system has been achieved. In this respect, compatibility and links between the two management systems have been achieved, which provide efficiency in addressing threats, including those of an asymmetrical and hybrid nature.

In fact, the Economic Analysis Management System, as part of knowledge management, is particularly useful for identifying risks, threats and vulnerabilities with impact in the plan of economic crises.

At the same time, the black swan analytical method describing phenomena with a very low probability of production, but with a major security impact, was applied within economic systems, which provides an economic crisis.

4. The Role of Strategic Analysis in Economy

Strategic analysis gives companies an overview of the capabilities, vulnerabilities, trends and intentions of concurrence in order to obtain majority of the market. At the same time, the strategic analysis allows the identification of threats and levels of risk to economic security, with the aim of allowing law enforcement agencies to formulate appropriate policies, programmes and plans to effectively combat economic crisis.

The main purpose of the strategic analysis is to obtain information for the management and decision-making activity, thus being oriented indirectly not only on concrete actions, but especially on the image of the phenomenon.

The objective of this approach is to obtain information for managers, to create profiles of facts or perpetrators and to verify and carry out procedures and methods for

combating negative effects at economical level. The products of strategic analysis have an additional positive effect on companies' activity. This is done, for example, by means of concrete instructions for action, the setting of priorities and recommendations directed, specifically, for preventive purposes.

Although it was originally created for law enforcement institutions, the principles and methods specific to strategic analysis also apply to the private environment that has developed, exponentially, to meet the needs of managers in all fields of activity to avoid strategic surprises generated by the huge volume of information that needs to be structured and analysed on a scientific basis.

For example, strategic level analysis allows the high-level manager to judiciously allocate organizational resources to meet the objectives imposed by the company's Board of Directors and achieve performance with minimal resources.

5. Strategic Economic Cycle

This degree of complexity is necessary in view of the specific requirements of the economic strategic analysis which must provide the high-level beneficiary with more than information, i.e., knowledge and proposals for solutions to solve the problems subject to the analytical process.

Economic strategic analysis is currently the main tool for high-level managers, enabling them to make scientifically well-founded decisions based on the application of modern analytical methods adapted to the topics subject to economic analysis.

Economic strategic analysis is an extremely important component of information analysis management, managing to help underpin decisions at the top management level.

In practice is necessary to carry out the following steps:

- **Selecting the objective of the economic strategic analysis**

The selection of the objective shall be made according to the priorities on the beneficiary's agenda, considering the following essential milestones:

- it is necessary to establish from the outset, by the beneficiary and the staff of the company (e.g. economists, analysts, managers), the relevance of the propose objective, in an organisational and interinstitutional context;
- selected staff shall negotiate with the beneficiary what type of economic analytical product will be delivered, depending on the actual needs of the beneficiary;
- it is necessary to quantify the organisation's efforts to achieve the objective (time needed to carry out the analysis; human, financial and logistical resources), which will be approved and approved by the institution's management.

- **Selection of personnel involved in carrying out the Strategic Economic Analysis**

The selection of staff for a strategic level analytical project is an extremely important aspect that will be directly reflected in the quality level of the final analytical product. Staff quality is essential at the level of information analysis, the economic analyst being required to have relevant knowledge/expertise in the field to be analysed in addition to the baggage of analytical knowledge.

At the same time, in the economic analysis process it is necessary for the personnel involved to possess certain professional qualities and to know to correctly apply economic analytical techniques, as well as certain intrinsic qualities of personality and applied intelligence.

Currently, the training of staff, in particular economic analysts, focuses on tactical or operational analysis that requires analytical qualities focused, in particular, on solving specific cases or situations, but are not able to look at the situation as a whole, taking into account all the information relevant to the analysis in question. Instead, economic strategic analysis requires certain imaginative and creative qualities to develop the ability to

structure data in a broad context that allows the economic analyst to form an overview of the evaluated phenomenon.

There is a perception among the community of analysts that a strategic analyst must go forward 5-10 years by conducting economical tactical and operational analyses. This approach is not always correct, because carrying out a lower-level analysis "distorts" the skills and skill of the economic analyst who focuses on solving specific problems, at the expense of surprising the overall aspects. Economic strategic analysts must have special qualities, especially on the predictive level, and need to be able to apply analytical techniques specific to economic strategic analysis, at the same time as creative and relational/communication techniques.

The training of economic analysts through dedicated courses must be carried out by combining techniques specific to tactical and operational analyses with those of strategic level. An inconvenience is the higher proportion of tactical/operational economic analysts than those of the strategic level.

At the same time, the training courses of the economic analysts must be determined on the two fields, and training courses are required on the tactical-operational and strategic levels. Training courses dedicated to economic strategic analysis focus on atypical analytical techniques, some of which require the creative-anticipatory side of the analyst leading to the generation of multiple scenarios.

- **Proper definition of the problem to be analysed**

The planning process of any economic analysis project requires the analyst's correct and complete understanding of the tasks assigned to him to carry out a relevant and valuable technical analysis.

This process is a difficult one, given that the problem of economic strategic analysis is, in some situations, vague and imprecise, which includes many independent and interdependent variables. For example, an event that occurs in Asian financial markets is also indirectly passed on to the US and European markets. At the same time, the phenomenon of globalisation has required strategic level analyses to consider the evolution of the situation at the global level, after which the field is narrowed at regional level, the last stage being the approach to the problem at national level.

In this context, it is necessary for the beneficiaries of economic analysis products to understand, clearly, what are the expectations of the final analytical product, in order to avoid unnecessary waste of institutional/organizational resources.

In certain situations, it is necessary to re-clarify and rewrite the objective of the economic strategic analysis, in order to provide precise directions of action for the process of gathering information.

- **Development of the economic strategic information collection plan**

Data collection is a very important step in which the economists identifies the typology of the data and information to be collected in due time in order to be relevant, reliable, accurate and leading to the achievement of the economic strategic analysis under optimal and quality conditions.

The process of collecting information is continuous, given that information needs are complex and change crucially during the analytical process. In this respect, economists must demonstrate flexibility in addressing the information gathering process, being obliged to prioritize their intelligence activities according to the intelligence needs established by the analysts based on coherent and timely assessments. Another important aspect is the need to know the beneficiaries, the process of collecting information being focused on their needs.

If the process of gathering information is not well directed it can lead to the accumulation of a large volume of data and information, many of which are redundant,

which leads to the unjustified difficulty of the analytical process, and an intermediate stage is necessary, namely that of the sanitisation of the data and information obtained. In this respect, it is necessary to carry out a preliminary process of gathering information which is not very restrictive but must be consistent in terms of economic analytical purpose.

- **Generating working hypotheses**

When economists have established a comprehensive conceptual framework on the selected issue, working hard to correctly define the issue to be considered it is possible to make a first estimate of the risks, threats and vulnerabilities.

At this stage of the cycle of economic strategic analysis, the first working hypotheses are defined, given that human nature develops more ideas than the information received, making cascading multiplication of ideas. Ideas, concepts and opinions, called working hypotheses, are intended to respond, observe or observe aspects of the issue selected for economic analysis, explaining in detail the causes of the trend changes or by forecasting subsequent developments.

- **Obtaining specific additional data**

Depending on the objective/objectives set to be analysed, the role of working hypotheses is to direct data collection and information activities relevant to the resolution of specific analytical tasks.

This extension of the information collection plan will focus on specific areas of interest, selecting the data types and sources of information relevant to the analytical project concerned. The purpose of this phase of the information cycle to obtain specific additional data is to test working hypotheses. The result of this will be the confirmation, partial confirmation, modification, or invalidation of working assumptions by intelligence officers.

- **Data and information processing – recording, collating and evaluation**

The nature of informational work does not require any difference in the way the recording, collection and evaluation of data and information is carried out. Indeed, each objective of the information cycle, regardless of the type of stage, requires a flexible approach, adapted to the operational requirements imposed by the beneficiary.

Since each collection plan is unique in terms of the type and form of economic data to be collected, as well as in terms of the type of sources, the most appropriate protocols and procedures for recording, collecting and evaluating the data must be chosen. These flexibility requirements are a feature of intelligence gathering, whether they relate to strategic-level intelligence.

The evaluation of data in economic operational intelligence requires that each information to be evaluated in terms of the veracity of the information and the credibility of the source before being registered in the system. This evaluation of the information is necessary for the analytical process, in the sense that the analyst must know the degree of veracity of the information in order not to draw erroneous conclusions that mislead the beneficiary of the information product. In this context, the analyst must be balanced, and the premises, assumptions and conclusions should be based on information and not on personal "convictions" on the subject under consideration.

Strategic economic analyst specialists tend to carry out mental assessments and to "feed" these perceptions in the analytical process and interpretation of data and information.

- **Integration, analysis and interpretation of economic data and information**

The analysis represents the process of selection, integration and interpretation of economic data focused on an issue of interest. In the context of economic activity, compared to other analytical fields, two additional aspects are needed which are particularly important.

First, the environment in which economic activity is carried out rarely allows the processing and collection of information to be fully quantifiable and controllable. Secondly, from economic analysis must result a product that is not necessarily descriptive or to explain certain phenomena but must forecast events that may occur in the future, the predictive-anticipatory role being particularly important.

In the field of economy, analytical processes of data interpretation and integration must be carried out in such a way as to include objectives in addition to those specific to tactical or operational analysis.

First, the development of the conceptual framework and the redefinition of the economic problem led to the creation of a working hypothesis and the conceptual basis for the subsequent examination of the problem analysed. Secondly, the economic analysis work will focus on these assumptions and allow the development of the collection plan in order to obtain selective data on each hypothesis.

It is necessary at this stage that in the process of identifying additional data, the emphasis should be placed on obtaining data and information in order to rigorously test analytical assumptions.

Once collected this data in the process of collection activity are entered in the integration/interpretation process to allow testing of each hypothesis and to allow analysts to confirm, modify or invalidate them. As an expected result of this stage is the development of new hypotheses, each of which will be subject to the validation process.

This stage will be repeated whenever deemed necessary but taking into account the proposed deadline for the completion of the analysis and the availability of sources of information. At the same time, it is essential for the analytical process to continue the information cycle until a comprehensive and useful analytical product is obtained for the final beneficiaries.

This approach to strategic research and analysis will allow the development and refinement of hypotheses, so that in the end only the best-founded, as well as the most convincing and balanced analytical conclusions can last.

- **Reporting the results of the Strategic Economic Analysis**

The outcome of the Strategic Economic Analytical Process must be reported by the economic analysts to the managers of the institution or beneficiary who requested the economic analysis. Most aspects require a thorough and comprehensive examination, in this respect most reports being presented in written form, but it is possible that a summary of the economic analysis will be presented orally to the managers of the institution or beneficiaries of the analysis (briefing).

In certain companies, especially from the Anglo-Saxon area, the profession of briefer was established, these being economic analysts specialized in the oral presentation of the conclusions of the analysis, being able to answer the questions raised by the beneficiaries of the higher level. The advantages of oral transmission of information lies both in the speed of the transmission of ideas and in the fact that this working session is intense, and the beneficiary can quickly learn the answers to his questions (Ivan, 2018).

The outcome of the economic analytical process justifies written reporting only if the issue under consideration is complex. In other cases, reporting is carried out orally, in these situations the documents drawn up by the economic analyst are not transmitted to the hierarchical heads or beneficiaries. The form of presentation depends on the urgency of resolving the case and the urgency of the economic analysis.

The final report of the economic analysis shall cover all aspects of the issue under consideration and provide answers, explanations, forecasts, and recommendations covering all the issues requested by the beneficiary of the economic analysis. Given the

nature of the issue subject to the strategic economic analysis process, the reporting is different from that addressed on the tactical-operational economic level.

The rules to be followed for the preparation of an analytical report are as follows:

- the economic analyst shall structure the presentation material in a logical form (both the written report and the oral presentation);
- the written report must be drawn up in a clear and precise manner;
- the oral report must be well structured according to the techniques specific to the briefing.

• **Review of the Strategic Economic Analytical Process**

Given the complexity of the problem studied by economic strategic level, it is unlikely that the first assessment will be able to respond to all the problem requested by the beneficiary of the economic analysis. In fact, analysing a topic is a continuous process that does not end with the presentation of the economic analysis report.

Problems of an economic strategic nature require a very wide range of variables, and when the economic assessment provides certain answers and forecasts, they change untimely due to developments in the field, and a new evaluation is needed.

Once the economic analysis has been completed, a review process is necessary covering two aspects, namely:

- an evaluation of the results of the economic project in terms of the fulfilment of the parameters foreseen at the time of setting the objective/objectives of the economic analysis;
- defining the key variables that are used in the initial report and that act as warning indicators to be evaluated periodically.

6. Conclusions

The process of strategic economic analysis generally involves research activities, as well as the application of several advanced analytical techniques, some built specifically for specific problems. Therefore, function management must consider the fact that they depend on creating an enabling environment to support the economic analytical process, including by creating and maintaining an atmosphere conducive for providing to economic analysts with the environment for the development of organizational spirit, imagination and creativity.

The role of managers is to avoid unrealistic expectations from the final product of strategic economic analysis. In practice, despite the training strategies carried out in recent times, there is a risk that, against the background of not knowing the purpose of achieving strategic economic analytical products, managers will have unrealistic expectations regarding the results of strategic economic analysis, which go beyond the possibilities of the methodological framework of strategic intelligence.

The manager of an economic analysis department makes the link between the expectations, requirements and agenda of the beneficiary and the analytical capabilities/professionalism of strategic level economic analysts.

During the activities related to a strategic economic analytical process, the structure manager must follow the proposed/approved directions of action both in the data and information collection phase and at the strategic economic analysis stage. This is especially important given that a strategic economic analytical process spans a relatively long period of time, and the role of the manager is to ensure that the objectives of the project are strictly met within the set time.

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IMPACT OF DEMOGRAPHIC CHANGES ON THE LABOUR FORCE MARKET AND PENSION PROVISION IN THE REPUBLIC OF MOLDOVA

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Abstract: *The purpose of given research is to analyze the impact of demographic changes on the market of labour force and the financial stability of state social insurance in the Republic of Moldova. Population decline, including through labour migration, and ageing population process affect the age and sex structure of labour force, its reproduction and the quality of labour market. Demographic ageing of population is accompanied by an increase in the number of age pensioners, which on the one hand contributes to ageing of labour market and reducing its competitiveness, which requires additional costs for retraining of elder labour force to support the labour market and, on the other, leads to increase in social insurance budget expenditures on age pensions and other social benefits to support and care for the elderly population. As a consequence of the above processes, there is financial instability in the social insurance budget as a result of reduction in contribution income from the employed population. Given article presents the results of calculations of the losses of social insurance revenues from the reduction in the number of employees, which is a challenge to improve the effectiveness of public policies. Based on the results of research, conclusions and proposals to improve the situation on labour market in condition of demographic changes and increase the financial stability of the social insurance system were elaborated.*

Keywords: *social insurance budget, social insurance contributions, demographic ageing of population, employed population, employees, labour force market, labour migration, pension system, age pensioners.*

JEL Classification: H55, J21, J14.

1. Introduction

Population ageing has become one of the significant transformations and global phenomena of the 21st century. Thus, according to the UN data, in 2018 the number of elderly population 65 and over has exceeded the number of children under 5 for the first time in human history, and according to forecasts, every sixth person in the world will be over 65 by 2050, compared to every 11-th in 2019, and natural population growth in the world has decreased by half in the last 50 years or to 10,9 persons per 1000 population in 2015-2020, compared to 20,5 during 1965-1970. In developed economies the share of the population over 65 years old per 100 work age persons (old age dependency ratio) will double by 2050 and will require additional financial resources for the pensions system, health and social protection in conditions of employed population reduction, and, accordingly, a decrease in the amount of insurance contributions. Moreover, according to the OECD, if current budgetary and pension systems are maintained, global GDP per capita will decline from 4% in 2015 to 2% in 2050 (Ostapenko and Snigirev, 2020).

Population ageing is becoming a serious challenge at the contemporary stage of socio-economic development, along with population decline and migration processes in the Republic of Moldova. Changing age structure of population effects on economic development due to the reduction in the share of young population in the traditionally working age population, labour market and, ultimately, population's well-being. Demographic changes put on the agenda problems related to the deficit of labour force, qualified workers, labour productivity and innovations, as well as availability of social protection adequate to the changes taking place in society. The challenges of demographic change, along with crises (economic and pandemic), are putting pressure on both the

financial state and social protection systems of the population. Given these factors, policies must be complex, taking into account the correlation of social and economic development, employment population and social protection for different age groups across the life course as well as solidarity between generations. A healthy and active ageing population has a highly valued in that it prolongs elder people's participation in remunerated economic activity, which contributes to greater diversification of financial revenues to the budget in the form of taxes, wage deductions, state social earmarked contributions, which contributes to improve the financial stability of social and health insurance systems.

2. Research Background

The research of changes in the population's age structure, especially, the increase in the elder people share is called in science "demographic ageing". In the opinion of the French demographer Sauvy A., this phenomenon can be forecasted and calculated, but it is quite difficult to foresee its consequences (Sauvy, 1997). Definitions of demographic ageing in the academic literature include a "quiet revolution" (Denisenko, 2005) or "silver tsunami" (Lebedeva, 2016), given phenomenon is interpreted as "humanity's greatest achievement" or "threat to human existence". At the same time, despite the existing definitions, the ageing process, which has affected almost all countries in the world, has put on the agenda the question of its essence: is this phenomenon natural for all countries or does it have specific features in each country (Dobrokhleb, 2017).

In the Republic of Moldova, the following scientists contributed to the study of ageing and its impact on labour market: Paladi G., Gagauz O., Penina O. (Paladi, Gagauz, Penina, 2009; Gagauz, 2012a; Gagauz, 2012b), Zaharov S. (Zaharov, 2017), in which the specifics of the processes of population decline and ageing in the country, as well as their impact on socio-economic development and the character of labour force reproduction were evaluated. The results of the study of the impact of ageing on labour market, as well as its relationship with the pension system are reflected in the scientific works of Gagauz O., Savelieva G. (Gagauz and Savelieva, 2019), the perfection of the pension system in conditions of the demographic ageing process are presented in the works of Rojko A., Stremenovskaya Z. (Rojko and Stremenovskaya, 2013), Savelieva G., Zaharov S. (Savelieva and Zaharov, 2014; Savelieva and Zaharov, 2013), Sainsus V. (Sainsus, 2010), the reformation of the pension system is proposed by the authors Vaculovchi D., Gilca V. (Vaculovchi and Gilca, 2012).

3. Purpose of the research, data and methods applied

The principal purpose is to analyse the impact of demographic changes, such as population decline, demographic ageing and labour migration, on labour force market. As a consequence of above factors, there is a deformation of the age composition the labour force towards the predominance of elder age groups, including the pension age. The field of application of labour force of elder age groups is limited to activities in the agricultural complex with low productivity and low wages, and in the social sectors (public administration, education, health and social protection), where the low earnings from labour activity affects the structure of formation the social insurance budget revenue and replenishment of financial resources and its financial stability. Based on the results of the analysis, proposals for improving the situation on labour market under conditions of demographic change and increasing the financial stability of the social insurance budget were elaborated. The effective purpose is realised by performing the following objectives:

Analysis of tendencies in major demographic changes (population decline, ageing, labour migration) and their impact on labour market, including on the structure and employment of the labour force in elder age groups.

Evaluation of tendencies in the number of population at pension age, including in the regional aspect, by gender, employment opportunities by sphere of economic activity, as well as characteristic of the amount of retirement pensions in relation to wages, by gender, by sector of the economy.

Analysis of the sources of formation the social insurance budget revenues, the system of insurance contribution tariffs, the calculation of financial losses to the budget for changes in labour market due to the reduction in the number of insurance contribution payers (reduction in the number of employees and informal employment).

Elaboration of proposals to improve the situation on labour market under conditions of demographic changes and to increase the financial stability of the social insurance system in the Republic of Moldova.

In order to achieve the study's objectives, a complex and systemic approach was used, as well as scientific methods, including quantitative and qualitative analysis, graphical analysis, authors' calculations, etc. Official statistical data from the National Bureau of Statistics of the Republic of Moldova, Ministry of Labour and Social Protection, National Social Insurance Fund were used in the analysis, as well as some indicators necessary for the study were calculated by the authors. When calculating the indicators, the number of the population with usual residence was used, defined as the place where a person lived predominantly during the last 12 months indifferent of temporary absences (for the purpose of recreation, vacation, visits to relatives and friends, business, medical treatment, religious pilgrimages, etc.).

4. Result and Discussions

In the Republic of Moldova, the population ageing process is different from European countries. Thus, if population ageing in European countries was a gradual process during a long period of time, given process in Republic of Moldova was sharply and at a rapid rate beginning in early 1990s (12,8% in 1990, 13,6% in 2000, 14,4% in 2010, 18,4% in 2018)¹, practically for 30 years more than 20% of the population is above 60. Moreover, the process of population ageing is taking place along with population decline, both as a result of natural reproduction processes (especially can be noted the phenomenon of mortality as a negative component of the vital statistic) and due to the migration outflow of working age population, which affects the population's number and its structure by age and sex (table no. 1).

¹ Ageing rate calculated by the NBS on the basis of resident population. https://statbank.statistica.md/PxWeb/pxweb/ro/20%20Populatia%20si%20procese%20demografice/20%20Populatia%20si%20procese%20demografice__POP__POP010/POP011600.px/table/tableViewLayout1/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774.

Table no. 1. Principal indicators characterizing the population, RM*

	2014	2015	2016	2017	2018	2019	2020	2021
Population (as of January 1), total, persons	2869	2844	2824	2779	2730	2686	2643	2597
Including:	226	673	387	952	364	064	883	107
-under working age, 0-15 years old	547	542	542	541 556	539	529	518	504
% of total population	19,1	19,1	19,2	19,5	19,7	19,7	19,6	19,4
- working age, 16-56/61 years old	1786	1755	1725	1669	1611	1603	1561	1542
% of total population	62,3	61,7	61,1	60,1	59,1	59,7	59,1	59,4
- over working age, 57/62+ years old	535	546	556	568 475	579	552	563	550
% of total population	18,6	19,2	19,7	20,4	21,2	20,6	21,3	21,2
Population aged 15 and over working or looking for work abroad**	341,9	325,4	319,0	318,4	352,7	140,6	151,1	-
Including as % of the economically inactive population	11,2	10,6	10,1	11,1	12,3	8,4	7,0	-
Indices of demographic dependency, per 100 working age population, as of January 1								
Working age population, total	60,6	62,0	63,7	66,5	69,4	67,5	69,6	68,4
Population under working age	30,6	31	31,4	32,5	33,4	33,0	33,3	32,7
Population over working age	30,0	31	32	34,0	36,0	34,5	36,3	35,7
Life expectancy at birth, years	69,3	69,4	69,9	70,8	70,6	70,9	69,8	-
Males	65,2	65,2	65,7	66,7	66,3	66,8	65,9	-
Females	73,6	73,7	74,2	74,9	75,0	75,1	73,9	-
Ageing coefficient, as of January 1, %	17,5	18,1	18,5	19,2	20,0	20,8	21,7	22,5
Males	14,5	15,0	15,4	16,0	16,7	17,5	18,3	18,9
Females	20,3	21,0	21,5	22,2	23,0	23,9	24,9	25,8

* Since 2014, data on the population with usual residence has been used.

Since 01.01.2019, the retirement age has increased and constituted 63 years for males and 58 years for females.

Since 01.01.2021 the retirement age for females has increased to 59 years.

Data as at 01.01.2021 on the number of resident population is preliminary.

** 2014-2018 NBS calculations on the basis of the resident population, 2019-2020 on the basis of the population with usual residence and the labour force survey of household (labour force survey), in accordance with the new research plan and in accordance with the revised definition of employment.

<https://statbank.statistica.md/pxweb/pxweb/ro/30%20Statistica%20sociala/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774>

Source: NBS data, www.statistica.md

Data analysis shows that the number of population practically tended to decline annually: as at 01.01.2019, it was 93,6% compared to 01.01.2014 or decreased by 6,4% (180,2 thousand persons), and in one year or 01.01.2021, population decreased by 1,8% (98,2% compared to 01.01.2020 or decreased by 46,8 thousand persons). Through the period under study, the share of population aged 0-15 years varies between 19,1-19,7% (as of 01.01.2018-2019), at the same time the share of working-age population (16-56/61) decreased from 62,3% as of 01.01.2014 to 59,4% as of 01.01.2021, or by 2,9 p.p, as well as annual growth in the share of population over the working age - 57/62 years, or from 18,6% as of 01.01.2014 to 21,2% as of 01.01.2021. As a result of the above-mentioned

tendencies, the demographic dependence increased, including the demographic dependence index of population over working age constituted as of 01.01.2020-2021 respectively to 36,3 – 35,7 persons per 100 persons of working age population, and total demographic dependence index - 69,6 – 63,4 persons per 100 persons of working age population. Ageing coefficient of population for the analysed period has constantly registered from 17,5 % as of 01.01.2014 up to 22,5 % as of 01.01.2021, the ageing coefficient among females is higher than that among males (25,8% and 18,9% or by 3,6 p.p.), that is explained by the higher mortality among males and the shorter life expectancy (69,5 years for males and 73,9 years for females or the difference is 4,4 years) as of 01.01.2021, the analogous situation takes place during the analyzed period. The migration of working-age population had also reflected to structure of population, including labour market. Thus, in the period 2014-2018, an average of more than 330,000 people were looking for work or working abroad annually.

Table no. 2. Characteristics of labour migrants by age, gender and place of residence*

	2014	2015	2016	2017	2018	2019	2020
Total (RM), thousand persons	341,9	325,4	319,0	318,4	352,7	140,6	151,1
Urban	96,7	101,6	94,1	96,6	108,5	52,7	58,2
Rural	245,2	223,9	224,9	221,8	244,3	87,9	92,9
Males	219,0	210,8	212,3	211,3	238,2	95,8	109,5
Females	122,8	114,6	106,8	107,2	114,5	44,8	41,6
Total (RM), %	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Urban	28,3	31,2	29,5	30,3	30,8	37,5	38,5
Rural	71,7	68,8	70,5	69,7	69,2	62,5	61,5
Males	64,1	64,8	66,6	66,4	67,5	68,1	72,5
Females	35,9	35,2	33,4	33,6	32,5	31,9	27,5
Structure of labour migrants by main age groups, % of total							
15-24 years	27,7	23,9	24,4	18,5	18,9	19,2	19,4
25-54 years	68,3	71,7	71,1	76,0	76,3	75,8	73,4
55 years and over	4,0	4,4	4,5	5,5	4,8	5,0	7,2

* NBS calculations in 2014-2018 - on the basis of the resident population, in 2019-2020 - on the basis of the population with usual residence and the labour force survey of household (labour force survey), in accordance with the new research plan and in accordance with the revised definition of employment.

Source: NBS data and authors' calculations, www.statistica.md

More 60% of labour migrants leave rural areas, however, during the analyzed period, there is an increasing tendency in the share of migrants from urban, including from 28,3% in 2014 to 30,8% in 2018, and the share of labour migrants from urban increased by 1,0 p.p. only for one year (2020). By gender, male population dominated in labour migrants and in 2020, their share reached the highest value of 72,5%, for female migrants there is a clear downward trend from 35,9% in 2014 to 32,5% in 2018 and a sharp decrease by 4,4 p.p. in one year (31,9% in 2019 and 27,5% in 2020) due to the pandemic crisis and their specific employment in the service sector. By age criterion, the main share of labour migrants (more 70% of working age population) is the most productive age, 25-54 years, with professional education (in 2020, the share of professionally trained migrants constituted 31,9%, with higher education 13,8% and 11,3% of secondary special education¹).

It follows from the above, that migration factor not only contributes to changes in the population structure by age and sex, affects the reproduction of the population, but also worsens the situation on labour market, including the ageing of the labour force, increasing the share of elder age groups (pre- and pension age). A comparative analysis of the

¹Authors' calculations on the basis of NBS data, www.statistica.md.

economically active, employed and pensioners gives an opportunity to evaluate not only the competitiveness of national labour market but also the financial sustainability of the pension system.

Table no. 3. Economically active/inactive and employed population

	2014	2015	2016	2017	2018	2019	2020
Economically active population, thousand persons	1 019,6	1 038,0	1 035,3	999,7	1 018,1	919,3	867,3
Economic activity coefficient(rate), %	43,3	44,5	44,8	44,1	45,9	42,3	40,3
Employed population, thousand persons	981,5	989,1	993,7	960,8	988,5	872,4	834,2
Employment coefficient(rate), %	41,7	42,4	43,0	42,4	44,5	40,1	38,8
Employees, thousand persons	650,3	629,9	606,2	604,2	589,2	678,4	651,8
% of employed population	66,3	63,7	61,0	62,9	59,6	77,8	78,1
Employees occupied in a formal workplace, thousand persons	639,4	622,9	598,4	597,9	579,7	667,8	644,0
Including in a informal workplace	49,8	49,3	42,2	38,1	35,3	41,8	36,7
Employees occupied in informal sector, thousand persons	8,1	4,3	4,8	3,6	6,6	7,9	6,4
% of total employees	1,7	1,1	1,3	1,0	1,0	1,6	1,2
Employees occupied in formal workplace	589,6	573,6	556,2	559,9	544,4	626,0	607,3
Employees occupied in informal workplace	60,7	56,3	50,0	44,4	44,8	52,4	44,5
Including % of total employees	9,3	8,9	8,2	7,3	7,6	7,7	6,8
Economically inactive population, thousand persons of them:	1 168,5	1 140,0	1 122,6	1 108,4	1 039,7	1 255,9	1 283,6
Share of the economically inactive population, working-age population aged (15 years and over), %	56,7	55,5	55,2	55,9	54,1	57,7	59,7
Pensioners (by age, by disability, etc.), thousand persons	537,8	543,1	534,2	527,7	503,9	566,2	580,2
% of economically inactive population	46,0	47,6	47,6	47,6	48,5	45,1	45,2
Share of pensioners and labour migrants in economically inactive population, %	57,2	58,2	57,7	58,7	60,8	53,5	52,2

Source: NBS data and authors' calculations, www.statistica.md

Analysis of changes in the structure of working age population of 15 and over, ongoing under influence of demographic processes, shows the growth tendencies in the *coefficients of economic activity and employment* during 2014-2018. Taking into account these processes and transition from 2019 to a new methodology of household surveys and the concept of “employed population” according to European standards, as well as the consequences of pandemic crisis in 2020, all this in general led to decline both in the number of economically active and employed population, and the corresponding coefficients. In 2020, the activity rate was registered at 40,3% and the employment rate at 38,8%, the lowest for the whole analyzed period. At the same time, against the background of a decrease in these indicators, the share of economically inactive population is growing, which in 2020 reached 59,7%, i.e. practically 60% of working-age population does not participate in national labour market, GDP growth and budget revenues (national, social and health insurance) and the share of pensioners and labour migrants in economically

inactive population exceeds 50%. The tendency to reduce employees is observed in 2014-2018 (by 9,4%), including by 3,9% in 2020 compared to 2019, but their share in employed population increased in 2019-2020 to 78% (in 2014-2019, it decreased from 66,3% to 59,6%, or by 6,7 p.p.). Which is a challenge for economic and social policymakers in addition to the above-mentioned reasons. Moreover, despite a decrease in the number of employed population in the informal sector, the employment of employees in informal working places was maintained (7,7% in 2019 and 6,8% in 2020 of total employees- hiring workers).

In condition of the existence an unstable labour market and a threat to the financial stability of the state social insurance system, there is the factor of demographic ageing and the maintained share of population of pension age (45,2%, table no. 3), of which about 24% are involved in the labour market (table no. 4).

Table no. 4. Dynamics of changes in the number of pensioners, as of January 1

	2014	2015	2016	2017	2018	2019	2020	2021
Pensioners, total, as of January 1, thousand persons*	679,9	690,2	700,2	711,7	716,0 ¹	703,9	696,0	686,3
of which: pensioners by age (retirement), as of January 1, thousand persons <i>including pensioners:</i>	495,9	507,5	518,8	531,8	533,0	526,7	524,5	522,8
- agricultural sector, thousand persons	201,8	199,0	195,9	193,9	189,9	182,9	175,9	170,0
% of total pensioners by age	40,7	39,2	37,8	36,5	35,6	34,7	33,5	32,5
-non-agricultural sector, thousand persons	294,1	308,4	322,9	337,9	343,0	343,8	348,5	352,8
Pensioners by age:								
Males, thousand persons	145,9	149,9	153,3	157,3	156,9	154,9	154,5	157,7
% of total by age	29,4	21,7	29,5	29,6	29,4	29,4	29,5	30,2
Female, thousand persons	350,0	357,6	365,6	374,5	376,1	371,7	370,0	365,1
Pensioners by age in the territorial context, thousand persons								
mun. Chisinau	102,3	106,8	111,7	116,8	119,2	118,97	120,7	121,7
North	162,2	162,82	163,4	164,6	162,7	158,95	156,3	153,9
Centre	137,2	140,7	143,9	147,5	147,8	146,5	145,6	145,3
South	73,3	75,5	77,3	79,6	79,8	78,9	78,4	78,2
A.T.U. Gagauzia	20,8	21,4	22,2	22,9	23,1	22,8	22,8	22,9
Pensioners by age in labour market, pers.	147 996	154 654	160 658	164 477	170 028	174 757	175 656	172 516
Share of pensioners by age in labour market - total, %	21,8	22,5	23,0	23,3	23,3	23,0	23,4	23,7

* Since 01.01.1918 the pensioners of the law enforcement agencies registered with the NCSS are included in total number of pensioners.

Source: NBS data, www.statistica.md

The improving of the legislative base in the field of social insurance and especially in the pension system, including the age limit, the insurance period and the conditions of retirement for certain categories of the population conditioned a slight decrease in the inflow of pensioners by age criterion. As a result, the number of age pensioners decreased and stabilised at 527,000-523,000 as of January 1, 2019-2021. The population from the non-agricultural sector dominated in total pensioners (in last three years - 65%-67%), and by gender, females predominate in total pensioners by age in the proportion of about 70% and 30% males (due to a higher mortality rate in working age and a lower life expectancy).

In territorial aspect, 30% of pensioners are registered in the North zone, the second place with 28% in the Center zone, the third place - 23% in mun. Chisinau, 15% in the South zone, and only 4% in Gagauzia, the slight increase of the number of pensioners is registered in Chisinau or by 1,5% compared to the previous year on January 1, 2020 and by 0,8% compared to January 1, 2020. The number of age pensioners working on labour market increased, including by 18,1% as of January 1, 2019 compared to January 1, 2014, by 0,5% as of January 1, 2020 compared to January 1, 2019, and decreased by 1,8% as of January 1, 2021 compared to January 1, 2020 with a slight increase of 0,3% in the share of working pensioners. In the regional aspect, the highest share of pensioners by age on labour market as of January 1, 2021 is in mun. Chisinau – 35,6%, followed by ATU Gagauzia – 23,9%, Central zone 20,6%, Northern zone 19,6% and Southern zone 19,4%¹. The participation of pensioners in labour market, on the one hand, is a means of increase their incomes, and on the other hand, as payers of social and health insurance contributions, they replenish the revenues of the corresponding budgets, partially reducing the burden of employed population in given field. The characteristics of employed population in the pre- and pension age group of 55 years and over, by economic activity and by main zones are presented in table no. 5.

Table no. 5. Distribution of employed population (55 and over) by main types of economic activity and zones, RM

	2014	2015	2016	2017	2018	2019	2020
Employed population by economy - total, RM, thousand persons	981,5	989,1	993,7	960,8	988,5	872,4	834,2
Including:							
Age group 55 years and over, thousand persons	193,5	204,3	220,0	226,6	253,5	186,5	181,1
%	19,8	20,7	22,1	23,5	25,6	21,4	21,7
Share of employed population (55 years and over) by type of economic activity							
Total (55 years and over), %	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Agriculture, forestry and fisheries	44,9	47,5	50,5	50,1	58,8	29,8	28,4
Industry	9,4	0,7	9,0	9,0	7,6	12,8	11,8
Construction	3,5	2,6	2,8	3,3	2,7	4,0	4,6
Wholesale and retail trade; Accommodation and public catering activities	8,8	7,5	8,3	8,2	7,1	12,3	11,2
Transport, storage; Information and communication	5,0	5,4	4,8	4,1	3,6	5,5	7,1
Public administration, Education, Health and Social protection	21,1	20,1	18,4	18,9	15,5	27,0	29,8
Other activities	7,3	16,2	6,2	6,4	4,7	8,6	7,1
Share of age group of 55 years and over in employed population of a concrete type of economic activity,							
% from employed population by type of activity							
Agriculture, forestry and fisheries	27,3	28,7	30,6	33,3	38,4	30,4	29,2
Industry	15,5	17,0	17,4	18,9	17,8	18,6	17,5
Construction	12,6	10,1	12,8	17,3	14,9	12,2	13,9
Wholesale and retail trade; Accommodation and public catering activities	10,7	10,5	12,1	12,0	12,6	14,0	13,7
Transport, storage; Information and communication	15,6	18,2	17,8	16,8	16,5	17,2	20,8
Public administration, Education, Health and Social protection	21,7	21,5	22,7	23,5	22,4	25,5	27,9

¹ Regional statistics, social protection. [www. https://statistica.gov.md/pageview.php?l=ro&idc=349&](http://www.statistica.gov.md/pageview.php?l=ro&idc=349&).

Other activities	16,8	17,3	16,9	19,1	16,6	20,2	18,0
Share of age group of 55 years and over in employed population by main zones, % from employed population of region							
mun. Chisinau	15,6	17,1	17,4	17,6	16,2	14,9	16,0
Northern zone	22,5	24,9	24,1	25,6	28,4	26,2	25,9
Central zone	19,1	19,7	23,3	25,1	28,2	23,1	23,0
Southern zone	23,3	20,9	24,3	27,1	30,9	22,2	22,5
Share of employed population (55 years and over) by working hours per week, % employed population in this age group							
Employed population - total, 55 and over, % *	100,0	100,0	100,0	100,0		100,0	100,0
0-20 hours	8,4	9,0	8,1	8,2		10,2	14,0
21-30 hours	22,4	24,0	27,0	25,4		12,2	11,3
31-39 hours	17,5	18,0	16,5	16,7		15,4	16,2
40 hours	31,0	28,2	29,9	28,2		39,9	37,8
41 hours and more	20,7	20,8	18,5	21,5		22,3	20,7

* NBS data for 2018 not available.

Source: NBS data and authors' calculations, www.statistica.md

The analysis of labour market situation shows that the number of employed population in 2014-2018 was unstable, with a sinusoidal tendency of growth - decline. Starting in 2019, a new methodology of household survey (labour force survey) and a new standard of labour force concept have been introduced, so the number of employed population is not comparable to the previous period. In 2020 compared to 2019 its number decreased by 4,4% in one year, including both demographic changes and the impact of the pandemic crisis. Moreover, the share of employed population (55 years and over) decreased to 21-22% of total. The main fields of economic activity of this age group are agriculture, forestry and fisheries (28-30% of employed in this age group both in economy and in economic activity), with low wages and productivity, as well as the low share of hired workers (10-12%), i.e. labour market participation does not provide a significant financial contribution to the social insurance budget through social insurance contributions and in this case it can be mentioned only improving the material well-being of this age group due to 2 sources of income (pensions and wages). The second field of employment (the category of aged 55 and over) is public administration, education, health and social protection, where the share of this category ranges from 27 to 30% of total number of employed in economy (26-28% for given type of activity). In industry and wholesale and retail trade, accommodation and public catering activities, the share of this category is approximately the equal (respectively, 11,8% and 11,2% of employed in given category in economy) and slightly higher in given activities (respectively, 17,5% and 13,7%), and in transport, storage, information and communication even achieves 20,8%.

At the same time, the employment discussed above can be considered as the involvement of labour force in labour market to cover its deficit, balance the market and increase the employment rate. But for the Republic of Moldova, in conditions of an ageing labour market and reducing number of employees, an important issue is *retirement*, which is based on the principle of the solidarity of generations (the demographic dependence index of population in nonworking age constituted 68,4 per 100 persons of working age population, Table no. 1). In this context, elderly workers should not only be considered as the labour force, but also as real taxpayers of the social security and social protection system. When considering given problem, it should be noted that the share of workers (55 and over) with regime of working week of up to 40 hours constituted 37,8% in 2019 and in 2020 – 41,5% or an increase of 3,7 p.p., i.e. according to the current legislation (Labour Code) remuneration in the country are paid according to the amount of real time worked.

From this a conclusion follows that with some improvement in their financial situation, the amount of transferred state insurance contributions decreases accordingly to the wage received.

As mentioned above, one of the reasons the pensioners' employment is the possibility to improve their material well-being. In the Republic of Moldova the amount of pensions of some population' categories is small and barely covers the subsistence level of the pensioner. The basis for calculating the amount of pension is insurance income, wages, which are replaced by the pension when reaching the retirement age. However, the replacement amount of 40% and more established by the European Convention is not implemented in the Republic of Moldova, and the replacement coefficient is barely up to 30%. The average monthly wages and pensions are presented in table no 6.

Table no. 6. Comparative characteristics of average monthly wages and retirement pensions

	2014	2015	2016	2017	2018	2019	2020	2021
Average monthly wage of an employee in the economy (gross), lei*	4089,7	4610,9	5084,0	5897,1	6446,4	7356,1	8107,5	9115,9
% compared to the previous year	111,3	110,5	110,3	112,1	113,2	114,1	110,2	112,4
Male average monthly wage, lei	4374,9	4881,3	5414,4	6017,0	6779,4	7808,0	8558,5	-
Female average monthly wage, lei	3831,8	4235,2	4631,4	5204,0	5800,7	6709,8	7387,2	-
Wage difference between males and females (Gender Pay Gap, GPG in monthly wage), %	12,4	13,2	14,5	13,5	14,4	14,1	13,7	-
Average monthly wage in industry, lei	4388,1	4855,2	5267,9	5815,8	6485,7	7151,0	7673,6	8333,6
Average monthly wage in construction, lei	4165,7	4378,1	4843,2	5544,2	6198,2	7155,3	7728,1	8601,2
Average monthly wage of an employee in agriculture, forestry and fisheries, lei including:	2708,9	2994,0	3300,4	3688,4	4188,7	4768,7	5167,3	5790,9
- % of the average monthly wage in the country	66,2	66,0	66,0	66,0	66,8	65,9	63,7	63,5
- % of the average monthly wage in the real sector	63,9	63,8	63,0	63,4	64,8	64,3	61,7	60,4
Average monthly wage of an employee in the public sector, lei	3699,2	4125,3	4359,7	4950,1	5675,1	6636,2	7313,8	7786,6
Average monthly wage of an employee in the real sector of the economy, lei	4238,8	4814,6	5390,1	6000,1	6748,2	7627,1	8402,7	9595,0
Ratio of wages in the budgetary and real sectors of the economy, %	87,3	85,7	80,9	82,5	84,1	87,0	87,0	81,2
Subsistence level of a retirement pensioner (by age), lei	1343,7	1437,4	1494,8	1547,5	1574,2	1707,4	1759,8	1811,7
Consumer price index (average annual), %	105,1	109,7	106,4	106,57	103,05	104,84	103,77	105,11
Consumer price index for food products, %	106,5	109,8	107,4	107,93	105,39	107,61	107,35	106,96
Consumer price index for non-food products, %	105,5	111,8	106,3	104,53	102,67	104,19	100,89	105,95
Consumer price index for services, %	102,5	106,2	104,9	107,06	99,78	101,47	102,38	101,28
Indexation of State social insurance pensions, %	6,45	7,95	10,1	6,8	6,6	5,3	4,83 on 04.01.2020 1,07 on 01.10.2020	13,94% up amount 9900.0 lei plus fixed sum 171.71 lei

Replacement rate (pension/wage), %**	26,7	25,8	25,6	25,6	25,5	25,1	25,5	-
Average retirement pension (by age), as of January 1, lei	1049,9 2	1114,7 3	1191,8 3	1301,1 4	1456,8 6	1643,7 2	1842,9 9	2067,5 5
% compared to the previous year	106,4	106,2	106,9	109,2	112,0	112,8	112,1	112,2
Average retirement pension (by age) in the agricultural sector as of January 1, lei	899,18	949,28	1007,2 7	1093,7 0	1208,7 8	1289,0 6	1447,3 9	1522,1 8
Average retirement pension (by age) in the non-agricultural sector, as of January 1, lei	1153,3 4	1221,5 1	1303,8 2	1420,1 5	1594,2 3	1832,3 6	2042,7 3	2330,3 9
Average retirement pension (by age), males, as of January 1, lei	1190,4	1268,1	1362,5	1491,1	1682,4	1940,1	2157,8	2409,2
Average retirement pension (by age), females, as of January 1, lei	991,4	1050,4	1120,3	1221,4	1362,8	1520,2	1711,6	1919,9
Ratio of male to female retirement pensions (by age), %	83,3	82,8	82,2	81,9	81,0	78,4	79,3	79,7

* Since 2019 the methodology for assessing wages has been changed, for 2021 no wage data.

** Data from the Ministry of Labour and Social Protection for 2014-2018, for 2019-2020 authors' calculations.

Source: NBS data, www.statistica.md

Through the analyzed period, annual growth in the average monthly wage per employee overall in the country was 10% and more, which took place for certain types of economic activity, although in some cases at a lower rate. However, the comparison of the average monthly wages of workers by type of activity and its average amount in economy overall in the country allowed, that only the wage of real sector the economy exceed the average amount in economy (including in 2020 by 3,6% and in 2021 by 5,3%) and male wages (including in 2020 by 5,6%). The wages of a worker in the sectors, which mostly persons aged 55 and over, are lower. Thus, amount of wage in the public sector is lower than the average in the country, including by 9,8% in 2020 and by 14,6% in 2021. The average monthly wage of a worker in the agriculture, forestry and fisheries sector constitutes 63,5% of the average in economy as a whole and 60,4% of the average monthly wage in the real sector of economy. In addition to sectoral differentiation in the amount of average monthly wages, there is a differentiation in the gender aspect (males - females), which has remained at the level of 14% for the last five years. As a result of employment in working places with low wages and as a consequence of given factor, there is a low level of pensions' amount, which, despite the indexation, in 2014-2017 was lower than the social standard accepted in the country or the subsistence level for a pensioner (respectively, 83,0%, 82,9%, 87,0%, 94,1%). Only due to indexation and social support for people of pensionable age during the pandemic crisis the average monthly pension increased within one year, including by 12,1% in 2019 and by 12,2% in 2020. The differences in wages between male and female, interruptions in work due to childbirth and care of a child or other family members, have let to the difference from 18% to 20% in the average retirement pension (by age) by gender during the period analyzed, which is maintained for January 1, 2021 (20,3%).

The synergistic effect of analyzed problem shows a low replacement coefficient (replacement rate) of wage for the established pension, which causes population' distrust towards the existing state pension system, and even is a reason for evasion from paying social insurance contributions. The replacement coefficient shows the income from labour activity of a worker, who loses it from the moment of work termination and retirement. The average replacement coefficient at the national level shows the ratio between the amount of the average monthly retirement pension (by age) and the average monthly wage in economy of country as a whole. In the Strategy for reforming the pension system of the Republic of Moldova (Hotărîrea Parlamentului Republicii Moldova,

1998) the value of the replacement rate was provided at the level of 42% (ILO, C102 - Social Security (Minimum Standards) Convention, 1952 (No. 102), which was not ratified by the Republic of Moldova, but has the replacement rate of 40%. According to Recommendation 167 (ILO, R167 - The Maintenance of Social Security Rights Recommendation, 1983 (No. 167), the amount of coefficient for developed countries is established at 45% and currently reaches the level of 50%). The experience of other countries shows, for example, in Ukraine the replacement rate constitutes 50%, including for science sphere - up to 80%, for public administration - up to 75%, in Russia the rate constitutes 40%, in France - 70-80%, in Croatia - 80-90%. In the Republic of Moldova, the replacement rate tends to decrease, if in 2014 it was 26,7%, then in 2018 – 25,5% or 1,2 p.p. less and in 2019-2020, respectively, 25,1% and 25,5%, that is, the gap between previously received labour income and the amount of the assigned pension remains sufficiently substantial, which is one of the main reasons for the continuation of economic activity of pensionable age persons independently from the physiological capabilities of their organism.

The decline and ageing population, migration processes, the ageing of labour force market and as a consequence growth of burden on employed population, low pensions amount and replacement rate of wage cause numerous problems to the social insurance system and the formation of the State Social Insurance Budget, including ensuring its financial stability.

The revenues of State Social Insurance Budget is formed at the expense of obligatory state insurance contributions, transfers from the state budget and other receipts, with the principal share (60-70%) is the contributions by the taxpayers of the given system. Transfers from the state budget are an important part the budget deficit coverage in conditions of the low level the coverage the requirement the pension system and other social benefits at the expense of the above-mentioned source.

**Table no. 7. Structure of State Social Insurance Budget revenues,
Expenditure on pensions**

	2014	2015	2016	2017	2018	2019	2020
Revenues, mln lei	12028,9	13433	15 060,6	17 818,7	19 790,3	21 748,3	24 285,6
Compulsory social insurance contributions, mln lei	8 362,9	9 273,1	10 036,6	11 864,0	13 037,9	13 635,7	14 295,4
Including:							
Compulsory social insurance contributions calculated by employers from the Remuneration Fund, mln lei	6664,5	7273,7	7871,1	9373,4	10094,1	10517,8	11028,5
Individual contributions calculated from the wage of hiring worker, mln lei	1715,8	1867,8	2024,9	2488,4	2787,5	3270,2	3394,2
Contributions calculated by self-employed workers (individual enterprises, advocates, lawyers, notaries, owners of entrepreneurial patents), mln lei	93,1	92,2	95,0	103,5	92,7	115,9	117,0
Other revenues, mln lei	5,9	6,9	8,1	13,7	82,2	155,6	220,8
Transfers from the budget, mln lei	3 660,1	4 153	5 016,0	5 941,0	6 670,2	7 957,0	9 769,4
including to cover the Social Insurance Budget, mln lei	1 121,5	862,8	1 340,6	898,6	1 113,9	1 987,7	2 554,6
Revenues structure, %	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Contributions for compulsory social insurance, %	69,5	69,0	66,6	66,6	65,9	62,7	58,9
Transfers from the budget, %	30,4	30,9	33,3	33,3	33,7	36,6	40,2
Other revenues, %	0,1	0,1	0,1	0,1	0,4	0,7	0,9
Expenditures, mln lei							
Social insurance, mln lei			11 059,7	12 242,0	13 684,7	15 344,3	16 787,4
Pensions, mln lei	9 685,5	9 782	9 583,8	10 611,3	11 859,6	13 342,9	14 125,9
% in social security expenditures			86,7	86,7	86,7	87,0	84,1
% of total expenditures	80,6	72,5	64,0	60,2	61,0	61,8	58,3

Source: NBS data and NSIH, www.statistica.md, www.cnas.md

Informal employment, both in informal sector enterprises and informal working places, is one of the factors the decline in the number of taxpayers. Despite the 7,5% decline in number of employed population in informal sector of economy in 2020 compared to 2019, 23,1% of employed population in 2019 were concentrated in informal working places and in 2020 – 22,4% (down by 0,7 p.p.). The major share of given category of employed was occupied at enterprises in informal sector – 72,7% in 2019 and 74,7% in 2020, the share of employed in informal working places at enterprises in formal sector constituted 7,2% in 2019 and 6,6% in 2020, a insignificant number of informally employed persons (1,4% in 2019 and 0,7% in 2020) are occupied in households as hiring workers (employees). In total number of hiring workers, the share of informally employed persons is decreasing: while in 2019 it constituted 7,7%, in 2020 - 6,8%, or 0,9 p.p. less. Informal activities prevail in agriculture, forestry and fisheries (58,3% of informally employed), construction (19,5%), wholesale and retail trade, accommodation and public catering activities (9,5%) and other activities (6,3%)¹. Due to the fact that characteristic feature for informal employment is work under an oral agreement (without an official signing of an employment contract worker-employer), wages "in envelopes", lack of social guarantees, the employer's refusal to transfer insurance contributions of given category of employees, in these conditions it is difficult to predict the amount of future pension and whether it will be assigned in accordance with the current legislation, as the income of workers is not registered and is not reflected as income by the employer in official documents presented to the relevant financial and insurance authorities and as insurance revenues in the system of state compulsory social insurance (Legea RM, 2000).

The Strategy for the Reform of the Pension Insurance System in the Republic of Moldova provides a gradual decrease for amount of compulsory contributions of state social insurance paid by employers while increasing individual compulsory state social insurance contributions for workers. Before 2002 employers transferred to the Social Insurance Budget 31% of the Labour Remuneration Fund and 1% of workers' individual contributions, in 2002-2003 these rates were 29% and 1%, and since 2004 the employer' contributions were decreased by 1% and the workers' contributions increased by 1% (2004 - 28% and 2%; 2005 - 27% and 2%; 2006 - 26% and 3%; 2007 - 25% and 4%; 2008 - 24% and 5%, and so on, i.e., the tendency to reduce the employer tariff from the Labour Remuneration Fund (from 29% to 23%) and the increase in amount of worker' personal contribution (up to 6%). At the same time, the changes affected both the amount of tariffs and the procedure for establishing individual compulsory state social insurance contributions transferred by different categories of physical and juridical persons, including land owners, patent holders and other categories of taxpayers. All this is

¹ Calculated by the authors on the basis of NBS data, www.statistica.md.

connected with the process of implementing structural reforms in the economy and social sphere, the development of private property and, consequently, new forms of organization of economy activities, the improvement of the legislative normative framework and other factors. The several categories of principal taxpayers and contribution rates for 2020 are presented below. It are established in accordance with the Law on State Social Insurance System No. 489 of 08.07.1999. Percentage rates of social security contributions paid by employers in 2020 were the following¹:

-employer's contributions to Labour Remuneration Fund and other benefits for workers who concluded an individual labour contract and work in the budget sector and also self-financing institutions - 23%, in the private sector and in higher education and medico-sanitary institutions - 18%;

-employer's contribution for civil aviation workers whose working conditions are classified as special - 26%, for Labour Remuneration Fund and other benefits, for those employed in the private sector;

-employer's contribution to Remuneration Fund and other benefits for workers hiring and working according to an individual labour contract in the agricultural sector - 18%, of which 6% is subsidized from the state budget;

-contributions paid by physical persons carrying out professional medical activity independently in one of the forms of organization of given activity provided by Law of the Republic of Moldova No. 411/1995 constituted 18% on the family doctor's revenue;

-the employee's individual contribution tariff of worker is set in the amount of 6% of the wage and other benefits;

-the fixed compulsory annual sum of social insurance contribution tariff constituted amounted 10740 lei (in 2019 - 9456 lei), including for:

- employers in the field of taxi motor transportation of passengers - for each worker-driver;
- non-working persons, including founders of individual enterprises, notaries, advocates, executors, holders of individual patents, authorized managers and other categories according to the current legislation.

For physical persons, who concluded an individual social insurance contract with the National Social Insurance Fund, the annual fixed tariff constituted 10740 lei (in 2019 - 9456 lei).

For physical persons, carrying out activities as day laborers, according to the Law of the Republic of Moldova on the procedure for making of casual unqualified work by day laborers No. 22/2018, as well as for owners or tenants of agricultural land, who individually work the land, the fixed tariff was set at MDL 2736 (in 2019 - MDL 2412).

So, according to the data carrying out of the Social Insurance Budget, the revenue from social insurance contributions increased by 4,6% in 2020 compared to 2019 (table no. 7). The calculated base of contributions from remuneration fund and other benefits was declared in the amount of 55977104,0 thousand lei, of which 1104341,6 thousand lei is the wage fund exclusively for workers carrying out agricultural activity, who have the right to preferential tariff, and 120815,2 thousand lei (0,2%) is the remuneration fund for workers who work in special conditions (flying personnel and flight control personnel in aviation). Employers' contributions assessed on wage fund and other benefits, as well as individual contributions transferred by workers from their wage constitute the basis in the structure of state social insurance contributions. In given context, the decline in the number of employed population, including the reduction in share of hired workers (table no. 5), as

¹ National Social Insurance Fund. Report on the execution of the State Social Insurance Budget in 2020, 2021, www.cnas.md.

well as the existence of informal employment, for which the absence of labour contracts with workers is a specific factor, the non-payment of social insurance contributions are specific factors, all this negatively impacts on the formation of the Social Insurance Budget and its financial stability.

In 2020, 16,7% (in 2019 – 16,8%) of total employed population in national economy were employed in the informal sector and 22,4% (in 2019 – 23,1%) of working places were informal, of which 23,8% of total employed population were hired workers. In the non-agricultural sector of economy, the share of informal employment constituted 10,8% and the largest share of informally employed was registered in construction, where given category of workers accounted for 64,9% of total employment in this sector, while the share of hired workers carrying out activities in informal working places constituted 6,8%. In this context, it should be mentioned the negative fact of receiving a wage “in an envelope”, which in 2020 was received by 6,7% of workers, including the largest shares of workers are in agriculture (60,8%), construction (13,4%), trade (9,9%) and industry (6,3%).

Table no. 8. Main indicators of development the informal employment, RM*

	2014	2015	2016	2017	2018	2019	2020
Employed population, thousand persons	981,5	989,1	993,7	960,8	988,5	872,4	834,2
Share of formal working places, % of total	66,5	63,4	61,7	63,0	60,3	76,9	77,6
Share of informal working places, % of total	33,5	36,6	38,3	37,0	39,7	23,1	22,4
Share of hired workers in total employed population, %	66,3	63,7	61,0	62,9	59,6	77,8	78,1
Share of hired workers in a formal workplaces, % of total	90,7	91,1	91,8	92,7	92,4	92,3	93,2
Share of hired workers in a informal workplaces, % of total	9,3	8,9	8,2	7,3	7,6	7,7	6,8
Number of workers for whom the employer has not paid compulsory social insurance contributions, thous. persons*	66,1	59,1	54,3	49,0	51,2	49,2	42,6
% from total hired workers in informal sector**	91,7	86,9	87,3	87,2	90,0	93,9	95,7
Share of informal working places, % from total for this type of economic activity							
Agriculture, forestry and fisheries	77,4	82,5	82,3	82,5	82,9	64,3	65,7
Industry	6,3	6,0	6,4	5,0	4,8	5,6	4,3
Construction	59,3	62,6	58,6	60,0	61,3	64,0	65,4
Wholesale and retail trade, accommodation and public catering	15,8	15,6	16,0	15,3	12,8	11,7	8,2
Transport, storage, information and communication	10,4	11,7	14,6	9,4	9,0	9,0	7,5
Public administration, education, health and social protection	0,3	0,5	0,6	0,3	0,6	0,2	-
Other activities	14,3	14,3	15,7	17,3	18,4	16,1	13,1

* NBS data for 2014-2020 is calculated on the basis of the population with usual residence, 2019-2020 household labour force survey (Labour Force Survey) was carried out according to the new plan and in accordance with the revised definition of employment.

** Employees data for 2014-2018 were calculated based on the resident population, 2019-2020 - based on the population with usual residence.

Source: NBS data and Proceedings “Workforce. Employment and unemployment” for 2015-2021, www.statistica.md, <https://statistica.gov.md/category.php?l=ro&idc=107&>, <https://statistica.gov.md/pageview.php?l=ro&idc=263&id=2204>

Practically 96% of hired workers (66% of which are males) with the status of informal employment do not have labour agreements, working by a “*oral arrangement*”, and for given category of workers the employer does not pay social insurance contributions, leaving them without the right to a retirement (age) pension and other social benefits. Informal employment has a negative impact not only on the absence of social protection for workers, but also on the reliability and stability of the Social Security System through the reduction of unpaid social insurance contributions according to the tariff as the main source of revenue for the State Social Insurance Budget (due to the decline of possible taxpayers, as employers in the informal sector do not pay contributions, including both physical and juridical persons). Calculations of State Social Insurance Budget (SSIB) losses due to non-payment of social contributions from the remuneration fund of workers “*by arrangement*” showed the growth in losses by 12,1% in 2019 compared to 2018, even with a 7,9% year-on-year reduction in workers and a 3,7% decreased in 2020 compared to 2019.

Table no. 9. Assessment of the possibility of supplementing the State Social Insurance Budget with formal employment of employees (transition from informal to formal employment)

	2018*	2019**	2020**	2020 in compared to 2019	
				Growth/decrease, %	Difference (+/-) in absolute values
Hired workers, occupied informally, thous. persons	56,9	52,4	44,5	84,9	-7,9
Hired workers, occupied in activities “by arrangement”, thous. persons Including by types of economic activity:	51,1	49,2	42,6	86,6	-6,6
Agriculture, forestry and fisheries	24,1	23,8	26,2	110,1	+2,4
Industry	3,5	3,1	1,2	38,7	-1,9
Construction	3,7	7,5	6,1	81,3	-1,4
Wholesale and retail trade, accommodation and public catering	10,9	9,0	5,5	61,1	-3,5
Transport, storage, information and communication	0,0	-	-	-	-
Public administration, education, health and social protection	0,0	0,0	0,0	-	-
Other activities	7,8	5,6	3,6	64,3	-2,0
Hired workers for whom employers have not paid social insurance contributions, thous. persons	51,2	49,2	42,6	86,6	-6,6
Amount of possible losses to SSIB from non-paid of social contributions of hired workers occupied “by arrangement”, thousand lei	1580748,462	1772199,312	1706338,613	96,3	-65860,6992

Source: Authors' calculations on the basis of NBS data, <https://statistica.gov.md/pageview.php?l=ro&idc=263&id=2204>

5. Conclusions

The demographic tendency of population decline and its ageing, as a consequence of negative natural increase and high level of migration processes, have become a usual phenomenon for the Republic of Moldova. Thus, according to official statistics, the number of population with usual place of residence declined by 272,100 thousand persons

in 2021 as compared to 2014 (or from 2869,200 thousand persons in 2014 to 2597,100 thousand persons in 2021), the Ageing coefficient increased by 5,0% (from 17,5% at the beginning of 2014 to 22,5% at the beginning of 2021), the number of labour migrants increased by 3,2% in 2018 as compared to 2014, in 2020 as compared to 2019 by 7,5% only by one year. According to the demographic forecast of the Center for Demographic Research of the National Institute for Economic Research of the Republic of Moldova for the years 2019-2040, the annual population decrease in the coming decades will increase from 1,6% to 2,3%, which will lead to a decrease of population even in the minimal variant by 34,5% by 2040. At the same time, it should be noted low indicators of economic activity and employment of working age population: with the growth of economic activity from 43,3% in 2014 to 45,9% in 2018, in 2020 given coefficient constituted 40,3% or 2,0 p.p. lower than in 2019, and the employment coefficient, growing from 41,7% in 2014 to 44,59% in 2018, constituted 38,8% in 2020 or 1,3 p.p. lower than in 2019, and there is also a predominant share of economically inactive population (59,7% of working-age population aged 15 and over) and informal employment (6,8% of hired workers). With the growth of age pensioners, the number of pensioners employed in labour market constitute 23,7%. This situation is a challenge for socio-economic policies to improve health, working conditions, increase the duration of active economic activity and stimulate employment in elder age groups, improve the quality and standard of living, perfect the pension system and others. Thus, the Law No. 105 of 14.06.2018 on promotion of employment and unemployment insurance, taking into account the situation on labour market, provides for employment measures in elder age groups, including NEAM¹ through territorial employment offices (TESM²) offers to working age persons aged 50 and over, (according to Art. 23, p. 3, lit. d) of above Law), various services, both informational and intermediary nature, professional training, subsidized employment or assistance in opening a personal business, through which they realize the principle of economic independence and create working places. For example, workers aged 50 and over in case of work loss, are paid the monthly benefits amounting of 30 % of the average monthly wage in economy for the previous year for a period of six months. Agricultural activity is the principal place of employment for elderly workers, including every third of them indicated a farm or agricultural land as their principal place of work, and every fourth employed in given age group worked in public social services. Moreover, in the gender aspect, 35,1% of males worked in agriculture, 16,5% in industry, 9,3% in trade and 9,1% in education. In given context, it can be noted that, in general, the working-age population in elderly age groups is employed in spheres of low productivity and labour remuneration, however the income received in the form of wages along with the pension improves the level of well-being of their family (the wage replacement rate is low and amounts to 25,5%) and also makes it possible to replenish the revenues of the State Social Insurance Budget at the expense of given category of persons as taxpayers. The share of insurance contributions of taxpayers in the structure of sources the revenue decreased from 69,5% in 2014 to 58,9% in 2020, accordingly, and transfers from the State Budget to cover needs of social insurance increased from 30,4% in 2014 to 40,2% in 2020. As follows from the above, demographic processes, changes in the structure of the working-age population and labour force market, presence of various forms of employment, including informal employment, are factors that contribute to the financial instability of the Social Insurance Budget.

In order to improve the current situation, the following is proposed:

¹ National Employment Agency of Moldova.

² Territorial Employment Services of Moldova.

- based on population forecast, elaborate a medium-term forecast of labour market to assess demand and supply of labour force and identify labour reserves in order to ensure the stability and competitiveness of national labour market;
- improvement labour legislation, including removing barriers to increasing employment rates in elder age groups, ensuring equal rights and opportunities for access on labour market independently of age and gender, as well as wider application of flexible regimes of work;
- stimulating the development of formal employment of working-age population;
- development of new forms/systems of labour remuneration based on the use of foreign experience, including the EU countries;
- improvement of the pension system, including the system of facultative and other forms of non-state pension funds in the conditions of an ageing population;
- increasing the financial stability of the state social security system, including by improving the mechanism of establishing and revising pensions for different categories of pensioners, indexation of pensions, tariff rates of social contributions depending on the category and income level of working population, as well as the forecast of labour market.

The implementation of the above-mentioned measures will contribute to increasing the employment rate of working population, stability and regulation of labour market as a fundamental factor in the formation of the Social Insurance Budget on the basis of social contributions, which are the main source of its revenues, as well as ensuring its financial sustainability.

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17. Legea Republicii Moldova privind sistemul public de asigurări sociale: nr. 489-XIV din 08.07.1999. *Monitorul Oficial al Republicii Moldova*, 2000, 1-4, art. 2.

ERP SYSTEM IMPLEMENTATION IN THE SMALL AND MEDIUM ENTERPRISES: EVIDENCE FROM THE REPUBLIC OF MOLDOVA

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Abstract: Enterprise processes and their effectiveness are an integral part of marketing activities within the framework of modern approaches to marketing. Business processes are becoming faster and more complex. Communications with customers and suppliers are shifting towards the use of modern information technologies. The control and management of such complicated and complex processes require the implementation of modern information systems allowing enterprises to successfully implement their marketing strategies. In turn, the achievement of all these and other fundamental goals for the functioning of the enterprise is impossible without the use of a full-scale automated enterprise management system. In this article, some features of the implementation and use of an ERP class system in the small and medium enterprises (SME) are considered. The research methodology is based on the analysis of activities for the implementation of the Symphony ERP system at five SMEs in the Republic of Moldova based on qualitative research (in-depth individual interviews with the managers of the companies). The study was conducted in January 2022. Key benefits of ERP using for marketing processes were analysed from perspectives of product information, customers relations, targeting, pricing, marketing campaign management, performance management, ROI and insights. The implementation of ERP on SME is most often associated with serious barriers such as errors in preparation for implementation (uncertainty of goals, uncertainty of criteria for evaluating the effectiveness and depth of implementation), low level of formalization of business processes. The research shows the “Symphony” ERP system has been implemented in the above enterprises quite successfully due to the fact that this solution is specific and was developed from the very beginning for the auto service business. The developer of this program was the head of one of the companies, who actively promoted the implementation. Despite the rather high level of telecommunications development and high-speed Internet coverage, such integrated solutions are rarely used by SMEs in the Republic of Moldova. This is due to the high requirements for the qualification of personnel and management of enterprises, as well as the high cost of software and hardware components associated with the implementation of such systems.

Key-words: ERP, marketing, business processes, small and medium enterprises.

JEL Classification: Q3, M, M0, M3, M31.

1. Introduction

Within the framework of modern approaches, business processes of an enterprise and their effectiveness are an integral part of marketing activities. Along with the development of digital technologies, business processes have been accelerating and became more complex, communications with customers and suppliers have been shifting towards the use of modern information technologies. The control and management of such complex processes require the implementation of modern information systems that allow enterprises to successfully implement their marketing strategies. In turn, the achievement of all these and other fundamental goals for the functioning of the enterprise in modern conditions is impossible without the use of full-scale automated enterprise resource planning (ERP, Enterprise Resource Planning). The development of information technology in business management processes has made ERP one of the most widely used business software systems in various industries and organizations.

An enterprise resource planning (ERP) system is a computer information system designed to automate business and create a unified information environment for an organization. It is used for resource planning, accounting and control of financial and economic activities of enterprises, information analysis, supporting management decision-making (Odintsova, 2020). An ERP system is a type of automated business management solution. It includes a suite of applications that streamline and simplify both customer experience and back-office functions, including sales and marketing, finance, HR, accounting, and more. Thus, all employees can use the same system to find and share

important data in real time. ERP-systems can be considered as the information basis of the organization's main business processes. The combination of ERP and marketing provides powerful benefits that allow every employee to play an active role in the company's marketing success.

2. Literature Review

Research shows that the use of data collection and processing systems in the business system has increased significantly. This greatly facilitates the process of making managerial decisions and allows to get consumer insights about the target audience, product, and other useful ideas (Saura, 2021). Research shows a positive relationship between investment in information technology and business performance (Martin-Rojas et al., 2019; Lecerf & Omrani, 2020; Rehman et al., 2020; Bykovskaya, 2021). The effectiveness of using independent ERP data in the analysis of internal rules and statistical results for making managerial decisions to increase the efficiency and coherence of internal processes, obtaining valuable marketing information as tools for increasing the competitiveness of an enterprise has been demonstrated (Tao, Zou, et.al. 2021). Romanian data shows that ERP systems play a key role in improving the financial performance of SMEs (Bama et al., 2021).

At the same time, there is a negative experience of ERP implementation associated with the unpreparedness of the enterprise for changes, a poorly developed implementation plan, insufficient staff qualifications, inadequate technical support, etc. (Orlov, 2020).

However, it is noted that the concept of ERP management and integration in the SME sector is still not well understood (Bahit et al., 2021). This work is focused on replenishing knowledge about the implementation of ERP in SMEs, based on the generalization of the experience of implementation in SMEs in the Republic of Moldova.

3. Methodology

This paper presents an analysis of the implementation of the "Symphony" ERP in small and medium-sized enterprises (SMEs) of the Republic of Moldova, specializing in the sale of spare parts and car repair. A "Symphony", class ERP system belongs to the specific industry and was developed specifically for the conduct of medium and large car services, as well as wholesale and retail auto parts stores. By type of organization, Symphony is a private, desktop (not browser) local system (not cloud). The system is built according to a single architecture and does not provide for modular (partial) implementation.

The system includes various components connected by a single architecture:

- BPM - Business Process Management management of internal processes (production management)
- CRM (Customer Relationship Management)
- DMS (Document Management Systems) document management
- EPM (Enterprise Performance Management) monitoring and analysis of performance indicators (KPi)
- EWM (Extended Warehouse Management) - advanced warehouse management
- HRMS (human resources management system) personnel management
- PM (project management) project management
- QMS (Quality management system) - quality control
- SCM (Supply Chain Management) procurement management
- Accounting
- Tool turnover control
- Cross Reference system - accounting for cross-brand conformity of goods

- Car maintenance standards management
- Management of planned equipment maintenance.
- Trade management

The research methodology is based on the analysis of scientific literature on the topic, generalization, analysis of activities for the implementation of the Symphony ERP system at five SMEs in the Republic of Moldova (BRAVOMOTORS SRL, INTER-Koleso ICS, BOSCH Service SA, TurbineMaster SA, Autotransmission SRL) based on qualitative research (in-depth individual interviews with the managers of the companies). The study was conducted in January 2022.

Four companies from this list are small enterprises with up to 50 employees, and one is a micro-enterprise with up to ten employees. By type of organization, all are private commercial companies. Despite the small size of companies, the complicacy and complexity of internal business processes created a need for a deep systematization and streamlining of the activities of all departments and linking it to one system.

4. Results and Discussion

In nine years of using this software solution, companies have managed to significantly improve their financial performance, reduced costs and optimized the use of labor resources in the enterprises. Data exchange with the accounting system was automated, which significantly accelerated the maintenance of the product range, counterparties and primary documentation overall.

The "Symphony" implements a system for recording and analyzing staff key performance indicators. The Kpi management node allowed to take the assessment of the contribution of each employee to the overall and personal results to a new level; it allowed employees to be motivated in a new way and created an opportunity for a fairer and more transparent payroll system.

The "Symphony" ERP implements a module for calculating and forecasting future sales based on data from technical regulations for car maintenance. This node made it possible to offer consumers a unique solution that allows them to plan annual budgets for corporate car park maintenance.

When the marketing component becomes important for all departments of the company, productivity increases, communication improves and, as a result, customer satisfaction increases. When exploring ways to improve marketing functionality in organizations, we can meet specialized and complex ERP solutions. Specialized solutions are stand-alone marketing software solutions, such as CRM like HubSpot, Salesforce, AMMO CRM. Comprehensive solutions include not only marketing functions, but also production, accounting, and other key business functions.

If we consider that ERP systems contain marketing functions, then a question arises regarding the advisability of considering the introduction of narrow specialized solutions by the business. It must be understood that, depending on the vendor, an ERP system may have weaker marketing functions than a dedicated marketing solution or may not meet specific business goals.

Although a specific solution can provide a competitive advantage, it is important to integrate it with the main ERP system or other company information systems. Integration can be complex and costly, which is why many organizations decide to implement a comprehensive ERP system.

Key Benefits of Using ERP for Marketing Processes

If the docking of heterogeneous software solutions constantly causes problems, creates malfunctions in the work of various departments, then an integrated ERP class solution can seamlessly combine the disparate efforts of different departments of the

company into a single information node, which creates a number of advantages that can advance the company in its development.

4.1. Product

ERP class system can collect detailed product information. A deep understanding of company's own product, demand, sales and inventory data creates opportunity to sell it without creating illiquid stocks. By using data from other departments, some of the most useful data points can be discovered, including:

- Peak sales periods
- Customer Complaints
- Shelf life of certain items
- Optimized pricing structure
- Potential combinations of articles and products in stock
- Number of sales (top selling/low-selling items)
- Search history

For example, based on the collected data array in Symphony ERP about customer search queries, companies were able to identify a whole range of products that were not only repeated in search queries, but also demand for which began to grow. These were goods that were not available in the company's warehouses, but the increasing demand indicated that firms should start purchasing these goods for constant availability in their own warehouse.

Based on the data on the number and frequency of claims for certain brands, SMEs using Symphony ERP took their management decisions regarding the transition to other more reliable product brands. The minimum and optimal figures for stocks of the most popular products were revised, considering the time from the moment of ordering from the supplier until the moment they are received at their own warehouses.

4.2. Client

A comprehensive ERP system through the CRM module allows evaluating the entire customer journey from showing interest in a company or product, purchase to re-purchase or recommendation of a company or service to other potential customers. In a few clicks, you can see what customers are buying, what offers motivate them, when they shop, and much more. Additional items for their online shopping cart; a scheduled sales call that syncs with their order cycle. Improved customer service and support is critical for a company to retain its best customers through an effective retention strategy (Gil-Gomez et al., 2020).

The "Symphony" ERP allows you to understand which communication channels are more convenient for each specific client; at what time of the day and on what day of the week customers are more active and willing to make a purchase due to knowledge of the routine, habits, devices, social networks.

The CRM module allows you to judge which customers convert with which traits better. This works best when sales or account managers capture key communication points:

- what the client needs addressed;
- what doubts and difficulties arose;
- why he chose this company, what influenced the purchase decision;
- average check;
- financial discipline and other data.

Thus, you can not only understand existing customers, but also form an understanding of your target audience, which is very important for building the right targeting.

4.3. Targeting

Researches show that 63% of today's customers expect personalized messages (RedPoint Global survey, The Harris Poll, U.S., U.K., Canada). If the company is still delivering the same marketing message to all members of its target audience, then ERP can help change the communication strategy in favor of a more demanded – individual one.

The "Symphony" ERP makes it easy to see which products are selling best in which channels and adjust company's approach accordingly. For example, the INTER-Koleso company promoted a publication in which it advertised tires every year during the winter season among its regular customers. It was a general publication that reported discounts and high quality of products.

In 2020 and 2021 INTER-Koleso has changed its communication strategy. Their "Symphony" ERP stores data on the winter tire sizes of their customers. As a result, customers were filtered for 205/55 r16 tires, then purchase histories and annual mileage were analyzed, making it possible to compile a list of those customers for whom winter tire replacement was potentially the most relevant. Promotion of a marketing message that contained a specific offer for a specific product with a discounted price affected the increase in sales of this product by 3 times. In general, this tactic allowed to increase overall tire sales by 2.1 times compared to previous years.

4.4. Pricing

The company may offer the best product, but if the pricing structure is wrong, then the value of the offer is significantly reduced. Quick access to the history of prices and sales volumes provides the information necessary to make the right management decision. Analyzing past campaigns, one can see whether lowering the price of a company's products actually helped increase sales and customer acquisition, or whether it simply allowed the company's current audience to buy their regular favorites at a lower price, thereby reducing the company's profit.

The "Symphony" ERP data showed that a higher price was the cause of failure only in 15% of cases. A greater influence on the purchase decision was the ability to physically see and compare the tires before buying and install them on the car directly at the place of purchase. However, in the motor oil segment, the price elasticity on demand turned out to be much higher and refusals due to a higher price amounted to approximately 65%.

Employees of the "Bosch Service" found out that there is a group of goods and services for which demand exhibits very low-price elasticity. Purchasing and retail prices for certain goods changed several times upwards and downwards over a fairly long period of time, but this had almost no effect on demand. When testing the hypothesis and increasing the price of goods of several test segments, the demand remained unchanged. Through this, the company has drawn several important and valuable lessons: discounts and other pricing methods do not affect sales of these products; profitability can be increased without compromising sales volume, and additional profits can be directed to the development of new lines of business.

Offering discounts during the period of time when the system signals a decrease in demand and sales is also an important tool in the formation of a reasonable pricing policy.

4.5. Marketing campaign management

An ERP system, in particular the "Symphony" ERP, combining the functions of marketing, sales and project management, can manage marketing campaigns and events, and due to the fact that it integrates the software functionality of various departments, it can generate holistic reports and serve as the basis for collecting "big data" on the project.

Project management using the ERP system allows company to properly distribute rights and responsibilities within the project, organize and delegate tasks. All this data is available to all project participants in real time, which allows you to quickly evaluate the effectiveness of the event and make the necessary changes, as well as instantly notify all team members about them.

The "Symphony" ERP module, which is responsible for project management, is also able to manage mailings, filter them by participant groups and distribute mailings according to the calendar. The next important node of this module is the automatic construction of a sales funnel, which allows tracking the entire "customer journey" from the moment of first contact with information to making a purchase and recommending a product or brand to other potential customers.

4.6. Performance management

The "Symphony" ERP is able to automatically monitor deadlines, send motivational alerts to subordinates and a summary of the performance of the management. The system allows to set milestones that project participants will be able to navigate during the implementation of the project and its individual tasks, communicate with colleagues and exchange information. This system solution makes it possible to make the work of marketing department employees and other employees involved in the project more efficient, improve the quality and speed of communication, minimize errors associated with the transfer of information, and also free up additional time for employees by reducing the number of software applications involved in the project and the need to switch between tasks.

4.7. ROI

Most often, after the completion of a marketing campaign, it is very difficult to evaluate its effectiveness and compare it with other campaigns. This is usually due to the fact that it is difficult to measure all financial, production and labor costs in a single view.

The ERP system, being a complex system, manages not only accounting data, but also contains the information about the workload of employees in the system (phone time, chat time, time spent preparing graphic products and writing texts). ERP is able to separate the costs of a specific marketing campaign from the total advertising costs, form the cost of each lead and categorize the leads.

The "Symphony" ERP instantly generate a report on fast-selling products as part of a marketing campaign, evaluate the current effectiveness of promotion tactics and evaluate the response of the target audience (leads). This functionality allows to make changes in real time during the execution of a marketing campaign, which allows to increase the final effectiveness of such a campaign.

4.8. Insights

The first and most important insight for the "BRAVO MOTORS" was that based on sales data and inquiries, employees revealed that the company could potentially abandon multi-brand in favor of servicing VAG brands, namely VW, Skoda, Seat, Audi without sacrificing sales volume. This step allowed the company to get rid of multi-brand non-liquid assets, sales of which could not be predicted in favor of stocks of VAG vehicles spare parts. Considering the fact that cars of these brands are built on common platforms, stocks have also sharply increased their liquidity. It was possible to sell some of the unnecessary equipment and purchase more specific and new equipment, which allowed expanding the range of services.

The next insight showed that the company could refuse to service and repair cars older than 20 years. This made it possible to sharply increase the quality of repairs due to the greater residual resource of the cars that came to the service.

Through the analysis of large data sets of the ERP system, company employees can gain valuable insights about the behavior and needs of customers.

As a result of the analysis of sales data, the marketing department of "BRAVO MOTORS" found out that women are more inclined to purchase car care cosmetics and content related to products in this category attracts more attention from women, while men show a low level of interest, both in the products of this category, and in its advertising.

In analyzing ERP sales calendars, "Symphony" produced 2 unusual wave forecasts for the automotive battery category. Most of the peak sales are in November and December, however, since in July and August potential customers make long overseas trips, and average temperatures are quite high, which, along with low temperatures, is a critical factor for battery performance, the program issued a recommendation to the promotion of this category of goods. As a result of the advertising campaign, "BRAVO MOTORS" managed to increase its sales in the goods category 2.5-fold.

After analyzing the history of car repairs of regular customers in terms of car age and mileage, the system made a repair forecast for cars of new customers. This made it possible to predict the budget for corporate clients for the year, and allowed the company to plan future repairs, thus securing work and sales.

5. Conclusions

ERP and marketing are a powerful and profitable combination. Modern marketers work best when they collaborate with others. To keep up with an astute and evolving audience, it is essential to know as much as possible about the company's own products, customers, and desired target audience.

When ERP and marketing work together, employees get a holistic picture, and quick access to data allows them to act and adjust strategies in accordance with the current situation. Thus, at the disposal of the business there are tools that can fully optimize marketing campaigns, attract key buyers, new customers and develop their own brand.

The "Symphony" ERP system has been implemented in the above enterprises quite successfully due to the fact that this solution is specific and was developed from the very beginning for the auto service business. An important factor that had a positive impact was that the main processes at the considered enterprises were already well formalized and, during the implementation of the system, were finalized to a common model acceptable to all participants in the implementation. The implementation team was able to motivate company employees to participate in the project and learn new features and standards.

Another important factor that positively influenced the successful implementation of such a large system was that the developer of this program was the head of one of the above mentioned companies, who actively promoted the implementation, constantly visited partners and conducted training. Such an implementation would have probably not been possible without a person who would know this type of business from the inside,

However, it is important to understand that the implementation of such complicated and multifaceted information systems is most often associated with serious barriers due to resistance to implementation by the employees of the customer's company; errors in preparation for implementation (uncertainty of goals, uncertainty of criteria for evaluating the effectiveness and depth of implementation); incomplete and changing system requirements; the orientation of the system design (bottom-up), when information is generated that meets the needs of lower-level employees and there is a lack of information for making managerial decisions; design without considering development; randomness

and low level of formalization of business processes, the presence of non-obvious and ambiguous processes.

The level of telecommunications development in general and high-speed Internet coverage, in particular, is quite high in the Republic of Moldova. There is a developed information infrastructure and there is access to modern universal and specific systems, but such integrated solutions as ERP systems are rarely used by SMEs. This is due to the high requirements for the staff and management qualification of enterprises, as well as the high cost of software and hardware components associated with the implementation of an ERP system. Due to such limitations, serious complex software solutions are available mostly to large companies that have sufficient financial and human resources, being rarely used by SMEs.

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TAX AND BUDGETARY SUSTAINABILITY – CURRENT AND FUTURE PERSPECTIVES

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***Abstract:** The crisis caused by the pandemic context we have been facing for over 2 years represents a threat not only for the population's health, but also for the national economy, respectively for the citizens' living standard. From one industrial sector to another and from one enterprise to another, the adverse effects were felt against the background of the restrictions imposed to limit the impact caused by the coronavirus. In this context, it is obvious that the public finances, which are closely interdependent with the branches of the private sector, have also been subject to various influences. a situation characterized by the unsustainability of public finances greatly complicates the conduct of fiscal, budgetary and monetary policy and requires decision-makers to implement a tax-monetary strategy which, even if in the first phase, generates negative reactions, shall be effective on medium and long term.*

***Keywords:** budgetary sustainability, tax, public finances.*

***JEL Classification:** H21, E62, H32.*

1. Introduction

The sustainability of public finances is the ability of a government to cover its current expenditure and to support its public policies without jeopardizing its solvency or risking not being able to repay part of its debts or making part of its pledged expenditure.

In the context of the pandemic crisis generated by COVID-19, the situation of public finances has become sensitive, from at least two points of view: on the one hand, the recorded economic contraction has generated the reduction of the tax basis, the main source of public funds, and on the other hand, the support measures related to COVID-19 have generated high costs supported from the public budget.

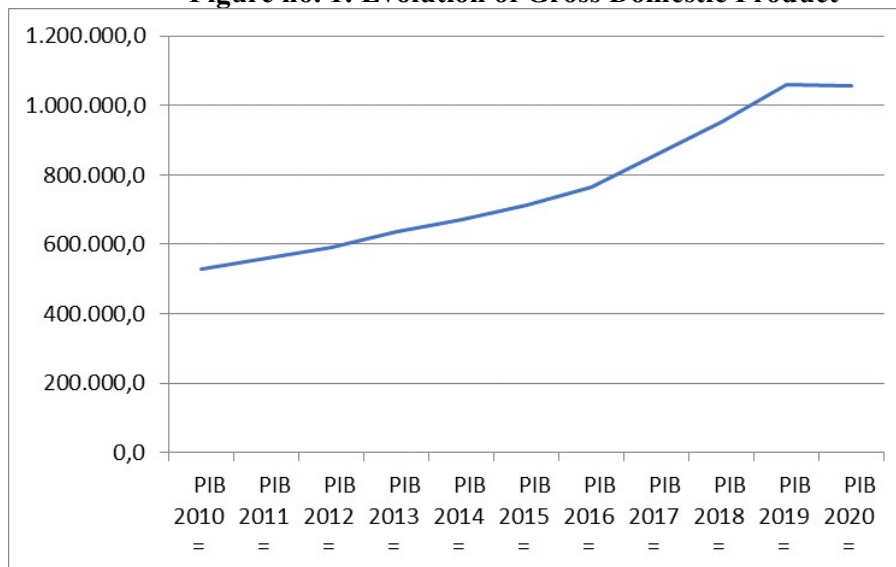
2. Factors determining tax and budgetary sustainability

The crisis caused by the pandemic context we have been facing for over 2 years represents a threat not only for the population's health, but also for the national economy, respectively for the citizens' living standard. From one industrial sector to another and from one enterprise to another, the adverse effects were felt against the background of the restrictions imposed to limit the impact caused by the coronavirus. In this context, it is obvious that the public finances, which are closely interdependent with the branches of the private sector, have also been subject to various influences.

We are talking, on the one hand, about the measures taken by the Government to counteract the effects of the health crisis, measures with a significant impact on the increase of budgetary expenses, and, on the other hand, about the contraction of the tax basis, with an effect on the sources of public revenues.

Considering the evolution of the main macroeconomic variables, according to the data provided by the Ministry of Public Finance, the Gross Domestic Product has experienced a continuous growth. The data published for the period 2010-2020 highlights this trend:

Figure no. 1: Evolution of Gross Domestic Product



Source: Made by the author based on the data taken from https://insse.ro/cms/sites/default/files/com_presa/com_pdf/pib_tr1r2022.pdf

For a correct assessment of the evolution of the macroeconomic indicator, it should be noted that even if in nominal values it recorded an approximately 6% increase in the last year, in real terms the evolution is not confirmed.

Another indicator highlighting the fragility of the public finances' position is the budgetary deficit. Its evolution in recent years indicates a deepening of the gap between budgetary revenues and expenditures.

From the point of view of the structural deficit, it is as follows:

Table no. 1: Evolution of Romania's budgetary deficit

	<i>Budgetary deficit – million lei</i>	Budgetary deficit - % of GDP
2010	-33,607.8	-6.4
2011	-23,898.6	-4.3
2012	-14,773.9	-2.5
2013	-15,794.0	-2.5
2014	-11,493.2	-1.7
2015	-9,630.7	-1.4
2016	-18,304.3	-2.4
2017	-24,294.7	-2.8
2018	-26,850.3	-2.8
2019	-48,554.3	-4.6
2020	-101,798.7	-9.6

Source: Made by the author based on the data taken from <https://mfinante.gov.ro/domenii/bugetul-de-stat/istoric-deficit-bugetar>

Even before the COVID-19 pandemic, in 2019, it had reached 48,554.3 million lei, an increase of approximately 85% compared to the previous year; in 2020, the structural deficit advanced, reaching 9.6% of GDP. An important factor that determined the

evolution of the structural deficit was the pronounced trend of growth of staff expenditure, as well as of those incurred with social assistance during the last years. Thus, in 2020, these categories of expenditure accounted for 94.3% of tax revenues (including insurance contributions), respectively 23.9% of GDP.

This situation is not sustainable given the two categories of expenditure are located at the level of current expenditure, which implies a final consumption of Gross Domestic Product.

The level of the budgetary deficit target for 2021 was 80,020.3 million lei, corresponding to a weight of 6.72% of GDP, with a decrease of the budgetary deficit in 2021 compared to the previous year.

The decrease in the budgetary deficit was supported by structural adjustment measures, namely the amounts collected in 2021 from the budgetary obligations related to 2020, whose payment was postponed by economic agents. In the Tax-Budgetary Strategy, the Ministry of Public Finance aimed for 2021 an adjustment of the weight in GDP of staff expenditure (by 1.9 pp), expenditure incurred with goods and services (by 0.8 pp) and with social assistance (by 1.3 pp). In fact, consumption expenditure continues to grow from one period to the next, in line with the growth of beneficiaries of the public wage system, as well as their remuneration.

It is difficult to envisage a tax consolidation in the period 2021-2024 in the absence of a significant increase in budgetary revenues. This could come from: improving the efficiency of collection, increasing the tax basis, narrowing the exceptions and loopholes that deviate negatively from the standard tax rates paid by some taxpayers, resolutely combating tax evasion and unfair tax competition, and optimizing tax rates.

Another aspect that could significantly contribute to increasing the sustainability of public finances is the possibility of accessing European funds, both in terms of the allocations related to the EU Multiannual Financial Framework for the period 2021-2027, and through the facility of the Recovery and Resilience Facility (RRF).

The temporary recovery instrument "Next Generation EU, with a financial capacity of EUR 750 billion, implemented at European Union level, can also be a solution for financing the recovery measures proposed at national level. It is based on three pillars: instruments to support the efforts made by Member States to recover, to remedy the consequences of the crisis and to emerge stronger therefrom; measures to stimulate private investment and support businesses in difficulty; strengthening the main EU programmes to capitalize on the lessons learnt from the crisis, to increase the robustness and resilience of the Single Market and to accelerate the green and digital double transition, and making use of it will be of real benefit to Member States, including Romania.

In this sense, beyond the manifestation of the interests of the various political groups, Romania's chance lies in a success of attracting as much as possible of these funds, leading to the implementation of structural reforms, directly and indirectly supporting the process of tax consolidation.

In assessing tax sustainability, due consideration should be given to the current and potential level of public debt. A high level of public debt may jeopardize tax sustainability, irrespective of the long-term expenditure related to population ageing.

Table no. 2: Evolution of Romania's public debt

Public administration debt	2018	2019	2020	2021	Martie 2022**)
total – million Ron	330,518.7	373,496.9	499,868.5	577,142.6	593,971.5
% GDP	34.7%	35.3%	47.2%	48.8%	50.3%

Source: Made by the author based on the data taken from <https://mfinante.gov.ro/ro/web/trezor/datorie-guvernamentala>

In recent years, the growth rate of the public debt has increased, so that, for the first time in February and March 2022, the weight of the public debt in the Gross Domestic Product recorded values of over 50%. It is foreseeable that, against the backdrop of current public policies, public debt will continue to grow, which will have a considerable impact on economic activity and inflation.

3. Conclusions

The impact of the budgetary-tax policy – and therefore of the evolution of the Gross Domestic Product, of the budgetary deficit, of the public debt – on growth and other micro and macroeconomic variables has been approached both in theory and in practice.

The deterioration of the public finances situation is perceived as worrying, the influence of the increase of the budgetary deficit and of the public debt on the economic activity being an unfavorable one and generating negative effects on the economy: the decrease of the purchasing power, inflation, fluctuations of interest rates, the reduction of investments, the slowdown of capital buildup, etc.

We are also identifying the negative effects of budgetary deficits and of rising public debt on long term basis. Firstly, the increase in public debt leads to a reduction in the related percentage of national income that is saved. Secondly, the increase in debt also determines the increase in budgetary expenditure with the payment of annuities. These payments must be made at the expense of productive expenditure – for example, public investment in infrastructure – or must be covered by increased taxes. Also, the increase of the debt increases the country risk and thus the risk premiums, which increases the costs of state funding and may endanger its solvency.

In conclusion, a situation characterized by the unsustainability of public finances greatly complicates the conduct of fiscal, budgetary and monetary policy and requires decision-makers to implement a tax-monetary strategy which, even if in the first phase, generates negative reactions, shall be effective on medium and long term.

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SUSTAINABILITY AND INNOVATION FOR ECONOMIC PERFORMANCE

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Abstract: *The European Union is committed to implementing the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). Sustainability reporting is the practice of measuring and communicating organisational performance towards achieving the Sustainable Development Goal, and it also covers accountability for this performance to internal and external stakeholders. Sustainability reporting is both a management and accountability tool. It entails reporting on how an organisation takes into account sustainability issues in its operations, its environmental impact and its social and economic impact. The Court identifies four challenges in relation to sustainability reporting within the EU institutions and agencies: o Developing an EU post-2020 strategy covering the SDGs and sustainability o Integrating sustainability and the SDGs into the EU budget and performance framework o Developing sustainability reporting within the EU institutions and agencies o Increasing the credibility of sustainability reporting through auditing.*

Keywords: *sustainable, performance, durable, sustainability reporting, sustainability strategy.*

JEL Classification: *Q01, Q28, Q56, R5, O22, P5.*

1. Introduction

The present article aims to identify the problems and solutions proposed by the EU to address sustainability mainstreaming.

The European Union is committed to implementing the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) (Report of the UN General Assembly Open Working Group on Sustainable Development Goals A68/970).

Sustainability reporting is the practice of measuring and communicating organisational performance towards the goal of sustainable development, and it also covers accountability for this performance to internal and external stakeholders. Sustainability reporting is both a management and a reporting tool (EU Sustainability Reporting and the United Nations Sustainable Development Goals). It involves reporting on how an organisation takes account of sustainability issues in its operations, its environmental impact and its social and economic impact.

There is no specific legal obligation for the Commission or other EU institutions to report on sustainability. As the EU is committed to achieving the SDGs and to sustainable development in general, it is expected that reporting on sustainability will be an integral part of reporting both on performance and results.

The European Commission does not report on the contribution of the EU budget or EU policy to achieving the SDGs. An exception is in the area of external actions, where the Commission has started to adapt its reporting system on performance against the SDGs and sustainability. The Commission has recently published a reflection paper describing some of the Commission's policies related to the SDGs. The EU Statistical Office (Eurostat) publishes an overview of "progress towards the SDGs in the EU context" (European Court of Auditors study). However, this does not aim to measure the contribution of EU policies and the EU budget to the 2030 Agenda.

For the most part, the underlying preconditions for useful sustainability reporting are not yet in place. The European Commission has published a reflection paper outlining scenarios for a sustainable Europe, but does not currently possess an EU strategy covering the SDGs until 2030 (European Commission Monitoring)

2. Challenges

The Court found that an EU institution, the European Investment Bank, and an EU agency, the European Union Intellectual Property Office, publish sustainability reports (United Nations Charter). Other EU institutions and agencies collect some sustainability data and sometimes publish it, but it is often fragmented and incomplete and does not cover all aspects of sustainability. This information mainly concerns the impact that the running of organisations has on sustainability, rather than how they have taken sustainability into account in their overall strategy and operations.

The Court identifies four challenges in relation to sustainability reporting within the EU institutions and agencies:

- Developing an EU strategy for the post-2020 period covering the SDGs and sustainability;
- Integrating sustainability and the SDGs into the EU budget and performance framework;
- Develop sustainability reporting within EU institutions and agencies.

Sustainability reporting is the practice of measuring and communicating organisational performance towards the goal of sustainable development, and it also covers accountability for this performance to internal and external stakeholders. It involves reporting on how an organisation takes account of sustainability issues in its operations, its environmental impact and its social and economic impact. The Global Reporting Initiative, a major player in supporting this development and the organisation that published the standard most commonly used in this area, defines sustainability reporting as "a published report by a company or organisation on the economic, social and environmental impacts caused by its day-to-day activities. A sustainability report also outlines the organisation's values and governance model and demonstrates the link between its strategy and its commitment to a sustainable global economy." It is becoming increasingly common for companies' sustainability reports to consider the SDGs. Sustainability reporting has developed in the private sector and is slowly expanding into the public sector, where reporting can be carried out by state-owned enterprises or government entities. By identifying examples from the private sector, this study aims to show the possibilities for the development of sustainability reporting. In the private sector, different terms are used when referring to sustainability reporting: "reporting on non-financial information"; "reporting on corporate social responsibility (CSR)"; "reporting on environmental, social and governance issues". This is also part of the "extended external reporting" or the "integrated reporting". The term used throughout this study is "sustainability reporting". Despite the all-encompassing definition mentioned above, sustainability reporting in the private sector varies widely, from reporting only on a particular environmental impact of a company, e.g. its water consumption, to reporting on the broader integration of sustainability into its overall operational processes, e.g. how climate change is reducing water availability and is posing a threat to its business model. There are two perspectives: the impact an organisation can have on climate change through its operations and the impact climate change can have on the organisation's operations.

3. Differences between various reports (EU sustainability reporting and UN Sustainable Development Goals)

The business and public sectors are motivated by different driving forces - companies ultimately need to make a profit and the public sector is concerned with the UN High Level Political Forum Parliament and other interested stakeholders, decision-makers, policy-makers, etc. Reporting at national level Reporting from governments of Member States Reporting at EU level Reporting from the European Commission Reporting at

organisational level Reporting from: - private companies - non-profit organisations - public organisations (universities, hospitals, etc.) - various EU institutions and agencies providing public goods. However, as stakeholder satisfaction is critical for both sectors, the motivations and benefits of reporting in both the private and public sectors can be similar.

The different motivations for the two purposes behind the reporting can be identifiable:

- (1) a management tool and
- (2) a reporting tool at management or organisational level.

Overall, "sustainability reporting in the public sector provides a framework for linking financial performance to the organisation's use of the significant resources and relationships on which it depends, and to the organisation's impact on those resources and relationships". By requiring public organisations to report on their core performance, transparency and accountability for management can be increased and guidance on governance and ethical behaviour can be provided.

4. Conditions for effective reporting

A sustainability report is the product of a process. This section describes the prerequisites that need to be in place to produce useful sustainability reports, based on existing guidelines and frameworks. In particular, the Court focuses on three key prerequisites: Stakeholder involvement, Development of a strategy and Integration of sustainability into the budgetary process, based on targets measured by indicators Stakeholder involvement. Stakeholder involvement is essential throughout the sustainability reporting process.

A. Developing a strategy

In order to be useful, reporting must be integrated into an organisation's strategic objectives and its entire policy/factual cycle. In this way, sustainability becomes an integral part of its performance management framework.

B. Integration

Integrating sustainability issues into key budgetary processes, business objectives or policies is another prerequisite for sustainability reporting.

C. EIB and EUIPO sustainability reports

EIB Report The European Investment Bank (EIB) is an EU institution with headquarters in Luxembourg. It is "financially autonomous" with a capital of EUR 243 billion and a total staff of over 3 800. As the 'EU bank', the EIB finances and advises on investments worldwide. The institution published its first sustainability report in 2007 and has aligned it with the Global Reporting Initiative reporting guidelines since 2008. Its latest report (2018) consists of two documents: the Sustainability Report and a document containing information on sustainability reporting in 2018 (Sustainability Reporting Disclosures)

5. Conclusions

In order to implement the European and UN provisions on sustainable development in Romania, the Department for Sustainable Development was established by Government Decision no. 313/2017. The Department operates within the Government's working apparatus, subordinated to the Prime Minister, financed from the state budget through the budget of the General Secretariat of the Government. The Department has the following roles:

- coordinating the implementation activities resulting from the set of 17 Sustainable Development Goals - SDGs of the 2030 Agenda;

- planning and integration of data and information communicated by the institutions with attributions in the field, in order to formulate proposals for measures to improve the efficiency of the processes/documents developed by the public administration authorities, reporting to the Government on the elaboration or implementation of the set of measures through sustainable development at national level and coordinating the activities of localisation and prioritisation of specific targets and objectives elaborated by the specialised public administration authorities;

- monitoring sustainable development indicators established at European Union and United Nations level, as well as specific indicators, adapted to Romania's conditions, on possible gaps and on measures to remedy them;

- to formulate proposals for adjusting the national targets and deadlines

- and the identification of new indicators needed in the light of both the actual situation and the de facto situation as established by the relevant EU directives, adapted during the process;

- representation of the Department in relations with ministries, public administration authorities, as well as in relations with Romanian and foreign individuals and legal entities.

The Government Session of June 8, 2022 adopted the Government Decision Draft for the completion of the National Strategy for Sustainable Development of Romania 2030 (SNDDR 2030). This legislative act approves the National Action Plan, a key document guiding the implementation of the SNDDR 2030 in accordance with the objectives of the 2030 Agenda for Sustainable Development and EU strategic documents, in all sectoral policies, for sustainable development at national level between 2022 and 2030.

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IMPROVING THE MODERN MANAGEMENT SYSTEM THROUGH THE USE OF INFORMATION TECHNOLOGIES

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Abstract: *This paper represents a theoretical-methodological foray into the possibilities of improving the management system using modern information technologies. In a post-pandemic context, the managerial system of enterprises needs a revitalization, a reorientation towards the insertion of new information technologies in its activity that would help the management of companies to perform their managerial functions efficiently. The purpose of the research is to identify solutions to increase the efficiency of the management system using the most modern information technologies. The research methodology focused on the use of several research methods such as: analysis, synthesis, induction, deduction, abduction, scientific abstraction, documentation. Through the lens of these methods, we had the opportunity to outline relevant conclusions and obtain relevant results.*

Key words: *management, management system, information technologies, modern management, improving the management system.*

JEL Classification: *M10, M13, M15.*

1. Introduction

In the context of the pandemic crisis, of the major disruptions felt in the managerial system of companies, there is a need to identify new competitive advantages that would help the managerial system to adapt more easily to the new challenges, to the new requirements imposed by the new post-pandemic context.

Consequently, a pillar in increasing companies' adaptability to the market consists in the use of information technologies, which help companies to adapt their performance to the new demands imposed by the changes that have taken place. In order to overcome the challenges brought by the pandemic crisis, the need to implement new information technologies in the modern management system has become more important and has become a lifeline, especially for SMEs.

For these reasons, this paper aims to identify the most relevant information technologies applied within companies, aimed at streamlining the activity of businesses that wish to achieve increased efficiency and performance in the activity they carry out.

2. Contents

The management system is a success lever designed to make the activity of companies more efficient using the most relevant management methods and models that would ensure companies a clearly superior performance compared to its competitors.

Researching the specialized literature, we can mention that managerial studies abound in research focused on defining and identifying the most relevant methods and techniques that can be applied in various contexts.

The researchers S. Robbins, M. Coulter, R. Montana, at the end of the 20th century, point out the following definition of management: "management coordinates activities so that they are completed effectively and efficiently with and through other people". The authors emphasize the role of management to achieve managerial efficiency by animating and coordinating other humans (Robins, Coulter, Montana, 2016). The same idea is also found in the works of J. Naylor, 2004, who evaluates management as "the process of achieving organizational objectives, by attaining efficiency, effectiveness and equity, in the

context of limited resources, tasks with and through other people” (Naylor, 2004). From the definition offered by the researcher Naylor, we highlight the special role of management in forming, evaluating, and ensuring the efficiency, effectiveness, and equity of the enterprise, with and through employees.

The researchers A. Hitt, S. Black, L. W. Porter, 2012, point out that “management is a too complex concept for a precise definition” (Hitt, Black, Porter, 2012). According to the authors’ opinion, it is observed that the management process is a complex process, which includes several activities that must be carried out with maximum precision and in a timely manner in order to achieve organizational performance. The same idea is cultivated by R.W. Griffin, 2013, who reiterates that “management includes a set of activities (including planning and decision-making, organizing, leading and controlling) directed at the resources of an organization (human, financial, material and informational), with the aim of achieving organizational objectives in a efficiently and effectively” (Griffin, 2013).

Five years later, researchers A. Kinicki, B. K. Williams, in 2018, mention that “management consists in getting work done via others” (Kinicki, Williams, 2018).

The Academy of Management, 2018, in its attempt to define management, does not provide its own definition, but only refers to an external online dictionary on its website where management is “the act or manner of managing; manipulation, direction or control” (Academy of Management, 2018).

With the passage of time, the views of management researchers are becoming more and more dispersed, as Boddy, in 2017 mentions “management is a universal human activity in domestic, social and political environments, as well as in organizations” (Boddy, 2017). Indeed, the term management is widely used in everyday language and even in the organizational world and applies to areas as diverse as data management or conflict management.

In modern theory, there are many definitions of the term “management”:

- achieving results through human effort;
- creating and maintaining an internal environment in a company where they can work in efficient and effective individual groups to achieve common goals;
- the process of planning, organizing, leading, and controlling to formulate and achieve objectives based on human work and the use of resources;
- the process in which managers create, implement, and manage the organization through a systematic, coordinated, and cooperative human effort.

According to our opinion, management represents a complex system of relationships that are established between the company’s subsystems, in order to achieve organizational objectives, through the lens of the efficient use of resources in order to ensure organizational performance.

At the core of our definition is the approach to management as a system, which involves an integral approach to the study of the relationships of the subsystems of an organization in order to organize the achievement of the established objectives. Therefore, this requires an integrated approach that could reduce the conflict between different subsystems and the modification of the objectives of these subsystems in order to reach the optimal solution of the problems that may arise in the achievement of the main objectives or in the operation of the whole system.

The systemic approach of managerial science derives from the need to achieve organizational performance, which can only be achieved by animating and coordinating the activities of all elements of the subsystem.

The managerial system can be shown schematically in Figure 1.

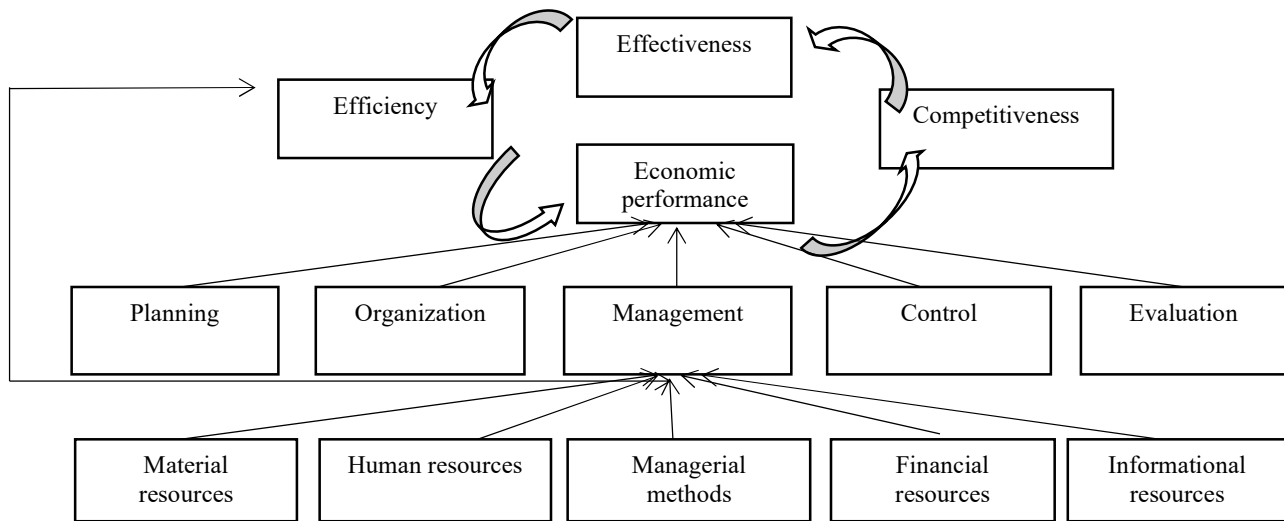


Figure 1. The Systemic Approach to Management

Source: elaborated by the author

Analyzing the management approach as a system, we can point out some defining aspects:

1. Management involves the correct management of resources in order to achieve organizational performance at the level of all subsystems;
2. Management involves the successful performance of managerial functions in balancing all subsystems;
3. Management focuses the team's efforts towards achieving the efficiency, effectiveness, performance, and competitiveness of the entire system.

In the context of the research carried out, we can identify the efficiency factors of the modern managerial system that we have shown schematically in Figure 2.

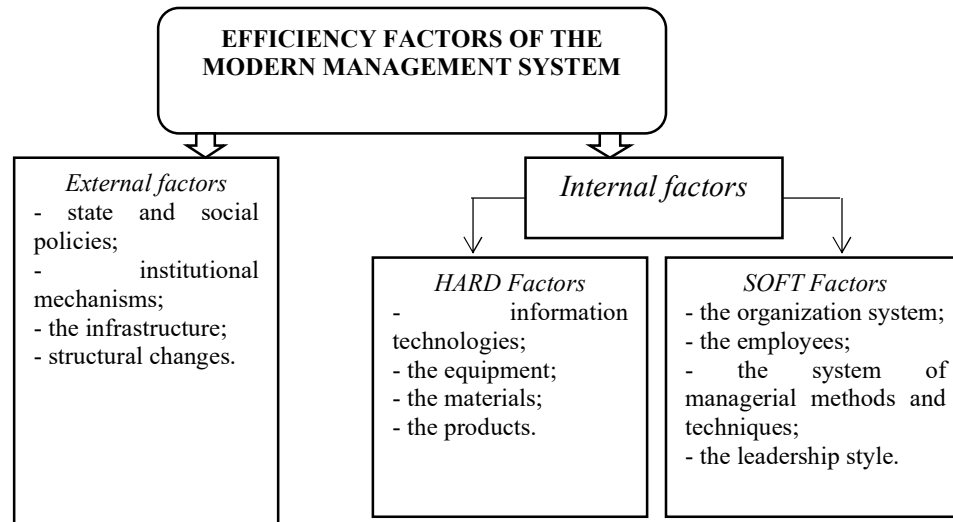


Figure 2. The Efficiency Factors of the Modern Managerial System

Source: elaborated by the author

In conclusion, we can mention that management is a complex field, which has registered a multitude of approaches, which have helped it to establish itself and acquire new dimensions and spheres of applicability. Drawing a chronological map of the

approaches of researchers in defining management, we can mention that over time researchers identified management by means of the managerial functions that a manager performs in his activity. At the same time, another characteristic of management is the achievement of organizational objectives through other people, in terms of performance and competitiveness.

Every manager tries to develop a modern management system, focused on competitiveness and sustainability. The factors that contribute to the formation of the efficiency of the modern management system are: external factors - rendered through the prism of macroeconomic policies, institutional mechanisms, infrastructure, structural changes. In addition to external factors, an important weight is given to internal factors, rendered through the prism of “hard” factors – that is, of technologies, equipment, materials and products used, but also of “soft” ones – rendered through the company’s organizational system, employees, managerial methods and techniques, leadership style.

The important changes resulting from the information technology sector have become the source of basic changes in business management. The most important changes are rooted in the fact that technology has allowed managers to highlight the necessary information and monitor the work of their employees (Oprea, Airinei, Fotache, 2002).

In recent years, research in the field of management amplifies the importance of information technologies for business success.

In 1998 research carried out by the Nolan-Norton Institute showed that the use of information technologies in management is reflected by the quality of the new managerial methods applied (Pascari, 2021).

According to D. Danaiata, 1998, information technologies offer several advantages for the business world, such as operating speed, stability, and data compatibility, promoting organizational efficiency and improving productivity, controlling internal processes (Danaiata, 1998).

At the same time, researchers D. Oprea, D. Airinei, M. Fotache, 2002, appreciate that information technologies remain a tool that makes changes in work, integrates organizational duties, and contributes to stimulating organizational competitiveness (Oprea, Airinei, Fotache, 2002).

The use of information technologies can reduce transaction costs through electronic data transactions and shared databases, can eliminate intermediaries in organizational processes. Using computers and communications equipment, data, audio, images, sound and even video can be shared.

Schematically, the modern management system is shown in Figure 3.

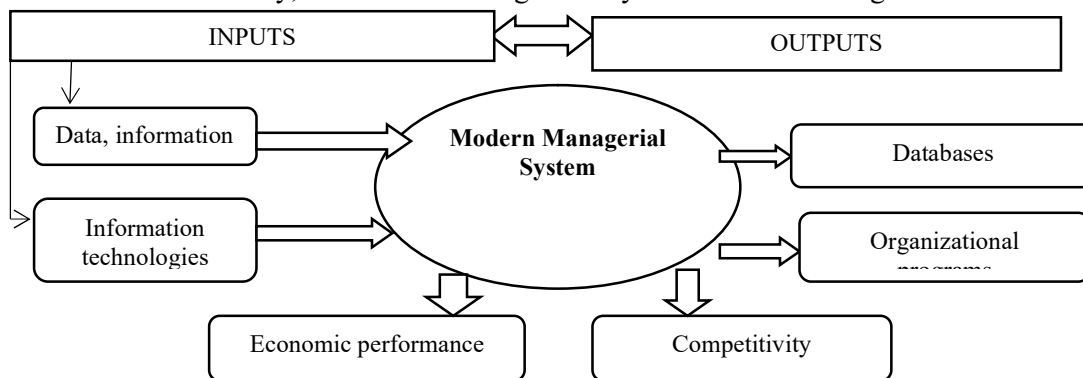


Figure 3. The Role of Information Technologies in Achieving Economic Performance
Source: elaborated by the author

According to the data in Figure 3, we can see that companies that apply information technologies in business, achieve a high level of economic performance and tend to achieve competitiveness by forming strategic competitive advantages.

The main information technologies that can be applied in enterprises differ from one company to another, from one country to another. However, the most important information technologies are shown in Figure 4.

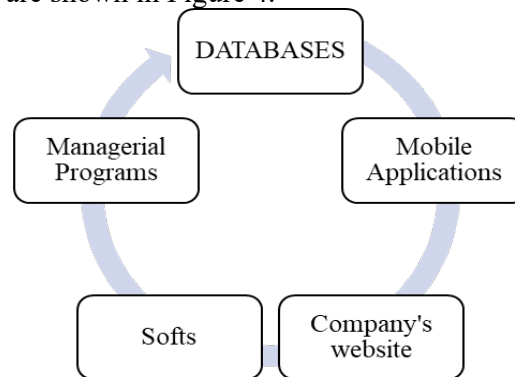


Figure 4. The Main Information Technologies Applied in Management

Source: elaborated by the author

The most modern information technologies that are applied by companies all over the world are: mobile applications, software, programs, databases, interactive websites, etc., which help companies to anticipate the wishes of customers, apply relational management and become competitive enterprises.

Currently, national economies are affected by rapid changes that synergistically impact all subfields of activity. These developments are due to the paradigm shift from a production-based economy to an information-based one.

On the other hand, the globalization of business involves major changes in the activity of companies. National markets have been influenced by foreign and international (multinational) enterprises. Commercial companies, trying to survive and maintain competition with other countries and companies, must introduce rapid changes in managerial paradigms.

A useful tool that has been applied within companies is information technology that has modified the managerial system of enterprises by infiltrating a new managerial tool focused on achieving success and streamlining processes.

Undoubtedly, managers have a fundamental role in shaping the development approach of organizations where information technologies have proven to have a decisive impact on business success and in achieving organizational performance.

However, it is clear that IT, by creating a wide spectrum of information that records the smallest events and information, helps managers to plan and take decisions by analyzing updated data, to make a bright future for themselves and their organizations.

Information technologies allow managers to quickly control and coordinate the performance of the organization with their management through rapid feedback and solidarity, using the rapid information process. In general, getting information technology right and accurate seems to be difficult. In 1980, the computer was the only technology that was identified as information technology. Nowadays, IT has become like an umbrella that includes a group of equipment, services, functions, and basic technologies.

3. Conclusions

In conclusion, we can note that modern companies, which want to stay on the market, are required to resize their management system through the prism of:

- the introduction of new information technologies – company managers, in order to strengthen their position on the market, must increase the application of information technologies that will help them reach a higher level of performance;
- the application of the new managerial models – in order to overcome the negative effects of the pandemic crisis, companies must review their managerial methods and models in order to adapt them to the new demands imposed by the new context;
- the intensification of the exploitation of SOFT factors – in order to achieve managerial efficiency, there is a need to intensify the SOFT factors of the managerial system that will contribute to the efficiency of achieving organizational objectives through the effective use of human potential;
- the implementation of modern management methods – the application of modern management methods will help companies to collaborate effectively with all their stakeholders and to overcome the challenges imposed by the pandemic.

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ADAPTING THE MANAGEMENT STRATEGY TO THE NEW POST-PANDEMIC CONTEXT

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Abstract: *The present paper represents a complex approach regarding the research of the possibility of adapting the managerial strategy to the new post-pandemic context. We are all aware that in the context of the pandemic, companies had to adapt their business strategy to the new context, to identify new viable solutions, which would help companies overcome the challenges brought by the global crisis. Thus, any economic agent had to adapt its managerial approach to a new context, to reorganize its strategic objectives, to define the applied strategies, to identify new competitive advantages that would help them to position themselves strategically on the market. Thus, the managerial strategy has undergone changes, trying to adapt to the new context and to face the new challenges. The main objective of this study is to identify the adapting options of the management strategy to the new post-pandemic context. The research methodology focused on the use of the following methods: analysis, synthesis, induction, deduction, abduction, comparative analysis, qualitative research through documentation. In conclusion, we can reiterate that the application of a proactive strategy, innovative strategies, can help companies in crisis to adapt more easily to the new context and overcome challenges, problems and identify new market segments, competitive advantages that will help them stay on the market.*

Key words: *managerial strategy, strategic management, strategy development, pandemic, innovation.*

JEL Classification: *L21, L26, M10.*

1. Introduction

The Covid-19 pandemic has reshaped the activity of every individual citizen. Each of us has been hit hard by the global Covid-19 health crisis. The business environment was also drastically hit by the pandemic, imposing on economic agents the need to quickly adapt to the new context. Those companies that managed to adapt, applied strategies, innovative management methods, managed to stay on the market, the other companies had to leave the market.

The need for adaptability arises in the context of multiple changes that characterize the business environment of companies. The emergence of new competitors, new products, the application of new managerial methods, point to the need for change, adaptation through the prism of generating new strategies, managerial models, which would help companies resist the new changes on the market.

2. Contents

The specialized literature abounds in multiple studies carried out by various researchers in the field of strategic management, where the effectiveness of various strategies applicable in different contexts are analyzed. Accordingly, the researchers Rahimnia, Castka and Sharp (2005) argued that, within companies, various types of strategies are applied that have been established in the activity of different organizations (publishing companies, automotive industries, hospitals, administration, ICT companies and tertiary institutions) (Anwar, Hasnu, 2016, p. 25).

The researcher Bryson (2004, p. 6), defines strategic planning as “an effort to produce fundamental decisions and actions that shape and guide the existence of an organization, which makes it” much broader than the program, the project, the budget, thus, strategic planning is a “general” approach that solves the more serious problems

facing an organization’s long-term efficiency and effectiveness (Anwar, Hasnu, 2016, p. 6).

The use of strategic planning has grown reasonably in recent decades as the need to respond promptly to emerging problems has been recognized. Again, it is imperative that companies need to adapt to new changing circumstances and future-proof themselves in a determined way to ensure continued viability and adapt to the changing environment (Berman, West, Poister, Streib).

Several procedures have been postulated for conducting formal strategic planning attempts (Bryson), but all the advocates of strategic planning emphasize the need for flexibility in modeling the process, to adapt to new circumstances and the needs of the organization at a given time.

The success factor in carrying out the strategic planning process is the successful formulation and implementation of the managerial strategy. Thus, the managerial strategy emerges as the basic link in the successful implementation of the strategic planification process.

Making a chronological foray into the evolution of the postulates related to the concept of strategy, we can outline the fact that the given concept was founded from ancient times, in ancient Greece and China, before our era, where strategy was applied in the field of defense, military, and presumed as a science that teaches you the art of being a military leader, of achieving victories without coming into conflicts (Figure 1).

With the passage of time, the specialized literature abounds with a multitude of approaches to the definition, role and importance of business strategy and highlights the need to formulate effective and successful strategies to ensure the opportunity for companies to obtain leading positions in the market in order to achieve competitiveness.

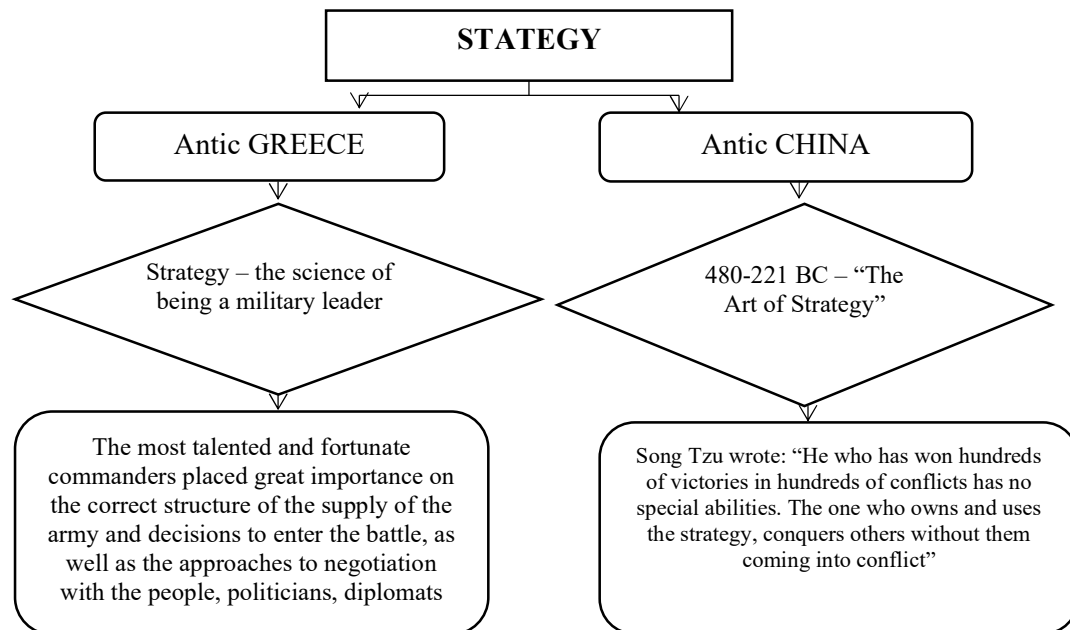


Figure 1. The Essence of the Evolution of Approaches to Managerial Strategies

Source: adapted by the author as stated by [9, p. 1984]

We have summarized the most relevant approaches of specialists in the field in Table 1.

Table 1. Conceptual Approaches in Strategy Definition

Autor	Approach
J. Quinn	The strategy should: contain clear objectives, the achievement of which is decisive for the overall result of the created situation; supporting the initiative; the main efforts are concentrated at the right time; to ensure such flexibility of behavior to use a minimum of resources to obtain maximum results;
H. Mintzberg	defines the concept of a strategy by the so-called combination of 5 “P’s”: - strategy - an action plan; - strategy - positioning, i.e., actions aimed at overcoming opponents; - strategy - prioritization of actions; - strategy - position in the surrounding environment; - strategy - perspective.
F. Chandler	Strategy is “a definition of the main objectives and long-term tasks and the approval of the course of action, the distribution of the resources necessary to achieve these objectives”.
I. Ansoff	highlights some distinctive features of the strategy: - the strategy development process does not end with any immediate action. Usually, it ends up setting general directions, the promotion of which ensures the growth and consolidation of the company’s position; - the formulated strategy should be used to develop strategic projects using the search method. The role of strategy in search is: first, to focus attention on certain areas or opportunities, second, to eliminate all other opportunities as incompatible with the strategy; - the need for this strategy disappears as soon as the real course of events brings the organization to the desired development; - when formulating strategies, it is not possible to anticipate all the opportunities that will cut through when developing specific activities; - when more accurate information becomes available, the validity of the primary strategy may be questioned.
Floyd	Strategy execution is the managerial activity that aligns organizational actions with strategic intentions or plans
Céspedes	Strategy execution or implementation involves good planning that includes resource allocation and operational problem solving.
Hrebiniak, Joice	The implementation of the strategy is a sequence of interventions regarding the organizational structure of the company
Kotler	Strategy execution is the process that changes plans into action assignments and ensures that such assignments are implemented effectively to achieve stated plans and objectives.
Bonoma	Strategy execution interconnects the outlined strategy with market reality
Favaro	Strategy implementation consists in implementing all necessary strategic decisions and activities and put them into effect.

Source: Adapted based on researchers’ approaches

Interpreting the approaches offered by researchers regarding the definition and role of managerial strategy within the company, we can identify the importance of the approach of formulating and implementing the strategy within a company which consists in carrying out the multitude of interventions in the management of the company in order to transform the objectives, resources, structure, and organizational culture with the intention of achieving the strategic actions of the company.

In our opinion, strategy is a complex strategic approach to formulating organizational objectives, mission, and vision, as well as policies and actions to achieve them, in the context of a dynamic and turbulent environment, which helps companies to achieve a higher level of strategic competitiveness in the market.

The process of developing a managerial strategy involves major efforts on the part of the top manager, because it is necessary to assess the current situation, the objectives, the

resources, and the potential of the company, in the context of achieving the strategic objectives of the company with the selection of the most effective approaches.

Schematically, the strategy development process is represented in Figure 2.

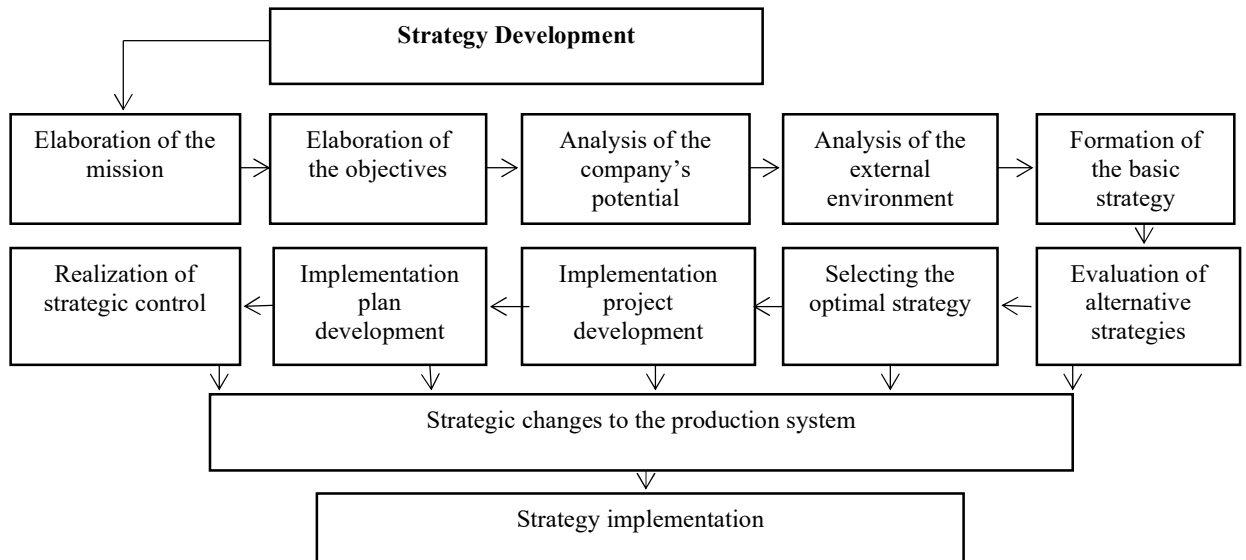


Figure 2. The strategy development process

From the data in the Figure, we can outline several important stages that harmoniously fold and contribute to the process of developing a business strategy. Each of these stages helps illustrate the company's efforts to adapt to the dynamic and turbulent external environment. The efforts to realize the strategy are accompanied by the multitude of beneficial effects that are brought by the process of implementing a successful strategy within the business. This approach is rewarded by strategic positioning on the market, ensuring an attractive assortment and juggling the most relevant strategies in order to attract and retain customers.

On the other hand, researcher Mintzberg identifies a series of stages necessary to be able to carry out the strategic planning process of a company. In Figure 3, we have shown the schematic process of carrying out strategic planning within an enterprise.

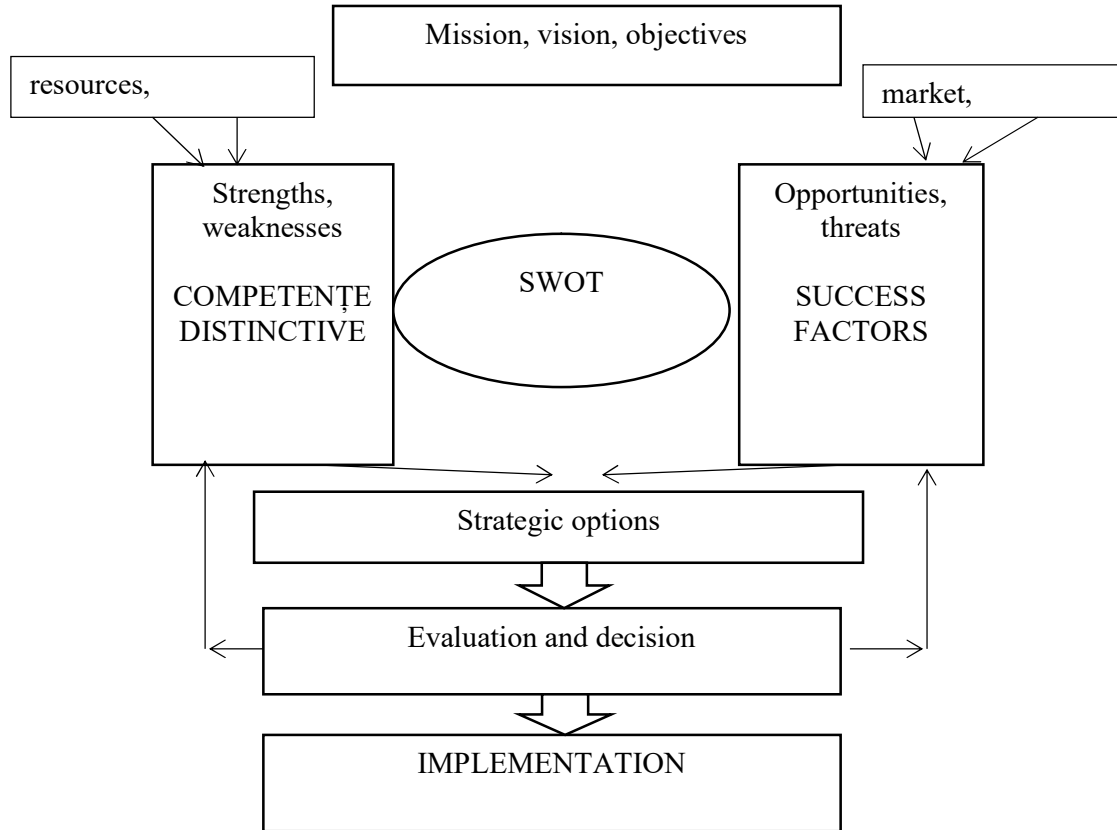


Figure 3. The Process of Strategic Planning within an Enterprise
Source: adapted by the author as stated by [13, p. 53]

Analyzing Mintzberg’s approach to strategic planning, it is observed that it involves a dynamic process of anticipating certain aspects of market evolution, evaluating the company’s internal situation, but also identifying development alternatives in the context of environmental factors that can had a positive or negative influence. This process is based on the SWOT analysis, which helps the company to self-evaluate and identify the strengths, weaknesses, opportunities, and threats that may affect it.

On the other hand, there is also the model of the modern approach to strategic planning which sums up to the following activities shown schematically in Figure 4.

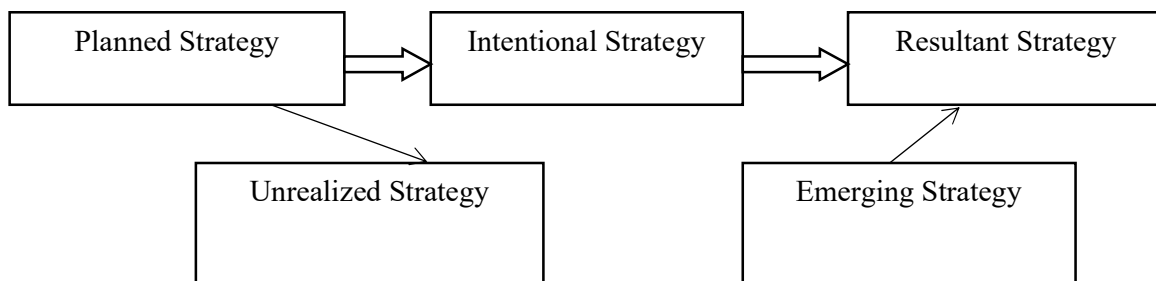


Figure 4. The Modern Approach to the Strategic Planning Process
Source: adapted by the author as stated by Mintzberg, I H, Quinn JB., 1991, p. 57.

Based on the analysis of Figure 4, we notice that although it seems to be simple, this model is a complex one, because it is based on an analysis and on the adaptation of some managerial decisions. This model lends itself to the management-as-art approach, but also to the traditional management-as-science approach. Thus, we can conclude that the classical approach is more rigid, it establishes some strict notions, a perfect model that companies should follow, while the modern approach is realistic and shows how today's companies, operating in a turbulent environment, can carry out strategic planning.

In their works, researchers N. Rosenberg and L. E. Birdzell point out the connection between the economic development of Western countries, the implementation of a continuous search for opportunities and the adaptation of changes favorable to further growth, that is, with innovations (Luoma, 2015, p. 1083).

To solve the problem of emergence towards innovative development, it is necessary to study the theoretical aspects of innovative managerial strategies. Researching the theory of innovative development requires, first, the study of basic concepts such as success factors in ensuring the efficiency and effectiveness of managerial strategies (Table 2).

Table 2. Success Factors in the Implementation of Managerial Strategies

Autor	Success Factors
Norton, Kaplan	- managerial skills; - organizational policies; - allocation of resources; - rewards / incentives.
Nyamboga, George	- process and personnel factors; - project factors; - organizational factors.
Noble	- communication; - stimulation of organizational structure change; - competent employees.
Yip	- organizational structure; - culture; - the people; - innovative managerial processes.

Source: Adapted by the author based on researchers' approaches

We believe that the list of success factors in strategy implementation should never be considered definitive, as several schools of strategic management thought have their own assumptions and suggestions, also the environment matters a lot when it comes to strategy implementation (Okumus, 2003, p. 874).

In their works, researchers Njagi, Kombo reiterate that a good strategy can give an organization a competitive advantage and equally give the opportunity to increase its performance [14, p. 65]. Moreover, according to researcher R. Miles, organizations that implement their strategies effectively generally do better than those that do not (Miles, Snow, Meyer, Coleman, 1978, p. 548).

On the other hand, D. Chetchen mentions that the main cause of strategic management failure is the wrong implementation of the strategy (Ketchen, 2003, p. 95). Therefore, researcher Noble argues that business strategies can be formulated using best practices, but they can fail if not executed in a correct way (Luoma, 2015, p. 1084).

J. Anwar, S. Hasnu, mention that "a successful strategy implementation also depends on many positive results achieved by organizations, such as: increasing customer satisfaction in customer loyalty, satisfying organizational need and demand, and giving the organization an advantage over its rivals. Correct application of the strategic planning

process also contributes to increased productivity, improves quality, and increases profit” (Anwar, Hasnu, 2016, p. 23).

In a recently published paper, Rebecca Anderson (2020) from Harvard Business School explains that in the (post) pandemic context managers now have no choice but to totally reinvent the managerial system through the prism of proactive managerial strategies.

The Covid-19 crisis has brought this debate into focus. Attention to performance, along with respect for individuality within groups and commitment to the good of society, innovation and sustainable competitiveness are the key pillars of success in the (post) pandemic context. These values quickly came to the fore in the form of decisive measures taken to protect citizens, respect individual freedom and prepare for the economic recovery of countries affected by the crisis.

Leaders in both the public and private sectors are very aware of the impact of the crisis on the managerial system that has imposed a forced pause, a moment of reflection on a global scale, where economic agents are forced to learn the lessons of the current crisis.

Next, we show the six major dimensions of the characteristics of the management system applied in the (post) pandemic context shown in Figure 5.

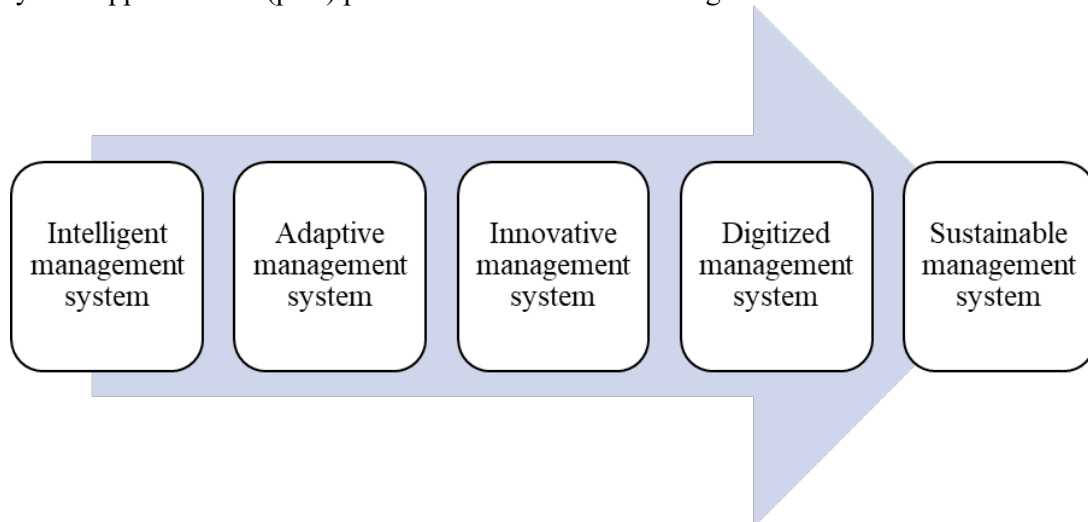


Figure 4. The Characteristic of the Managerial System in a (Post) Pandemic Context
Source: elaborated by the author

In order to overcome the negative effects of the pandemic crisis, managers must apply an innovative, adaptive, and intelligent managerial system, which would focus on the company’s development efforts but would also implement the latest information technologies in the company’s activity, along with the concerns of achieving sustainability. Thus, those economic agents who will manage to reorganize their activity in such a way as to identify and implement strategies and innovative managers will manage to stay on the market but also to strengthen their image and notoriety.

3. Conclusions

Following the research carried out in this paper, we can reiterate the following:

- in order to consolidate the position occupied on the market, companies must remodel their managerial activity, but also the strategic steps applied in order to align with the development requirements of society;
- the application of innovative strategies represents a success factor in a (post) pandemic context that companies must apply in order to overcome the negative effects brought by the pandemic crisis;

- the managerial system in a (post) pandemic context is an intelligent, innovative, digitized, adaptive one, anchored in achieving sustainability. Each manager must be responsible for his behavior on the market, towards all his stakeholders, in order to develop the society;
- the application of sustainable management strategies becomes a necessity for adaptive, innovative, and competitive companies.

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THE CHANGES IN THE WORK STYLE OF THE MANAGER IN THE STRUCTURES OF BORDER POLICE WITHIN THE NATIONAL CONTEXT AFFECTED BY CRISIS

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***Abstract:** Surveillance of the EU's external border has now become a sine qua non element for the proper functioning of the public, national, European security system and its key mechanisms. The three classical styles (authoritarian / autocratic, democratic / participatory and permissive / free) that have been based so far in many specialized works, are far from exhausting the existing palette in practice. In the current context, we argue that the manager's work style influences the external crises and the effects of the crises on the entity's performance. Starting from this idea, in this article we asked ourselves the following questions: What changes are taking place in the work style of the M.A.I. manager in the national context affected by the crisis? Is there a link between the work style and external crises? What would be the main tools and techniques for adapting to the external crises? In order to find out the answer, we undertook a qualitative research based on an interview on a section chosen from the structure of the Romanian Border Police.*

***Keywords:** motivation, human resources, management, performance.*

***JEL Classification:** M12.*

1. Introduction

In the context of the responsibilities assumed by Romania, as it results from the common position of the European Union, it is necessary to reposition the current system of public order and security, so that the priority effort of the Ministry of Internal Affairs to be focused on streamlining the services of all public institutions that are supposed to ensure public safety of the citizen and of the borders of the state. The public order structures within the Ministry of Internal Affairs must be flexible, mobile structures capable of integrating into the global and security architecture of the European Union. Romania is thus contributing to the conceptual completion and implementation of the NATO system in response to international crises, in order to ensure a climate of national order and security, in close connection with the provisions of the agreement with the European Union on participation in crisis management operations.

The area addressed in this article is current in the context of the imminent emergence of external crises, as well as in the context of the creation of an adequate management system to minimize their negative effects. Practically, at the moment, the surveillance of the EU's external border has become a sine qua non for the proper functioning of the public, national, European security system and its essential mechanisms. In the context presented above, we asked ourselves the following questions:

- What changes occur on the work style of the manager from M.A.I. in the national context affected by the crisis?
- Is there a link between the work style and the external crises?
- What would be the main tools and techniques for adapting to external crises?

We start from the premise that an increased performance is possibly caused by a managerial work style adapted to the internal and external environment (in which crises can arise at any time). In order to find out the answer, we undertook a qualitative research based on an interview on a sample chosen from the structure of the Romanian Border Police. Thus, through the interview, we test the influence of the work style practiced by the

Border Police managers on external crises and identify effective tools and techniques applicable to the field studied to prevent, reduce or counteract the effects of external crises.

2. The methodology of qualitative research

The interview we will conduct is a documentary interview. The qualitative research (namely the unstructured interview and the in-depth interview) was chosen in order to gain in-depth knowledge of the opinions of specialists on the relationship between the work style of managers in the Romanian Border Police structures and the external crises. The sampling method was random, the target group of the interview was represented by the heads of the territorial structures directly subordinated to the General Inspectorate of Border Police from Satu Mare, Maramureş and Suceava counties, which would have possibilities to observe and analyse the managerial work styles within these territorial structures and directions. The interview is structured in five open-ended questions. Seven people with leadership positions within the Territorial Inspectorate of Sighetul Marmătiei Border Police were interviewed. This territorial structure¹ has the mission to ensure:

- surveillance of the border and the control of its crossing with the Republic of Hungary on a length of 97.8 kilometres;
- surveillance of the border and the control of its crossing with the Republic of Ukraine on a length of 366.5 kilometres;
- compliance with the provisions of treaties, agreements, conventions and border protocols concluded with the Republic of Hungary and Ukraine and of the international ones to which Romania is a party, regarding the state border

Starting from the field of research, the interview conducted pursued three objectives:

O1. identifying the main effective tools and techniques for preventing, adapting and managing external crises;

O2. identifying the perception of specialists regarding the degree of influence of the managerial work style on external crises;

O3. description of the way in which the work style practiced by the Border Police managers helps to prevent, diminish, counteract the effects of external crises.

Starting from the first proposed hypothesis, namely that the work style of managers in the Romanian Border Police structures greatly influences external crises, by preventing, mitigating and counteracting crises, through the interview we will test three hypotheses and focus on identification within police structures Effective tools and techniques for preventing, mitigating and counteracting the effects of external crises.

Thus, through the qualitative research, we want to verify the validity of three hypotheses of this research:

- the work style of the managers from the public institutions subordinated to the Ministry of Internal Affairs directly influences the external crises in a proportional way;
- the work style practiced by the Border Police managers helps to prevent, diminish or counteract the effects of external crises;
- the identification of effective tools and techniques for preventing, mitigating and counteracting the effects of external crises is verified only by qualitative research.

¹ <https://www.politiadefrontiera.ro/ro/structura-teritoriala-sighetu-marmatiei/>, accesat 10 ianuarie 2022, ora 17:30

3. Case study

Through this qualitative research we want to check the perception of the interviewees on the relationship between the work style of managers (leadership style) and the external crisis, and at the same time to know the main tools and techniques applied by managers on prevention, mitigation, di-mitigation, in a word, external crisis management.

The profile of the interviewed

The interviewees are seven people with management positions (deputies of the territorial services: Satu Mare, Maramureş, Suceava, but also from different departments such as human resources, communications and informatics, operational management) within the Territorial Inspectorate of Sighetul Marmăţiei Border Police, highlighted in figure 1.

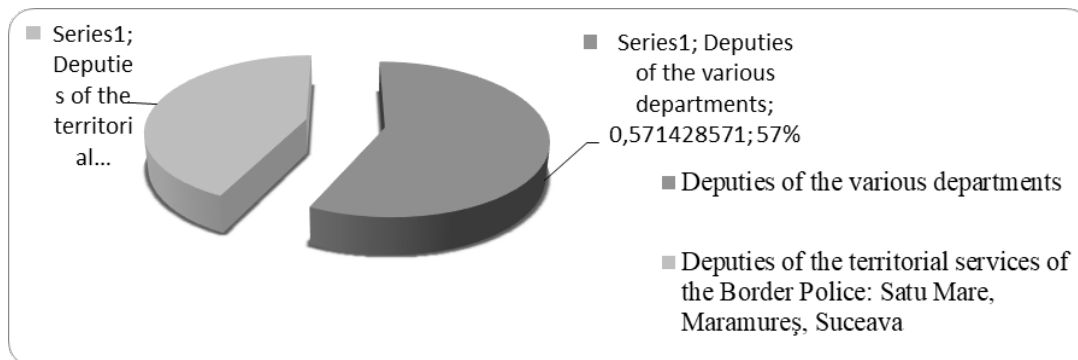


Fig. 1. The field of activity of the interviewed persons

Source: Developed by the author

Qualitative research results:

✓ In the first question of the interview: What does “work style” mean to you? we wanted to know the level of understanding of the phrase “work style” and we found the almost total association of the term with the way of being, of acting, of behaving of the manager towards subordinates. One of the interviewees from the human resources department states that the work style is that “*practical way of influencing employees based on the status, principles and norms of the activity*”. Concluding the work style implies a combination of “*knowledge and skills, reflecting objective needs and particularities of the psychic structure of the manager*” (deputy within the operational management service).

✓ The second question of the qualitative research: In your opinion, is there a link between work style and external crises? is one to check the evidence of the relationship between work style and external crises. Otherwise, all interviewees argued that this relationship existed. Only one respondent mentioned that there is a relationship of “conditioning imposed by the managerial style on external crises” (deputy of the communications and IT service).

✓ How do the manager's work style influence the external crises that arise? Most of the interviewees (approximately 86% of the interviewees) confirmed the high degree of influence of the manager's work style on the external crises in the economy (figure 2. is representative for the measure of the influence exerted by the managerial style).

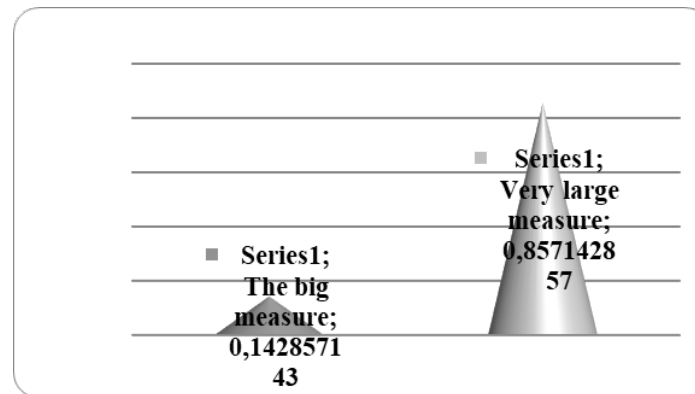


Fig. 2. The influence exerted by the managerial style within ITPF Sighetul Marmatiiei

Source: Developed by the author

A response from a deputy from the Territorial Inspectorate of the Border Police support his conviction regarding the image of a good manager, ie that manager who “is obliged to adapt to situations, to notice the essential elements, to treat employees differently and the problems they face. raises them ”(deputy from the human resources service)

✓ Through the fourth question: What do you think would be the main tools and

techniques for adapting to external crises? Identify the level of awareness among staff in the structures of ITPF Sighetul Marmatiiei of the solutions applied in case of external crises. Thus, the interviewees acknowledge that the main tools used in the management of crisis periods are found in *“the staged content of the techniques of approach and adaptation to the crisis and its effects”*. Respondents believe that there is a need for *“a comprehensive crisis response strategy (crisis management), a well-trained group of specialists (crisis cell) and an appropriate communication policy (crisis communication)”* (deputy from the territorial service of the Border Police: Maramureş). If the preparation stage has led to the elaboration of some crisis plans, then the institution through its managers (implicitly through their work style) has a control over the crisis, otherwise, it can try to control only when and how the information referring to this event will be distributed. This is *“particularly important”* because, *“from this moment on, the public and the press become aware of the existence of the crisis and keep the institution under strict supervision”* (deputy from the territorial service of the Border Police: Satu Mare).

✓ In the last question of the interview: What changes are taking place on the work style of the manager from M.A.I. in the context of the national crisis?, most of the interviewees express the difficulty they went through during the crisis caused by the Sars-Cov-2 virus, and claim that their work style changed between March 2020 and March 2022. Thus, they claim that *“when the crisis strikes, every day, habitual activities change”*, there is *“an exit from the comfort zone”* (deputy from the human resources service). Different emotional states can occur within the institution and only an effective management style can have an influence on the crisis, so that *“all difficulties end up being managed”* (deputy from the territorial service of the Border Police: Satu Mare).

Certainly, the manager's work style and even the activity of the institution will undergo direct changes both in the approach and in the application of the appropriate measures to the crisis management. Usually, the beautiful, famous *“brand image”* (deputy from the territorial service of the Border Police: Satu Mare) is built in the normal periods, when the set of values and representations through which the public perceives the respective organization is outlined. A deputy from the ITPF Sighetul Marmatiiei

departments states very eloquently that “*crisis management cannot be improvised: on the contrary, it is based on the correct assessment of the circumstances and the mastery of adequate response strategies, strategies prepared and even experienced long before the onset of the crisis*”. In this context, crisis response programs, designed and implemented, must be based on different communication strategies, able to influence the public and change the way they interpret that crisis.

4. Conclusions of the study on the relationship between the work style practiced by the Border Police managers and external crises

The definitions collected following the quantitative research on the phrase “work style” have as common points the set of “*knowledge and skills ... particularities of the psychological structure of the manager*” (deputy within the operational management service), used in relation to subordinates or others team members.

Therefore, all the interviewees argued that there was a relationship between the work style and the external crises. Most of the interviewees (approximately 86% of the interviewees) supported the high degree of influence of the manager's work style on the increasingly frequent external crises in today's society.

Thus, the interviewees acknowledge that the main tools used in crisis management are found in the preparation or prevention of the external crisis, a global crisis response strategy (crisis management), a group of well-trained specialists (crisis cell) and an appropriate communication policy (crisis communication)” (deputy from the territorial service of the Border Police: Maramureş). If the preparation stage has led to the elaboration of some crisis plans, then the institution can have some control over when and how the crisis will break out, if it cannot have control over the crisis, it can try to control when and how the information about this event will be shared. This is a priority because “*from this moment on, the public and the press become aware of the existence of the crisis and keep the institution under strict supervision*” (deputy from the territorial service of the Border Police: Satu Mare). In other words, the manager has crisis management tools and techniques at his hand. Legislative instruments that can be used legally and specific enforcement techniques can be used. Unfortunately, the interviewees did not provide much information about the existence and variety of these tools and techniques to adapt to external crises.

The interviewees' perception of the influence of managerial work style on external crises is favourable to the validity of the central hypothesis of this research. Namely, it can be seen from the graph created that most of the interviewees state the existence of a major influence, the percentages exceeding 66%, in case of preventing and counteracting the external crisis, and reaching the threshold of 100% in case of crisis reduction.

Therefore, the perception gathered from the qualitative research is that the changes in activities, missions, way of working, work schedule have changed and so has the mood, both inside the institution and outside it (the case of civilians). A crisis deeply affects the image of an organization, and the managerial style is the only one able to influence the effects of external crises.

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FDI- EXPORTS-GDP NEXUS IN THE REPUBLIC OF MOLDOVA

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Abstract: Exports and FDI are important tools of Governments to stimulate economic growth and prosperity. Many countries implemented successfully export led-grow models in their development path. Being a small European transition economy affected by mass migration, Moldova is trying to change its consumption led growth model fueled by remittances by an investment and export growth led model, where FDI have to be an important driver. Though, FDI inflows in Moldova are small comparative to many European countries, the economic growth is slowing down on long term, while there is slight improvement in export competitiveness. The aim of this paper was to analyze the long term causality between FDI, GDP and exports of goods in the Republic of Moldova. Estimations were performed based on the available data for the period 1995-2021. The Granger causality approach has been applied to test the relationship between the 3 variables based on annual data. The authors found a unidirectional causality relationship running from FDI to GDP, FDI to exports, and a Granger causality from GDP to merchandise exports. An impulse-response analysis has been performed based on VECM models. A 1% growth in FDI in Republic of Moldova causes an increase of GDP by 0.09 p.p. and of exports of goods by 0.08%.

Keywords: exports, foreign direct investments, economic growth, Granger causality, VECM model, transition economy.

JEL Classification: F13, F14, F17, F43.

1. Introduction

The relationship between foreign direct investments (FDI), economic growth and exports is a widely researched topic that is of particular interest for decision makers as well. Investments and exports can be important economic development enablers in developing countries, especially small one.

Growing up labor productivity, determined by capital accumulation and total factor productivity (TFP) is essential for a sustainable economic growth. It is a precondition for ensuring population with revenues from sustainable sources. FDI inflows proved to be an important source of human capital, tangible and intangible assets in host countries (Simionescu, 2016) and a driver for increasing productivity. The firms undertaking FDI tend to be more productive compared to the domestic firms and increase the competitive pressure in the local markets having a direct and indirect impact on the host economy productivity (Anuj Joshua Mathew, Kenneth Koo et. al, 2021).

The improvements on a country's productivity has a positive impact on its external competitiveness. Exports in turn may increase firms productivity by learning in the process of internationalization (Wagner J., 2005), by accessing a greater and more sophisticated markets that allow to reduce production costs and motivates them to diversify and produce more value-added products.

Mite Miteski and Dijana Janevska Stefanova (2017), Hlavacek P., Bal Domanska B. (2016), Cičak K. (2015) found that FDI had a positive impact on GDP growth in Central Europe and South-East European Economies (CESEE). According to Moraru C. (2013), the increase by one monetary unit of the FDI inflows in the Romanian economy lead to the increase of the GDP by 1.8 units. A positive bidirectional Granger causality between GDP and FDI was found for the most EU countries by Simionescu M. (2016). However, there are situations when GDP causes FDI growth (Cičak K., 2015; Simionescu M., 2016), corroborating the theory that investors are prone to stable macroeconomic conditions.

According to the Ludosean B.M. (2012) estimations based on a VAR mode for the time periode 1991-2009, FDI have had little effect on Romania's GDP in the first five years of transition. The same positive shock of FDI caused the contraction of GDP in the following years while a shock of + 1% in GDP generated a significant increase in FDI flow, especially in long-term.

FDI inflows to new countries that joined the EU during the previous two decades, especially coming from other members, have played a major role to boost exports in these countries. Foreign investment projects brought to exports restructuring in these countries by making them more technological intensive in the medium term. An example is the development of the automotive industry in these countries. Thouth, many of the Central and South Eastern European countries at the begining managed to attract foreign investors in labor intensive activities by offering a cheaper labor force. This lead to a slow increase in the domestic value-added content of the production (Jirasavetakul, F., Rahman, J., 2018).

Abamu, B. E., Pietrzak, J. (2019) argue that there is a complementary link between vertical FDI and exports. Verticat FDI are efficiency seeking investments projects that are determined by differences in production factors and costs between countries. They lead to value chain fragmentation in different countries accompanied by an increase in export product on in host countries.

2. Some facts about FDI, Exports and GDP evolution in Republic of Moldova

Republic of Moldova is among the transition countries that resumed its economic growth after the Soviet Union collapse late in 90's. Since 2001 the economy has begun to recover with relatively high growth rates, recording an impressive growth in investments and external trade. Althout the world crisis at the end of 2000s disrupted GDP, investments and external trade growth in 2009. The economy recovered fast at its pre-crisis GDP level. But after some years of relatively high economic growth, since 2014 the economy was hit again by a domestic financial crisis in 2014-2015; the crisis caused by the Covid-19 pandemic in 2020 and frequent climatic shocks that impacted negatively the agricultural sector that accounts for about 10% of Moldovan GDP. The economic growth slowed down during the past decade, increasing at significant lower rates comparative to the National Development Strategy targets. On average Moldovan economy grew up slightly faster compared to Central European countries, but the its economic growth is to slow to close the significant gap in GDP per capita compared to these countries (Stratan A., Toaca Z., Fala V., 2021). Moldova's GDP per capita, PPP was 15.6 thousand USD comparative to 36.9 thousand USD in Central Europe.

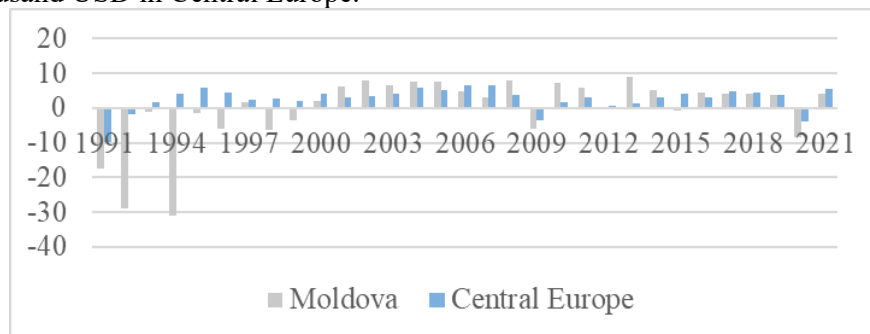


Figure nr. 1. Economic growth in Moldova and Central Europe, YoY % change, 1991-2021

Source: National Bank of Statistics of Moldova, World Bank

The intensity of private and public capital is very low in Moldova. Investment activity declined significantly during the first decade of economic transition and resumed its growth in 2001, both public and private investments increasing at fairly high rates until 2007. Investments in fixed assets slowed down significantly in 2008 and dropped in 2009, because of a sharp contraction of investments in the private, foreign and mixed sectors. Since then, their annual value reached the pre-crisis level only in 2021. Accordingly Gross Fixed Capital Formation (GFCF) relative to GDP reached the highest values in 2007-2008 (34%). Since that its decreased significantly amounting 24% in 2021. The poor investment performance in Moldova is explained by many critical constrains linked to the business and market sophistication, political and regulatory environment, quality and affordability of infrastructure, human capital that also hinder innovation activity (Dutta S. et al, 2021).

FDI used to be an important tool applied by Governments in many central european countries to restructure their economies. Although, the existing researches states that to foster productivity the value of FDI inflows should be in sufficient amounts while linkages between domestic and foreign owned firms have to be developed. Moldova can't be considered a successful case of transition european economies in attracting FDI. During the last 2 decades, Moldova attracted on average 270 mil USD of net FDI annually that is extremely a small amount comparative to other small european countries. In the three Baltic states: Estonia, Latvia, Lithuania the net FDI inflows value were 4 or even more higher than in Moldova during this periode. Moldova attract less FDI per capta (93 USD in 2021) comparative to most european countries (1200USD in Estonia, about 700 USD in Czechia and Latvia, 570 USD in Slovenia, 530 USD in Lithuania, about 400 USD in Serbia and Poland and others). Thus the inward FDI stock was about 4,8 billion USD at the end of 2021 year or about 35% as a share of GDP value. Computed by head of population it amounted to 1.8 thousand USD and by employed person 5.7 thousand USD in 2021, maintaining the large gap compared to countries from central Europe figure nr. 2). Overall the FDI enterprises represent 7.5% of reporting enterprises in Moldova, including 4.6% are foreign owned enterprises. Although there are yet a very weak link between foreign and local companies (World Bank, 2015; World Bank, 2019; NIER, 2020; BIS, NIER, 2021) that is an important action including in public development documents.

As many other countries in the region, Moldova is most attractive for vertical FDI inflows. Most of the greenfield FDI projects do not go to technological sophisticated activities and are labor intensive, although some of these investments are made in economic activities that are considered in EU medium –high technological intensive.

Manufacturing is one of the top sectors that have attracted most of FDI in Moldova. Due to FDI inflows has born a new industry in Moldova - manufacture of motor vehicles, trailers and semi-trailers. About half of enterprises in this branch are foreign owned and the production is export oriented. Yet, the sales per employee of firms with this economic activity, including of foreign owned ones, is twice lower compared to the average recorded in the manufacturing industry.

Free Trade Zones (FTZ) was an important incentive to attract FDI in Moldova, especially in manufacturing. Although since their creation or in two decades the stock of investments in FTZ increased only to 458.9 mil. USD in 2020.

The Republic of Moldova became as well part of the regional value chains in the production of other low value added products like clothes, shoes, furniture. Despite many concerns about these sectors low productivity that are intensive in cheap labor force, there have been achieved low progress in increasing the value added content of the created production.

The gross value added content of manufacturing production in Moldova is the lowest compared to other economic activities. It amounted on average about 34% during 2017-

2020, increasing slightly from about 29% in 2010. Accordingly, manufacturing industry share in GDP (9% in 2011) is rather small if consider the experience of other comparator countries and the high share of agriculture (about 10% in 2021).

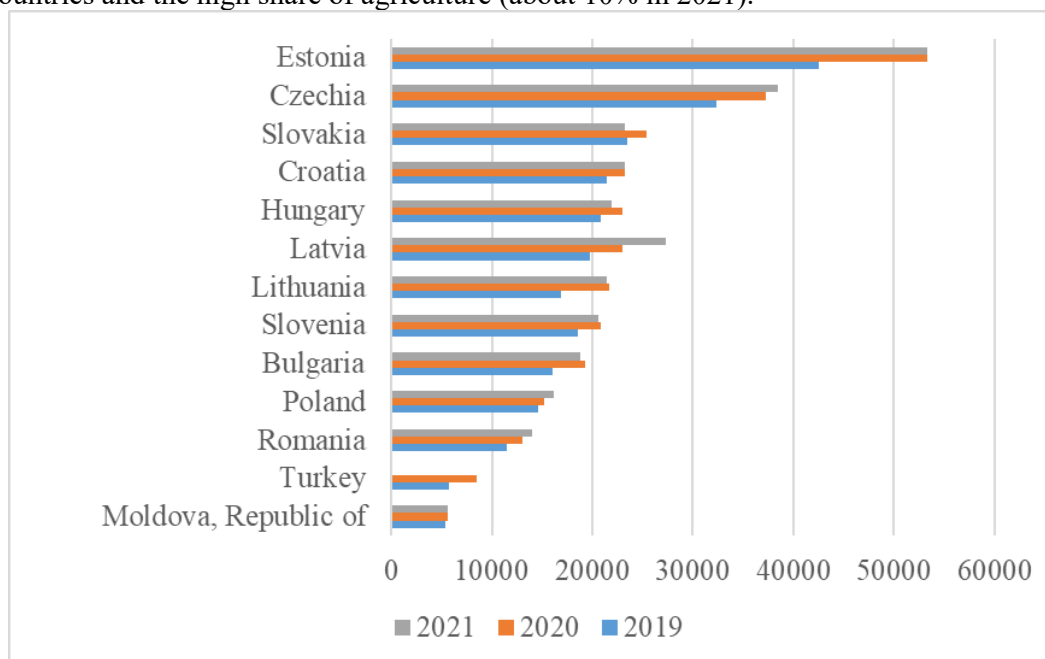


Figure nr. 2. Inward FDI stock per employed person in Central Europe, USD
Source: World Investment Report, UNCTAD

Services accounts for the highest share of GDP, more than 60%. Following manufacturing, the financial services and trade are two economic activities that proved to be the most attractive for foreign investors. But the two sectors are mainly market-oriented investments. Since last decade computer services develops rapidly. Different policy actions were implemented under the National Strategy for Informational Society Development „Digital Moldova 2020” and the Strategy for investment attraction and export promotion 2016-2020 to support the ICT sector. In 2018 was created the Moldovan IT park with the main scope to create a “Silicon Valley” atmosphere and infrastructure in Moldova. The number of residents doubled during 2018-2020, representing 658 companies, from which 22% was foreign own enterprises. These services are export oriented and has a positive impact on export of services, changing its patterns towards a more knowledge intensive structure.

Moldovan external trade accounted for 12 billion USD in 2021, including 9.3 billion USD or 77% the merchandise trade. Despite the relative small share of services in external trade, Moldova is a net exporter of services. On the contrary, the merchandise trade balance is negative and the deficit is huge as relative to GDP share amounting for -31% in 2021. This imbalance in merchandise trade causes a large current account deficit. The three-year backward moving average value of the current account balance as a percent of GDP since 2010 ranges from -5% to -8.8%.

Moldova is exporting less comparative to other countries in the region. It’s market shares in world exports of services is increasing faster comparative to merchandise exports, although in both cases the indicator shows low values comparative to other European countries with similar territorial and population size. The market share of Moldovan merchandise exports remains largely unchanged since the beginning of the economic transition and was about 0.014% in 2021. Other countries in the region have advanced at a

faster pace. Latvia has increased its share of world merchandise exports from 0.021% to 0.094% during 1992-2021, Lithuania from 0.054% to 0.183%, Estonia from 0.01% to 0.10% etc.

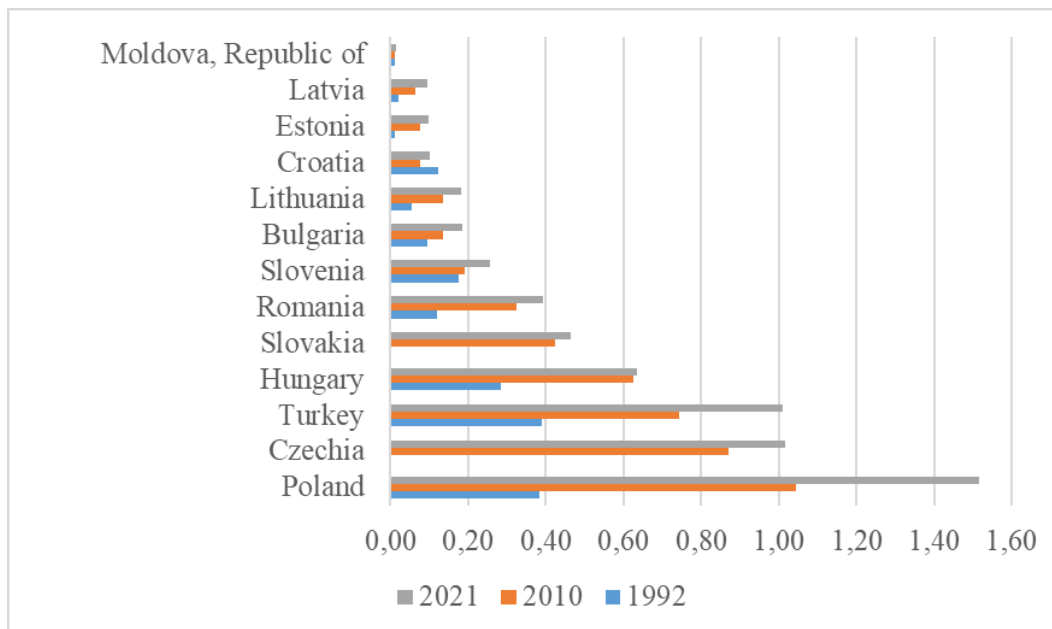


Figure nr. 3. Merchandise exports market share, %

Source: UNCTAD statistics

The average unit value of Moldovan merchandise exports is increasing slow because of its relative low technological sophistication. As of 2021, about 31% of merchandise exports are primary products, 15% resource intensive products, about half are low and medium intensive products and only 2% high tech products. The export of medium technology intensive products has increased significantly during the last two decades having a major contribution to exports growth. Although the value added content of exported goods is rather low (Stratan A., Fala V., 2021). The main commodities exported by Moldova are insulated wires, wheat, sunflower seeds, corn, fruits, wines, apple juice, apparel, furniture, shoes etc. Also the basket of exported merchandise is less diversified and records a higher concentration index (measured by Herfindahl Hirschman Index) on products and markets compared to most Central European countries (Fala V., Fala A., 2019).

The National Strategy for Investments Attraction and Exports Promotions 2016-2020 aimed to rise the exports value and diversification by making the molovan economy more attractive for FDI investments. Although the targets set for FDI inflows, GFCF and GDP growth have not been achieved. Export competitiveness in the Republic of Moldova is hindered by many supply-side constraints: small domestic market, inappropriate quality of institutions and backbone services (World Bank, 2015), weak infrastructure, large informal sector, reduced business sophistication, limited access to external financing, which is expensive etc. At the same time Moldova needs to develop it's institutional infrastructure to suport business, innovations, investments and exports. Special focus should be given as well to attract more FDI projects in high value added activities, to increase and diversify financial support programs that target development of innovative entrepreneurship, productivity and exports and to strenghten the links between foreign and local investors. .

The gap in labor productivity is large in Moldova compared to Central European countries. Despite exporters are prone to be more productive (World Bank, 2019) comparative to non-exporting enterprises, the share of firm exporting directly 10% of their sales was 12% in Moldova according to the World Bank Enterprise Survey (2019) compared to 27.6% in Latvia, 20.7% in Lithuania, 31% in Estonia, 42.8% in Slovenia, 13.3% in Slovakia etc.

The authors hypothesized that FDI inflows have a positive impact on GDP growth and exports of merchandise in Moldova, although the slow economic growth is not an encouraging factor to attract FDI in the country that determines their small level.

3. Methodology and Data

The aim of this research is to estimate whether there is a causality relation among FDI inflows, GDP and merchandise exports growth in the Republic of Moldova and how does one variable influence each other.

Structural models, which include the analysis of time series have been used to test the causal links between the FDI inflows and GDP and Exports. Annual frequency data were used, covering the period 1995-2021. Once FDI and Export are in dollars, it was decided to transform the statistical information of GDP into dollars. For the homogenization of information, the data have been transformed into logarithmic values.

The econometric analysis has been performed following many stages:

I. **Stationarity testing.** In order to be considered stationary, time series must satisfy the following conditions:

- The mean of the time series must be constant or, in other words, the observations must fluctuate around the mean;
- The series variance should be constant.

From an economic point of view, a series is stationary if a shock on the series is temporary (absorbed over time) and not permanent. If a series is not stationary, a stationary series is obtained by differentiation. The order of integration of the series represents the number of successive differentiations necessary to obtain a stationary series. In the case of the studied variables, the stationarity at the level of the series was first tested using ADF (Augmented Dickey-Fuller), PP (PhillipsPerron) and KRSS (Kwiatkowski – Phillips – Schmidt – Shin) tests, resulting in the series not being stationary or otherwise said, it has a unitary root. For stationary series, the 1st order differentiation of the series is applied, and the results indicate that these series are integrated of the first order (they do not have a unit root or are I (1)).

II. **Causality test Pairwise Granger** verifies the extent to which the current level of the variable is due to its previous levels and is showing whether adding the previous values of another variable can improve the explanation. The order of the variables is not important in the process of estimating a VAR or VECM, but it becomes essential already when determining the response-impulse functions.

III. **Testing the cointegration of the variables.** For the selection of the lag, the “VAR Lag Order Selection Criteria” test was considered (Table 1), which illustrates that for 3 criteria only one lag is recommended, and for 2 criteria - 2 lags.

Table nr. 1. VAR Lag order selection criteria

Lag	LogL	Sequential modified LR test statistic	Final prediction error	Akaike information criterion	Schwarz information criterion	Hannan-Quinn information criterion
0	-22.38590	NA	0.001530	2.030872	2.177137	2.071440
1	36.40432	98.76756*	2.87e-05	-1.952345	-1.367285*	-1.790074*
2	46.53230	14.58430	2.73e-05*	-2.042584*	-1.018728	-1.758610

Source: Data processed by authors using EViews 9.

The research considered the possibility of including in the model both one lag and two lags. Since the analyzed series are I(1) it is necessary to test the presence of cointegration between variables, which will determine the model used. If the recommended number of lags of the tests is p, then p-1 lags are included in testing the cointegration relations. If it is considered that in the VAR model, there is only one lag, then when testing the number of cointegration relations 0 lags are taken into account. According to the "trace" test, no cointegration relations are tested, and according to the "maximum eigenvalue" test – one cointegration relation. The presence of cointegration relations was tested and for two lags (Table 2).

Table nr. 2. Results of testing the number of cointegration relationships

The number of lags included in the testing of cointegration relations	Number of cointegration relationships	
	Test „trace”	Test „maximum eigenvalue”
0	0	1
1	2	2
2	1	0

Source: Data processed by authors using EViews 9.

The analysis of the obtained results does not lead to unequivocal conclusions. It is necessary to test several variants of VECM, but also a VAR, of course in finite differences in case there is no cointegration. Thus, several models were estimated and subjected to econometric testing. The final model was chosen based on the AIC test.

Table nr. 3. Results of AIC test

Estimated model	VECM(01,12)	VECM(1,2)	VECM(2,1)	VAR3(1)
Test AIC	-1,59	-1,74	-1,45	-1,04

Source: Data processed by authors using EViews 9.

According the lowest value of the AIC test in the analysis, a VECM (1,2) with 1 lag and two cointegration equations was considered.

¹ Number of lags

² Number of cointegration relationships

³ The variables were included in finite differences

$$D(L_FDI) = - 0.72*(L_FDI(-1) - 0.72*L_EXPORT(-1) + 0.05) + 0.99*(L_GDP_\$(-1) - 1.35*L_EXPORT(-1) + 1.37) - 0.027*D(L_FDI(-1)) + 1.33*D(L_GDP_\$(-1)) - 0.0005*D(L_EXPORT(-1)) - 0.018;$$

$$D(L_GDP_\$) = - 0.032*(L_FDI(-1) - 0.72*L_EXPORT(-1) + 0.05) + 0.46*(L_GDP_\$(-1) - 1.35*L_EXPORT(-1) + 1.37) - 0.07*D(L_FDI(-1)) - 0.02*D(L_GDP_\$(-1)) + 0.57*D(L_EXPORT(-1)) + 0.06;$$

$$D(L_EXPORT) = - 0.11*(L_FDI(-1) - 0.72*L_EXPORT(-1) + 0.05) + 1.07*(L_GDP_\$(-1) - 1.35*L_EXPORT(-1) + 1.37) - 0.06*D(L_FDI(-1)) + 0.22*D(L_GDP_\$(-1)) + 0.49*D(L_EXPORT(-1)) + 0.014;$$

The LM test for autocorrelation gives satisfactory results. The null hypothesis of the lack of autocorrelation for a 12th order lag cannot be rejected at the significance level of 5%. Also, according to the White test, the null hypothesis of homoscedasticity of the residual variance cannot be rejected. In the analyzed model, the hypothesis of the normal distribution of the residual is not violated, because the Jarque Bera test does not reject the null hypothesis of the normal residual distribution for all conventional levels of significance. The stability of the observed VECM model was also examined. It was found that all the roots of the characteristic polynomials are inside the unit circle, therefore the model is stable.

IV. Impulse-response analysis. The impulse-response function shows the propagation over time of the effect of changing the value of one variable (shock, innovation) on another variable. In other words, impulse response functions follow the effects of a shock in the dynamics of one variable on another variable in the VECM. The variance decompositions provide information on the relative importance of each innovation on the effect on the dynamics of VECM variables.

4. Discussion of results

The first pair of the Pairwise Granger causality test (Table 4) suggests that for a lag of 3 (which is not suitable for a 1 or 2 lag), the null hypothesis is not rejected, as GDP does not cause Granger FDI, and the assumption that FDI does not cause Granger GDP cannot be accepted. Therefore, the results indicate that in the case of the Republic of Moldova the inflow of FDI influences GDP, while GDP does not cause the change in FDI.

Table nr. 4. Pairwise Granger Causality Tests

Lags: 3 Null Hypothesis:	Obs	F-Statistic	Prob.
L_GDP_\$ does not Granger Cause L_FDI	24	0.45348	0.7182
L_FDI does not Granger Cause L_GDP_\$		2.52207	0.0924
L_EXPORT does not Granger Cause L_FDI	24	0.27624	0.8417
L_FDI does not Granger Cause L_EXPORT		3.39655	0.0420
L_EXPORT does not Granger Cause L_GDP_\$	24	1.39777	0.2777
L_GDP_\$ does not Granger Cause L_EXPORT		3.51383	0.0379

Source: Data processed by authors using EViews 9.

From the second pair of tests we can conclude that FDI causes Granger Export and the conclusion from the third pair is that GDP causes Granger Export. Therefore, the order in the cause-and-effect chain was determined according to the Granger causality test:

$$L_FDI \Rightarrow L_GDP_ \$ \Rightarrow L_EXPORT$$

The impulse response functions demonstrate a positive reaction of GDP and Export to the impulse coming from FDI for the whole period. The study shows that a 1p.p. increase in FDI inflows, determines GDP grow by 0.09 p.p. and exports rise by 0.08 p.p. in the first period. The effects on output will increase further reaching a maximum level in the 6th period that will remain stable in the following years. In case of exports the biggest impact will be reached in the second year, and then will decrease slowly, but will remain positive (figure 4).

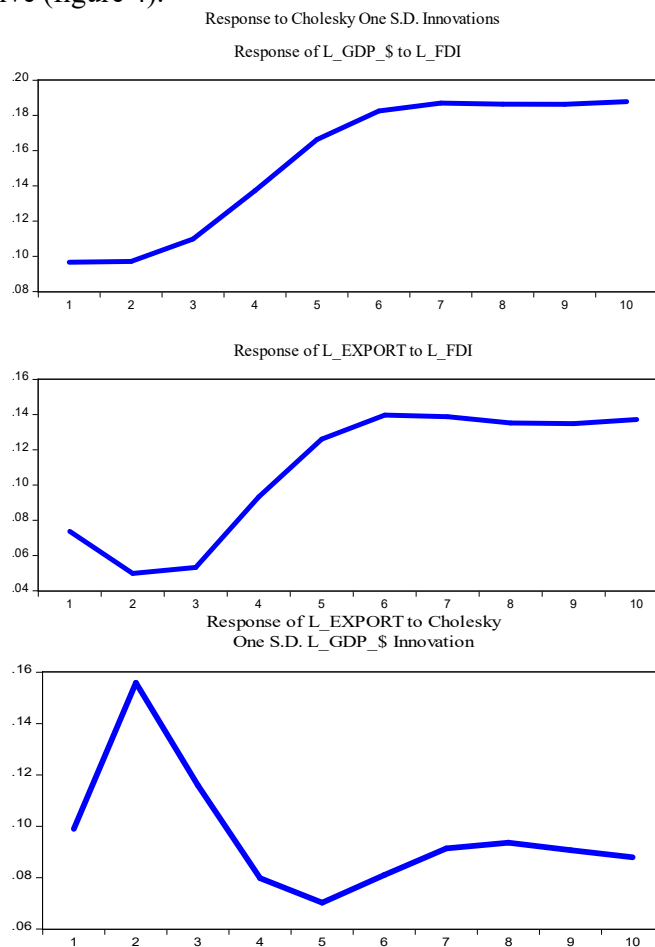


Figure nr. 4. Impulse response functions of the VECM model
Source: Data processed by authors using EViews 9.

The Pairwise Granger causality test and variance decomposition of GDP and exports reveals that Republic of Moldova is following rather a growth lead export development model. In the first period, changes in GDP are caused mainly by its own evolution in the previous year (57%) and that of FDI inflows (43%). The effects from exports arrive only beginning with the third period, rising slightly accompanied by an increase in FDI inflows. Further decomposition of exports growth reveals the small impact of exports on their own dynamics relative to the impressive contribution of GDP and FDI inflows. Innovations in

GDP are important for exports (starting with 53% and stabilizing at around 45%), as well as innovations in FDI starting with 30% and increasing up to 52% along the way.

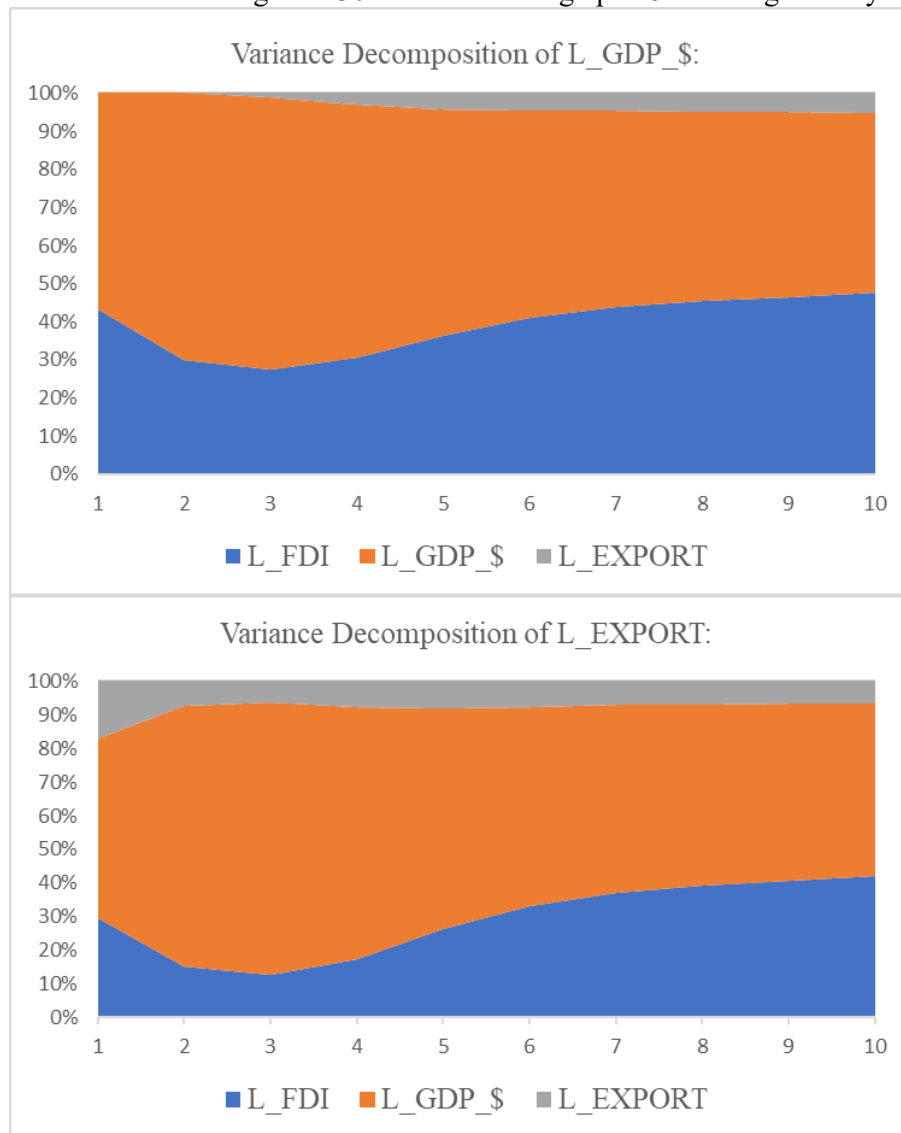


Figure nr. 5. Variance decomposition of GDP and merchandise exports
Source: Data processed by authors using EViews 9.

Moldova has a small low diversified production sector that needs time, money and competences to grow, diversify and meet the international market conditions. To increase export competitiveness should be developed an efficient institutional infrastructure for supporting investors and productive exporters.

4. Conclusions

The present research let the authors to draw the following conclusions. The first conclusion is that FDI inflows are a major determinant of economic growth and exports in Republic of Moldova. At the same time, economic growth and export are not leading to FDI growth in the national economy. An explanation may is the slow economic growth and thje existance of many supply side critical constraints that hinder investment and innovation activity of both local and foreign owned firms. Thus, despite being an important

tool to boost economic growth and exports value, Moldova attracts only a small amount of FDI per capita.

The second conclusion suggests that in Moldova there is rather a unidirectional relationship between GDP and exports, the economy following a grow lead export model. About half of exports dynamics is explained by GDP evolution. Exports have a small effect on GDP dynamics that appears only after several years, compared to GDP and FDI's great influence.

The third conclusion is that the previous National Strategy for Investments Attraction and Exports Promotions 2016-2020 had set the right scope to attract FDI for rising exports value in Republic of Moldova. Although the targets set for FDI inflows, GFCF and GDP growth have not been achieved. Trade policy should focus more on consolidating local producers' productivity, while more efforts are needed to eliminate supply side export constraints that should spur both: local and Foreign Direct Investment.

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INTERNAL CONTROL PRINCIPLES THAT MUST BE PROMOTED IN PUBLIC SECTOR ORGANISATIONS

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***Abstract:** Management controls are a set of practices now recognized as one of the essential components of effective management in organizations of all sizes, both in the public and private sectors, around the world. Management controls can be succinctly defined as rules and procedures designed to ensure that government programs achieve their intended results, that the resources used to carry out these programs are consistent with the stated goals and objectives of the organizations concerned, that these programs are protected against waste, fraud and mismanagement, and that decision making is based on the timely collection, recording, communication and use of reliable information. Clearly, the existence of effective management controls is essential to the success and proper functioning of public administrations. They are both a safeguard against waste, abuse and fraud and a means of ensuring that the rules set by managers are correctly applied at all levels of the organisation.*

***Keywords:** internal control, management, organisation, manager.*

***JEL Classification:** M10, M12.*

1. Introduction

Management controls are the backbone of the organization: all the plans, policies, procedures, and practices required by agents to achieve the entity's objectives.

One of the main objectives and one of the main strengths of an effective management control system should be to enhance the capabilities of managers to lead, to perform their leadership potential and to be a driving force to more easily achieve the goals and objectives of the organization. Such controls should hold each leader accountable, but should not be seen as limiting their freedom of decision in areas for which they have been delegated authority. Management controls do not guarantee the effectiveness of public programmes or the absence of waste, fraud or mismanagement. They are, however, a means of managing the risks associated with programmes and the functioning of public administrations. These controls must be adequate, cost-effective and supported by proper risk analysis and assessment. Management controls can be considered to have two aspects: - management information systems, which are needed by management to direct the work of the organization, to monitor the progress and quality of activities, and to evaluate the results and performance of the organization; - rules, systems, procedures, delegations of authority, and other factors built into the organization's processes to provide reasonable assurance that management's objectives are being met.

2. Literature Review

There is no definition of internal audit in any international standard.

In the UK, for example, internal audit is defined by the Institute of Internal Auditors in the UK as an independent research function established within an organisation to examine and “evaluate its activities on its own behalf”. The approach and standards adopted by the British National Audit Office for internal audit in government departments and agencies mirror those in the private sector.

In the United States, the US Institute of Internal Auditors defines internal audit in the same way as its British equivalent, namely: an independent assessment activity within an entity and in the service of that entity. It is a control exercised by management,

consisting of measuring and evaluating the effectiveness of other controls. The complexity of the structure and diversity of functions of the US government has led to internal control practices that differ in many respects from those prevalent in the private sector.

While it is true that in most countries internal audit is part of an organisation's management control system, this is not the case in Germany: in Germany internal audit is a component of external audit. Although internal audit is an integral part of the activities of public administrations, internal auditors report only to the Federal Court of Audit. They report only to this federal court and are not empowered to follow other orders in the exercise of their profession. This is why in Germany internal audit is called 'preliminary audit', not because it is an a priori audit, but because this type of audit is carried out before those who report to the Federal Court of Audit.

In France and Italy, internal audit is considered to cover certain aspects of internal control. This is the case in France with public accountants and financial inspectors, who perform key functions in controlling expenditure, while in other countries, Poland for example, internal audit is considered to encompass certain [public] regulatory and supervisory bodies.

Elsewhere, in Romania, for example, internal audit extends to bodies operating within companies, [reflecting] the possibility that the supreme audit institution is accountable not only to public authorities but also to these organisations.

The concept and scope of management controls

Management controls can be succinctly defined as the organisation, rules and procedures used to help ensure that public programmes achieve their desired results, that the resources used to deliver these programmes are consistent with the stated aims and objectives of the organisations concerned, that these programmes are protected against waste, fraud and mismanagement, and that decision making is based on the collection, recording, accounting delivery and use of reliable information, and that these operations are carried out in a timely manner. It is important that these management controls are seen, not as systems in themselves, operating separately from the rest of the organisation, but as control mechanisms that need to be integrated into the systems serving the whole cycle from planning, audit, budgeting, management and accounting. These systems must contribute to the efficiency and integrity of each stage of this cycle and provide continuous feedback to leaders.

3. Research Methodology

For this article we considered international publications in the field, E-books available through the university library, PDF documents with authors and versions of government or similar publications that are free of charge, articles published in print journals, articles published in e-journals, journal articles available through the university library or in various databases, articles in online newspapers, government and institutional publications, standards, reports of organisations, European documents, course materials and notes, publications available on websites. For the writing of this scientific paper it was not sufficient that the author only knew the subject. The knowledge and material accumulated was intended to be passed on in a form that would achieve its purpose: communication, correct and objective information. As a result, a redaction of the scientific material was required. The selection of the material was done through a thorough documentation, in order to present the most relevant information on the chosen subject.

4. Results

Internal control is an integrated process implemented by an organization's managers and staff designed to address risks and provide reasonable assurance that the following overall objectives are being achieved within the organization's mission:

- execution of orderly, ethical, economical, efficient operations;
- compliance with accountability obligations;
- compliance with applicable laws and regulations;
- protection of resources against loss, misuse and damage.

Internal control is an integrated and dynamic process that constantly adapts to the changes an organisation faces. Management and staff, at all levels, must be involved in this process to address risks and provide reasonable assurance that the overall missions and objectives of the organisation are being met.

Internal control is not an isolated event or a single circumstance, but a set of actions that influence all activities of an organisation. These actions are continuously present in all operations of an organisation. They are perceptible at all levels and inherent in the way the organisation is managed.

The internal control system is an integral part of an organisation and is most effective when embedded in its infrastructure and culture. Internal control must be integrated and not overlapping. In doing so, it becomes an integral part of core management processes in planning, execution and verification. The integration of internal control also has a significant impact on cost control. Adding new control procedures to existing ones generates additional costs.

Internal control does not exist without the people who make it work. It comes from the people who make up the organisation, by what they do and what they say. They need to know their roles and responsibilities and the limits of their authority.

When we talk about the people who make up the organisation, we mean both managers and other staff. Although management primarily exercises a supervisory role, it also sets the organisation's objectives and takes overall responsibility for the internal control system. As this contributes, through the mechanisms it entails, to a better understanding of the risks that threaten the achievement of the organisation's objectives, it is up to management to establish internal control activities and to monitor and evaluate them. Implementing internal control requires managers to give a decisive impetus and make an intensive effort to communicate with other staff. In this sense, internal control is a management tool, directly oriented towards achieving the organisation's objectives. As such, management is an important link in internal control.

Any organisation aims first and foremost to achieve its mission. Every entity has a purpose - the public sector generally aims to provide a service and an outcome that benefits the general interest.

Whatever the organisation's mission, achieving it will mean that the organisation faces all sorts of risks. The task of management will be to identify and control these risks to maximise the likelihood of achieving the mission. If internal control can help to address these risks, assurance on the achievement of the mission and overall objectives can only be reasonable.

Internal control, no matter how well designed and applied, cannot provide management with absolute assurance that the overall objectives will be achieved. Reasonable assurance reflects the idea that uncertainty and risk are linked to the future, which no one can predict with certainty. Achievement of objectives may also be compromised by external factors beyond the control or influence of the organisation: human judgement exercised to make certain decisions may be flawed, malfunctions may occur due to simple failures or errors, controls may be bypassed, management may

override the internal control system. Controls have a cost. These limitations prevent management from having absolute assurance that objectives will be achieved.

Decisions taken to manage risks and implement controls must take into account the costs and benefits. Evaluation of this cost includes both financial evaluation of the resources consumed to achieve a specific objective and economic evaluation of the opportunity costs resulting from delayed operations, decreased quality of service or productivity, or a loss of employee morale. Benefit is measured by assessing the extent to which the risk of failure to achieve a stated objective is reduced due to internal control.

Designing internal controls to provide value for money while reducing risks to an acceptable level requires that management has a clear understanding of the overall objectives to be achieved.

Internal control is designed to achieve a number of distinct but interrelated organisational objectives. These overall objectives are achieved through numerous specific sub-objectives, functions, processes and activities.

The overall objectives are as follows:

- Execute orderly, ethical, economical, efficient operations
- Fulfilling accountability obligations
- Compliance with applicable laws and regulations
- Protection of resources against loss, misuse and damage caused by waste, abuse, mismanagement, error, fraud and irregularities

Components of internal control

Internal control is made up of five interdependent components:

- Control environment
- Risk assessment
- Control activities
- Information and communication
- Management

Internal control is designed to provide reasonable assurance on the achievement of the organisation's overall objectives. Therefore, setting clear objectives is a prerequisite for designing an effective internal control process. The control environment forms the foundation of the entire internal control system. It provides the discipline and structure as well as the environment that influences the overall quality of internal control. In turn, it greatly influences how strategy and objectives are determined and how control activities are structured. Once clear objectives have been set and an effective control environment has been created, an assessment of the risks the organisation faces in achieving its mission and objectives needs to be made in order to define an appropriate response to them. The main strategy to minimise risks is to implement internal control activities. These control activities can be prevention and/or detection oriented. Corrective measures are a necessary complement to internal control activities to achieve objectives. The cost of control activities and corrective actions must be matched and create value. In other words, their cost must not exceed the benefit obtained (cost-effectiveness). Effective information and communication is essential for an organisation to manage and control its operations. Organisational leaders must have timely access to relevant, comprehensive and reliable communication about internal and external events. In general, the organisation needs information at all levels to achieve its objectives. Finally, since internal control is a dynamic process that must constantly be adapted to take into account the risks and changes an organization faces, it is essential that the internal control system be subject to monitoring and management to ensure that internal control remains in line with objectives, an environment, resources and risks that may have changed.

Connection between objectives and components of internal control There is a direct link between the overall objectives, which are what an organisation strives to achieve, and the components of internal control, which are the tools needed to achieve them.

Internal control applies both to the organisation as a whole and to its individual departments. This link is represented by the third dimension, which represents the whole organisation, entities and departments. It is thus possible to focus on any particular cell of the matrix. While the internal control system thus defined is relevant and applicable to all organisations, the way in which management implements it varies greatly according to the nature of the organisation and depends on a number of factors specific to it. These factors include, but are not limited to, organisational structure, risk profile, operating environment, size, complexity, activities and degree of regulation. Given the specific situation of the organisation, managers will make a number of choices about the complexity of the processes and methodologies implemented to apply the components of the internal control system. The following pages concisely outline each of the components mentioned above, along with commentary.

Personal and professional integrity and ethical values of managers and staff

The personal and professional integrity and ethical values of managers and staff determine their priorities and value judgements, which are reflected in a code of conduct. These qualities must be reflected in an attitude of adherence to internal control at all times and throughout the organisation. All those active in the organisation - both managers and staff - must demonstrate their personal and professional integrity and respect for ethics; all must comply at all times with the codes of conduct in force, for example by declaring any personal financial interests they may have, any positions they may hold outside the organisation or any donations they receive (if they come, for example, from elected or senior public officials) and by reporting any conflicts of interest.

Managers and staff should ensure that they maintain a level of competence that enables them to understand the importance of developing, implementing and maintaining good internal control and fulfilling their responsibilities to achieve the overall objectives of internal control and the mission of the organisation. Managers and their staff should demonstrate an understanding of internal controls sufficient to enable them to perform their duties effectively.

Management style (i.e., managers' philosophies and operating procedures) reflects the following elements:

- a permanent attitude of adherence to internal control, independence, competence and a willingness to lead by example;
- a code of conduct defined by the managers, as well as support and performance reviews that take into account the objectives of internal control and, in particular, that of conducting ethical operations.

It is of paramount importance that management demonstrates and insists on ethical conduct to achieve the objectives of internal control and in particular the objective of 'ethical operations'. In carrying out its function, management must set an example by its own actions and its conduct must be a model of what is the right thing to do rather than an image of what is merely acceptable or merely convenient. In particular, management policies, procedures and practices must promote ways of doing things that meet all the criteria listed: order, ethics, economy, efficiency and effectiveness.

Roles and responsibilities

All staff in an organisation have some responsibility for internal control. Management is directly responsible for all activities of the organisation, including the design, implementation, proper functioning, maintenance and documentation of the

internal control system. Everyone's responsibilities within management vary depending on their position in the organisation and the characteristics of the organisation itself. Internal auditors review and contribute to the ongoing effectiveness of the internal control system through their assessments and recommendations and therefore play an important role in the effectiveness of internal control. However, they do not have management's primary responsibility for designing, implementing, maintaining and documenting internal control. Staff members also contribute to internal control. Internal control is, explicitly or implicitly, everyone's responsibility. All staff members play a role in the implementation of internal control and are required to report any problems they observe in the conduct of operations, as well as any violations of the code of conduct or the organisation's internal policy. Certain external parties also play an important role in the internal control process. They may contribute to the achievement of the organisation's objectives or provide useful information for internal control. However, they are not responsible for the design, implementation, proper functioning, maintenance or documentation of the organisation's internal control system.

Internal control is primarily the work of the organisation's internal stakeholders, which includes managers, internal auditors and other staff. However, the actions of external stakeholders can also influence the internal control system.

Managers All staff of the organisation play an important role in implementing the internal control system. However, management has overall responsibility for the design, implementation, operation and maintenance of the internal control system and its documentation. What we call "management" here may include the board of directors and the audit committee, whose roles and composition vary from country to country and which, from country to country, are subject to different laws.

Internal auditors It is not uncommon for management to establish an internal audit unit which it considers an integral part of its internal control system and which it uses in the context of monitoring and managing the effectiveness of the internal control system. Internal auditors regularly provide information on the operation of internal control, paying particular attention to evaluating the design and operations of internal control. They communicate information on the strengths and weaknesses of internal control and make recommendations for improvement. However, their independence and objectivity must be guaranteed. Therefore, internal audit should be an independent and objective activity that provides an organisation with assurance on the degree of control over its operations, provides advice for improvement and contributes to the creation of added value. It helps an organisation to achieve its objectives by assessing, through a systematic and methodical approach, its risk management, control and corporate governance processes and making proposals to strengthen their effectiveness. For the internal audit function to be effective, it is essential that the internal audit team is independent of management, works impartially, fairly and honestly and reports directly to the highest level of management. In this way, internal auditors can provide unbiased opinions on the assessment of the internal control system and objectively present proposals to correct the weaknesses they have discovered. In addition to its role in monitoring an organisation's internal controls, a qualified internal audit team can contribute to the effectiveness of external audit activities by providing direct assistance to the external auditor. The nature, scope or duration of external audit procedures may thus be subject to adjustment if the external auditor can rely on the work of the internal auditor.

Members of staff The rest of the staff, regardless of their level, also influence internal control. It is often those on the front line who implement and monitor certain controls, review them and take corrective action if controls are poorly implemented; in

addition, they are in a good position to identify issues in the course of their day-to-day activities that require internal control responses.

External parties: external auditors, legislative and regulatory authorities, and other third parties, all of whom can contribute to the achievement of the organisation's objectives or provide useful information for the implementation of internal control. However, they have no responsibility for the design, implementation, proper functioning, maintenance or documentation of the organisation's internal control system.

5. Conclusions

For several years, a large number of researchers have focused on the links between management systems, more or less sophisticated, and organisational performance. Although the topic of internal control is the subject of much debate and research, it is rare in terms of measuring its effectiveness in the organisation. It is for this reason that the main objective of this article is to contribute to complementing the research on this subject by explaining the role played by the internal control system in improving the performance of organisations. The literature review shows that the internal control system through its five components makes it possible to improve company performance, because this system establishes a favorable control environment, a good risk assessment, a sophisticated information system, a set of procedures and policies and an effective management system. On a practical level, this study aims to enrich previous work belonging to the fields of study of management systems and more specifically the internal control system. It also provides managers and leaders with opportunities to situate and assess how they could improve the performance of their organisations.

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THE RISK APPROACH: AN ALTERNATIVE TO THE CLASSIC AUDIT APPROACH

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***Abstract:** This study will focus on addressing risk. The purpose of this article is to highlight the importance of the risk approach in the pursuit of effectiveness and efficiency in audit work. To demonstrate this, we will first show the limitations of the classical audit approach, then illustrate the importance of the risk-based approach, and finally present the approach to auditing according to this approach. A risk-based approach also improves an organization's decision-making process, regardless of its industry focus. Therefore, a risk-based approach consists of identifying, assessing, and understanding risks, as well as the subsequent application of measures proportionate to these risks to ensure their effective mitigation.*

***Keywords:** auditors, risks, audit, company.*

***JEL Classification:** M42.*

1. Introduction

The business world has changed dramatically in recent years. Indeed, thanks to technological development, companies have become more competitive and their structures have changed significantly. This development has led to significant flows both within companies and to or from third parties (customers, suppliers, credit organizations), but mainly an unprecedented development of fraud techniques that now affect all hierarchical levels and all sectors of activity. Audit quality has become a major issue for the accounting and auditing fields. Traditional audit approaches have some limitations against the regularity and honesty of financial statements. The statutory auditor, whose role is to control the regularity of the companies' accounting records and the veracity of their observations regarding the documents that justify them, has a right to alert if they find irregularities. The failure of auditors to detect numerous anomalies, despite changes in professional standards, calls into question a model of legal auditing centered on the larger objective of fair image and candor. The audit approach is a technique that is based on an in-depth and preliminary reflection on the nature of the risks that characterize the company. And only after this evaluation process will the auditor define his control program. This may lead him, compared to a traditional approach, to lighten his checks on sections or areas of accounts on which his reflection allows him to believe that the risks are low, and on the other hand, to initiate much more extensive investigations. This approach not only allows auditors to reduce the time budget but also to detect risks and protect themselves in the future. This approach also helps to strengthen the level of reasonable assurance and assurance that remains the ultimate objective of every auditor. In this regard, the question I would try to answer in this article is the following: To what extent can the use of a risk-based audit approach be a better alternative to the traditional audit approach? To answer this question, I will first reveal the limitations of the classical audit approach, then we will present the importance of the risk-based approach, and finally, we will cite its, different stages.

2. Review of the specialty literature

From the classical approach to the risk-based approach

Inadequacies of the classical approach Audit can be defined as the examination carried out by a competent and independent professional to express a reasoned opinion on the regularity and honesty of the financial statements. The objective is to conclude the "image", so the sincerity and not the accuracy of the accounts. The traditional audit approach to accounts was based on analysis of internal control and inventory controls but in a slightly differentiated way. The summary documents (financial statements, balance sheet, general register, journal, accounting documents) represent the starting point of the audit. Its mode of operation consists in performing a cycle opposite to that of the mechanics of building financial statements. The auditor will limit his control over the financial statements to the control of accounting documents, he does not situate the audit problem as a whole and is limited to figures and documents. They are then interested either in the areas that represent a significant part of the activity reflected in the annual accounts or accounts elements of the final statements that present significant variations compared to those of the last financial year or in the study of the evolution of certain reports over time. The main objective of the auditor is simply to ensure that the information contained in the accounts is supported by supporting accounting documents. Auditing is done in a routine and unintelligent manner. If the audit is done in a routine and unintelligent manner, then this approach has many limitations resulting from insufficient planning and failure to consider (insufficient consideration) internal control.

Insufficient planning: In this approach, the auditor does not situate the audit problem as a whole. It focuses all its attention on ensuring that the information contained in the financial statements is justified by convincing accounting documents. This then leads him to verify the reality of the accounting records.

Insufficient consideration of internal control: The fact that the auditor verifies that the financial statements are justified by supporting accounting documents very often leads him to perform an exhaustive examination of said documents. However, it will be difficult for him to understand an accounting fact that has not been recorded in the accounts. This could then lead them to issue a favorable opinion when there are material anomalies in the financial statements due to the non-recognition of certain transactions. Consequently, it will be difficult for the auditor to follow this approach, perform an effective audit, and reach an opinion that reflects both the result and the financial and patrimonial situation of the company, from where a new audit approach appears: the risk-based approach, which is based on an in-depth and prior reflection on the nature of the risks that characterize the company.

Risk-based audit approach The statutory audit is insurance against the risks of poor accounting and financial information. Therefore, the auditor must identify these risks before performing his controls. What type of risk should be identified? These may be risks specific to the company, given the nature of its business, the weaknesses or dysfunctions of its organization or its financial situation, as well as risks specific to the company's sector of activity, the company or company. Only after this evaluation of the process will the auditor define his control program. This can lead him, compared to a traditional approach, to ease his controls on sections or areas of accounts where his thinking will help him undertake much larger investigations in other sectors. This risk-based approach, the logic of which is based on common sense, is not necessarily familiar to all auditors, as it banishes systematicity and requires making choices in controls. However, it has three major qualities: it allows the anticipation of problems before closing, the adaptation of controls over the accounts to the environment of the audited organization; responds to companies' desire to quickly communicate their financial statements. However, the auditor cannot list

all the risks borne by the company. Indeed, the assessment carried out by the statutory auditor complies with the sampling rules which make it possible to limit the amount of work to be carried out, while providing an assurance reasonable about the faithful image. Thus, at the beginning of the audit mission, it is appropriate to target the risk-generating activities and to define not all the risks associated with each activity, but only the key risks likely to compromise the achievement of the objectives of the activity in question.

3. Research methodology

Forty semi-structured individual interviews were conducted by the author, of this study. Interviews took place from September to December 2022. This type of interview allowed me to receive information on a series of guiding questions and to provide the various interlocutors with a framework in which they could express themselves freely, from a qualitative perspective. The inventory of the communications carried out and their analysis made it possible to better understand the different elements related to audit risk. The conclusions of this analysis are presented in the RESULTS section. Also, the use of articles, information leaflets and, brochures, newsletters, allowed me to create the interview, guide. The topics covered in the interviews with the auditors were aimed at knowing the information about the different types of risks, as well as the ways to prevent and eliminate or reduce them.

4. Result

Risk-based audit approach

The approach proposed below is inspired by that used by auditors in major international audit firms. The techniques used are:

Knowledge and identification of risks The first step of the audit process is the knowledge of the audited company, which is of particular importance because it determines the progress of the other phases of the process. The auditor must therefore acquire a general knowledge of the company, its particularities, and its economic and social environment to better understand the events that may have a significant impact on the accounts subject to his audit, it also makes possible better planning of its mission so that it can focus its checks on the areas that pose the greatest risk. General awareness can generally include four essential phases:

- Collecting information;
- Analysis of different families of risks;
- Determination of significant areas;
- Summary of risks and plan of action.

Gathering information about the company The auditor must have a general knowledge of the company that allows him to direct his mission and understand the significant areas and systems. The information to be collected in this phase should allow the identification of the general risks borne by the company. The two major components of this phase are:

Preliminary work to know the company: At the end of this work we must highlight the external factors and the internal factors or influencing factors that affect the company's activity. The premiums are not directly controllable by management. When reviewing external factors, the auditor's main objectives are to obtain information to help him understand the company's business and the changes that have occurred and to identify situations that indicate potential areas of risk. These external factors are obtained through external documentation: specific regulations applicable to companies, documentation of the profession, etc. Internal factors are the financial and operational characteristics of the company: these are the conditions and circumstances of the company's business that have

an impact on its operations. By reviewing the financial and operational characteristics of the company's activity, the auditor becomes aware of the company's internal conditions and circumstances that impact its operation. This knowledge also relates to the consideration of the control environment that responds to the identified risks.

The second part consists in establishing the first contacts with the company: interviews with the leaders and the various heads of departments, on-site visits, etc., which will make it possible to develop the work program and break it down.

Analysis of different risk families This involves identifying and defining the main types of risk that the auditor may detect as part of his mission. These different types of risks are the potential risks commonly accepted in this sector of activity but which weigh differently on firms depending on the orientation of their activities and their internal organization.

Determining significant areas and systems At the end of these first two stages of gathering information and identifying risks related to the audited firm, the auditor identifies significant areas and systems. The identification of these significant areas presupposes the prior determination of a significance threshold. It can be defined as the amount from which an error, inaccuracy, or omission can affect the regularity and honesty of the summary statements, as well as the true picture of the result of the financial year, and the financial situation of the company. This threshold is quantified by taking into account several quantitative and qualitative benchmarks.

Risk summary and approach plan The preliminary stage of risk understanding and analysis allows the auditor to gather all the general information about the firm. It can:

- understand the elements that influence the figures to be verified;
- evaluate the general degree of risk that will be faced;
- identify the significant transactions and accounts on which he will focus his efforts;
- adapt its control program accordingly.

The analysis of the particular characteristics of the companies, related to their activities and their general environment, allows the auditor to identify those that could have the effect of reducing the audit risk or, on the contrary, increasing it. Both will guide the audit process. The companies have the following distinctive characteristics, which could result in a reduction of the audit risk:

- The existence of a regulated internal control function on which the audit activity can be based;
- The importance of assets managed on behalf of third parties;
- Repetitiveness of transactions and automation of processing, which play an essential role in the reliability of information systems;
- Absence of specific accounting principles and schemes to facilitate the control of accounts;

From these observations, it emerges that the following should be prioritized in the audit strategy:

- Good functioning of the internal control;
- Coherence of the formation of the result through detailed analytical examination and analysis of information systems.

Evaluation of internal control The quality of internal control exercised within a company largely determines the final phase of the audit process and especially the control

of accounts. Indeed, a good assessment of internal control provides greater assurance to the auditor and will therefore allow him to significantly reduce the work of auditing the accounts that the auditor will have to perform. On the contrary, a weak appreciation of internal control leads to the deepening of account controls. Internal control consists of all control measures, accounting or otherwise, that management defines, applies, and monitors, under its responsibility, to ensure:

- Completeness of records;
- Accuracy of accounts;
- Authorization of transactions;
- Authorization of access to assets and records;
- Accounting and audit control.

The auditor assesses the company's internal control according to its objective of certifying the summary statements. Accordingly, it will only perform a review and assessment of internal control for the systems leading to significant accounts that it has identified in the planning phase of its engagement. The assessment of internal control primarily involves understanding the data processing procedures implemented in the company to verify the proper function and correct application of these procedures by performing compliance tests. The procedure to be followed by the auditor, to evaluate the degree of risk control through internal control, is the following:

- To communicate the organization manual or arrange the systems and procedures used in entering data into the accounting programs;
- Ensure that he has understood and retained this description (using compliance tests);
- To deduce the satisfactory (strong points) and less so (weak points) procedures and ensure that they are applied permanently (permanence tests);
- Conclude by highlighting strengths and weaknesses.

The auditor should proceed to the detailed description of the internal control procedures. The company's procedures manual (if any) can be used to gather useful information. In addition to the operations described in the classic audit missions, special attention must be paid to the IT environment of the audited company. Among the points that the description must take into account imperatively, we mention:

- Highlighting the accumulation of tasks within the company, a fundamental source of risks;
- Detailed description of flows and operations that do not respect the principle of separation of duties;
- At the end of his work of studying and understanding the internal control procedures, the auditor must be able to distinguish the strengths that he must validate and the weaknesses that can generate fraud to prevent it and determine the threshold of meaning.

Auditing accounts The approach to auditing accounts relies heavily on the auditor's assessment of internal control given the large volumes and number of accounts to be processed. The strengths identified during the internal control review work will make it possible to ease or deepen the closing work on certain accounts. The auditor must, however, perform at each closing:

- Overall analytical examination;
- Reconciliations between management data and accounting data;
- Analysis of suspended accounts.

These checks should enable him to form an opinion on the balances of the balance sheet accounts and to ensure that income and expenditure have been recorded correctly and exhaustively. This stage aims to ensure the reality of the assets and the exhaustive nature of the liabilities. The degree of importance given to this phase depends on the understanding and evaluation of internal control. In the course of his engagement, the auditor obtains sufficient and appropriate evidence to establish reasonable assurance that allows him to issue certification. To this end, it has various control techniques, in particular plausibility document checks, physical observation, direct confirmation, and analytical examination.

- Checks on the documents: refers to the examination of documents received by the company, documents created by it, internal checks, etc.

- Physical observation: consists of examining goods, accounts, or how a procedure is applied. This is one of, the most effective ways to ensure the existence of an asset. However, only the existence of the good is confirmed, the other elements such as ownership of the asset, and the assigned value must be verified by other techniques.

Among the elements that can be the subject of a physical examination, we note:

- tangible fixed assets;
- inventories;
- commercial receipts;
- cash.

- Direct confirmation: consists of obtaining directly from third parties who have commercial or financial relations with the company, information about the balance of their accounts or the transactions made with it. The main ca direct confirmation refers to fixed assets, stocks, receivables, payables, banks, personnel,

etc. the choice of the balances to be confirmed must take into account all the particularities of the controlled enterprise. These are mainly: large balances, old balances, canceled accounts, and abnormal and l balances.

The analytical examination consists of:

- Making comparisons between the data resulting from the annual accounts and previous,

subsequent and forecasted data;

- Analyze fluctuations and trends;
- Studying and analyzing the unusual elements resulting from these comparisons.

The

overall review of the annual accounts aims to verify that the balance sheet, the profit and lo, the account, and the annex:

- They are consistent, given the general knowledge of the company, its sector of activity

and economic context;

- They are consistent with the accounting data;
- They are presented according to the accounting principles and regulations in

force;

- I take into account events after the closing date.

It also makes it possible to verify that the annex complies with the legal and regulatory

provisions and that it contains all the information of significant importance regarding the company's financial situation and results. Several analysis procedures can be used, including:

- Comparing the data from the annual accounts with those from previous or projected

accounts etc.;

- Comparison as a percentage of turnover of various items in the profit and loss account.

Any significant deviation must be analyzed and explained by the company.

Following his checks, the auditor will certify that the annual accounts are regular, honest and give a true and fair view of the results of the operations of the previous financial year, as well as of the financial position and assets of the company at the end of that year. It will state that it has performed the due diligence considered necessary according to the standards of the profession. The annual accounts will be attached to the report. If he certifies with reservations or refuses to certify, the auditor must clearly state the reasons for this and, if possible, in figures, the incidence. The report is presented in two parts:

- Opinion on the annual accounts
- Checks and specific information.

5. Conclusions

Without context, the risk-based approach has multiple advantages for auditors in that it allows them to perform shorter, but also better-targeted tasks. This risk-based approach has at least three major qualities: it allows anticipation of problems before closing, an adaptation of controls over accounts to the environment of the audited firm; finally, it responds to companies' desire to communicate their financial statements quickly. The application of the risk-based audit approach in the current context made it possible to measure the importance of this method, which is based on common sense and banishes systematicity and repetition and forces to make choices in the verifications. This advantage allows auditors to focus on areas of risk and vulnerability in the company and detect fraud, if applicable. It also makes it possible to prevent several cases of fraud that did not appear during the statutory audit missions carried out by another firm, applying the traditional audit approach.

However, despite its importance, this approach is not used by most auditors. Therefore, there are several reasons for this reluctance.

First, the concepts of risk are generally not clearly understood.

Auditors believe that risk assessment requires special skills or specialized IT tools. Although the auditor's activity consists in verifying the accounting data and in particular the balance sheet and the profit and loss account, the scope of his investigations must go beyond this narrow framework. If it wants to carry out its mission effectively, it is important to also examine a certain number of factors whose accounting impact is more or less direct. Indeed, one cannot judge the company's financial statements by ignoring the technical, commercial, legal, fiscal, and social realities. The auditor will have to use all his reasoning qualities to detect these anomalies that can be fatal to the company; indeed, conducting an audit engagement requires minds to be trained and techniques to be mastered.

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CAN COVID-19 RECOVERY MEASURE BRIDGE GENDER DIVIDE? EVIDENCE FROM IMPACT OF COVID-19 SURVIVAL FUND ON HOUSEHOLD INCOME IN NIGERIA

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Abstract: *In this paper, we assess the impact of the covid-19 MSME survival fund on entrepreneurs' income in southwest Nigeria. A total of 594 entrepreneurs were chosen by gender using a multi-stage selection technique. Cross-sectional data were obtained through structured questionnaire and subjected to propensity score matching (PSM), inverse probability-weighted regression adjustment (IPWRA), and instrumental variable (IV) regression approach to control for possible endogeneity that could arise from the data collection. Enterprise income was used as indicator to estimate the impact of covid-19 MSME survival fund scheme. There was a significant difference in income earned by male and female entrepreneurs due to their awareness and participation covid-19 MSME survival fund scheme. The size of the estimated treatment effect indicates a high improvement in the income outcome of beneficiaries. Findings show that age, entrepreneurial experience, access to credit and extension services, and number of years live in the community have statistically significant correlations with male and female entrepreneurs' participation in the covid-19 MSME survival fund scheme. Gender-sensitive policy and regulatory frameworks (together with their implementation) are essential for bridging the gender gap and encouraging female entrepreneurs to participate in programs that will help them grow their businesses and earn more income.*

Keywords: COVID-19, gender, impact, income, micro small and medium enterprises, entrepreneur, pandemic, survival fund

JEL Classification: L26, R28, R51

1. Introduction

The COVID-19 pandemic has sparked what could be the most serious worldwide health and economic crisis in human history. Many households and businesses around the world were caught off guard and unprepared for the pandemic's associated shocks since it had not been predicted. In Africa south of the Sahara, countries have rushed into action in an attempt to create containment methods and a long-term solution to stem the spread of the ravenous virus, but no treatment has yet been discovered. The virus's ongoing existence had consequences for the nation's employment rate, household income, and food security. Many people, notably micro, small, and medium entrepreneurs, lost their employment, saw their income collapse, faced significant food shortages, and had trouble accessing markets and hospitals during the covid-19 pandemic lockdown. Prior to COVID-19, Nigeria, for example, had an employment rate of 85 percent. Nigeria's self-reported employment rate fell to 43 percent after the lockdown measures were implemented. Nigerian employment increased to 71 percent in June and 82 percent in July as a result of the Nigerian government's several efforts to minimize the economic impact of the Covid-19 lockdown (CMI Report, 2020).

Nigeria was one of the first countries in Sub-Saharan Africa to detect COVID-19 (coronavirus) cases, and it has taken stringent efforts to prevent the virus's spread. At the same time, following the global pandemic's spread, oil prices plunged by 60%. Because the oil sector generates the majority of Nigeria's government revenue, the drop in prices has far-reaching consequences for the country's economy (World Bank, 2020). The federal government is faced with the dual difficulty of combating the pandemic's public health crisis while also attempting to support a faltering economy. Given rising indications that the twin crises will have severe social and economic consequences, the government is stepping up policy initiatives that can assist alleviate these negative consequences. Preventing poverty from deepening and increasing in Nigeria requires mitigating the effects of the COVID-19 crisis; prior to the crisis, approximately 4 in 10 Nigerians were living below the national poverty line, and millions more were living just above it, making them vulnerable to falling back into poverty when shocks occur (World Bank, 2021).

The COVID-19 pandemic poses a major threat to rural livelihoods by impeding women's and men's participation in economic activities such as farming, processing, trading, and labour. There is a considerable wage disparity between the sexes due to gender discrepancies in the commercial and non-commercial spheres, with women being paid less than males. Although the gender gap in labour income has shrunk in recent decades, it still exists, with considerable gender discrepancies among the population's least educated (Urquidi et al., 2020). Women in rural areas are more vulnerable than men because they have less productive inputs, markets, and financial, extension, and information services. Rural women's ability to engage as decision makers in the design and implementation of response and mitigation plans is often limited by sociocultural norms and gender roles. Women and men must be equally represented in decision-making in order for their individual goals to be considered and shaped in development efforts, policies, and programs. Most decision-making organizations established in response to the pandemic are dominated by men, according to a new worldwide quick gender study on COVID-19 (CARE and IRC, 2020). Women and girls, as well as their organizations, are frequently excluded from community-level decision-making and governance structures that determine humanitarian response methods (IASC, 2018). Women are more likely than men to work in low-wage, precarious jobs, which are particularly vulnerable during economic downturns (IASC, 2020). Institutional safeguards such as social insurance, pensions, and health insurance are not available in these types of jobs, leaving rural women vulnerable in the event of illness or unemployment. In order to contribute to the development of appropriate policy responses and to help lessen the effects of pandemics like Covid-19, this research should have a gender focus (Wenham et al., 2020). Also, except from this study, little is known about the economic effects of Covid-19 on gender equality, although the facts suggest that the impact of the pandemic will affect women and men differently. In addition, gender must be considered in this research to ensure that existing inequalities are not exacerbated, as has been the case in prior pandemics (Lozano and Garca-Calvente, 2020).

The Covid-19 outbreak has caused widespread panic and disruption in the business world. Because of their small size and limited resources, micro, small, and medium companies (MSMEs) are often the hardest hit. MSMEs are particularly vulnerable to the pandemic because they lack the ability to absorb shocks. The pandemic is seen as a threat to MSMEs' survival in Nigeria, as well as around the world. While the crisis has had a significant health impact, it has also had a significant economic impact, particularly on small businesses (Sipahi, 2020). Micro, small, and medium enterprises (MSMEs) are a key determinant of a country's socioeconomic growth and development, as they contribute significantly to the Nigerian economy. MSMEs employ 59,647,954 people in Nigeria,

according to the National Bureau of Statistics (NBS) (2019). MSMEs play an important role in a country's socioeconomic development since they have a high potential for job creation, contribute significantly to GDP, aid in economic diversification, and improve indigenous technical development, among others (Eze, Oladimeji & Fayose, 2019). Following the outbreak of the COVID-19 pandemic, the Nigeria government has established a survival fund which is a conditional grant to support vulnerable micro and small enterprises to meeting their payroll obligations and safeguard jobs. The country's reserves have taken a hit, with oil revenue, the country's main source of income, plummeting as world prices plummeted. The pandemic has also spurred on government talks on ways of diversifying the economy to ensure continued growth. Nigeria's federal government adopted the \$5.9 billion (N23 trillion) Nigerian Economic Sustainability Plan in July 2020 to solve the pandemic's economic difficulties. The plan, which would cost about 1% of GDP, aims to boost and diversify the economy, keep and create jobs, and provide stronger protections for the poor. Clean energy, agriculture, and infrastructure are all part of the recovery strategy (WRI, 2021).

The Economic Sustainability Plan also contains a National Medium, Small, and Micro Enterprises (MSMEs) Survival Fund to mitigate the economic impact of COVID-19 and foster the growth of small enterprises. MSMEs constitute the backbone of the Nigerian economy, accounting for almost 48 percent of the country's GDP. There are about 37 million MSMEs in Nigeria. COVID-19 has severely hampered MSMEs in Nigeria, with many of them either laying off employees or closing their doors. The MSME Survival Fund would support to the private sector in order to help diversify the economy, with a special focus on women. Sixty percent of the MSME Survival Fund has been set aside for women entrepreneurs, who account for at least 41% of the country's microbusinesses (NBS, 2020). While several studies have looked at the impact of the COVID-19 pandemic on global and national economic indicators such as global poverty, government interventions, GDP growth, budget deficits, and employment (ILO 2020a; ILO 2020b; Nicola et al. 2020; Sumner et al. 2020; UN-Habitat and WFP 2020; World Bank 2020), little is known about how the COVID-19 pandemic and associated government economic policies affected household income of entrepreneurs at a local level. As a result, it's vital to understand how the MSME survival fund program influences and supports methods that may be employed to ensure that enterprises continue to earn revenue. This paper adds to the growing body of knowledge on the impact of government action (MSME survival fund post COVID recovery strategies) in lessening the impact of the COVID-19 pandemic and the accompanying lockdown restrictions in Nigeria, as well as the consequences for other economic sectors. These interventions will undoubtedly aid in the empowerment of women and the closing of the gender gap, as well as the reduction of income inequality, the promotion of gender equality and equal representation, and the construction of a more equitable Nigeria (WRI, 2021). In this context, the purpose of this study was to look into the impact of the MSME survival fund as part of the Covid-19 recovery scheme on income of male and female entrepreneurs in southwest Nigeria.

1.1. Overview of Nigeria's Sustainable Covid-19 Recovery Plan (MSMEs Survival Fund)

The Economic Sustainability Plan (ESP) is Nigeria's response to the COVID-19 pandemic. The Scheme is a conditional grant designed to help vulnerable micro and small enterprises meet their payroll responsibilities and protect jobs in the MSME sector from the impact of the Covid-19 pandemic. The scheme is estimated to save not less than 103 million jobs across the country and specifically impact on over 35,000 individuals per state. The Survival Fund's goals are to: stimulate direct local production in the 36 states of

the Federation and the Federal Capital Territory (FCT) by providing funds to MSME's in the production sector to stimulate 'post COVID lockdown' off-take products; supplement payroll obligations of businesses in the health, production, education, hospitality, and food production sectors; and provide 50,000 Naira grants to an additional 100,000 MSMEs who are eligible. As a result of the scheme, about one million, seven hundred thousand (1,700,000) jobs are predicted to be saved. Grants are also available to self-employed individuals, including bus drivers, taxi drivers, ride-share drivers, and artisans like as electricians and plumbers, among others, with a special focus on 45 percent female-owned MSMEs and 5% MSMEs with special needs (i.e the scheme made compulsory female inclusion and achieved a female participation of 42% and male participation of 58%. There was a 5% quota for artisans with disability, while the total number of registrations for artisans with special needs made up 1%). Despite the multiple challenges that the COVID-19 pandemic has posed to MSMEs, they are critical to Nigeria's economic progress. Micro, small, and medium enterprises (MSMEs) are global engines of social and economic change. With 41,543,028 businesses, SMEs contributed 49.78 percent of Nigeria's Gross Domestic Product (GDP) in 2017. MSMEs have made important contributions to the production of wealth and the betterment of Nigerian inhabitants' socioeconomic conditions, according to the MSMEs report (2017). According to Ifekwem and Adedamola (2016), MSMEs contribute to the Nigerian economy in the following ways: mobilization of local resources, employment opportunities, equitable income distribution, raw material services, mitigation of rural-urban drift, generation and conservation of foreign exchange, and industry distribution.

2. Methodology

2.1. The study area: This study was carried out in Nigeria's south-western states. Because it is the epicenter of the COVID-19 in Nigeria, this location was chosen for this study. Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo are the six states that make up the region. The region is located between latitudes 6° N and 4° S, and longitudes 4° W and 6° E, and covers an area of approximately 114, 271 km². South-western Nigeria receives an average annual rainfall of 1,200 to 1,500mm, with mean monthly temperatures ranging from 18 to 24°C during the rainy season and 30 to 37°C during the dry season (Adepoju et al., 2011). Due to the area's fertile alluvial soil, this part of the country is largely agrarian. Cassava, maize, yam, cocoyam, cowpea, vegetables, and cash crops such as cocoa, kola nut, rubber, citrus, coffee, cashew, mango, and oil palm are among the notable food crops grown in the area. The study population included all of the region's rural farming households.

2.2. Sampling procedure and sample: A three-stage sampling technique was employed in the selection of respondents used for this study. The first stage involved a random selection of 50% of the states in the region (i.e., Ogun, Osun, and Oyo). The list of registered rural entrepreneurs who received MSME survival funds was obtained from the relevant State's Ministry of Commerce and Cooperatives. In the second stage, 3 registered rural enterprise associations were randomly picked from each State, for a total of 9 enterprise associations. In the third stage, 10 rural entrepreneurs (5 male and 5 female) were randomly selected from each of the enterprise association, totalled 270 (135 male and 135 female) respondents (treatment group). Lastly, a total of 108 (54 male and 54 female) rural entrepreneurs who are not MSME survival fund beneficiaries were randomly sampled from each of the selected states making a total of 324 (control group), and totaling 594 respondents for the study.

2.3. Method of data collection and analysis: The data was gathered using a questionnaire that has gone through two rounds of pre-testing by field enumerators. Respondents were asked to give their agreement before answering questions presented by enumerators. All respondents were encouraged not to participate in the study if they felt uncomfortable, and to leave at any time during the survey. Every respondent is given adequate information about the study's purpose and the value of taking part in it. The survey instrument was created to gather detailed information on rural entrepreneurs' socioeconomic characteristics, food and non-food expenditures, enterprise income, and MSME survival fund membership. Relevant data on the level of awareness about the MSME survival fund as well as rural entrepreneurs' decision to register for the MSME survival fund were collected. To control for possible endogeneity, the collected data were subjected to descriptive and inferential statistics such as frequency counts, percentages, charts, mean, standard deviation, and propensity score matching (PSM), inverse probability-weighted regression adjustment (IPWRA), and instrumental variable (IV) regression approach.

2.4. Measurement of variables: Independent and dependent variables are the variables of interest in this study. The effect of the MSME survival fund on rural entrepreneurs' income is the dependent variable, and it was quantified in terms of actual income from enterprise activities in Naira (₦). The independent variables (rural entrepreneurs' socioeconomic characteristics) were measured as follows (See Table 1):

Table 1: Description of the variables used in the estimation model

Variables	Measurement of variables	Category	Expected sign
Participation in MSME survival fund	1 if participated, 0 otherwise	Dummy	+
Age of entrepreneur	Actual age of entrepreneur in years	Continuous	+/-
Gender of entrepreneur	1 if male, 0 otherwise	Dummy	+
Marital status	1 if married, 0 otherwise	Dummy	+
Educational level	Years of schooling	Continuous	+
Household size	Number of people within the household	Continuous	+
Enterprise experience	Number of years engaging in enterprise	Continuous	+
Income	Average annual net enterprise income	Continuous	+
Membership of cooperative union	1 if belong, 0 otherwise	Dummy	+
Access to credit	1 if access, 0 otherwise	Dummy	+
Access to extension	1 if access, 0 otherwise	Dummy	+
Level of awareness of MSME survival fund	Aware=1 and 0=otherwise	Dummy	+
Number of years live in community	Actual years of resident in community	Continuous	+/-
Access to varietal information	Have access=1 and 0=otherwise	Dummy	+

Source: Author's elaboration from field survey (2022)

2.5. Estimation strategy

Researchers have been able to refine their knowledge of a causal influence over time by using a conceptual framework that postulates a collection of potential outcomes that could be observed in different configurations of the universe. Establishing the causal effects of the micro, small, and medium enterprises (MSMEs) survival fund on various outcomes of interest among beneficiaries is extremely difficult to do at the individual level due to endogeneity bias, with the exception of science fiction, where parallel universes are occasionally imagined to be observable. As a result, a lot of study has been focused on average causal effects. To make the concept of average causal effect tangible, random assignment of individuals into treatments must control for both observable and unobservable features. Because observed and unobserved features of individuals may

influence the likelihood of receiving treatments and outcome indicators in the absence of random assignment, selection bias may persist. Propensity score matching (PSM), inverse probability weighted adjusted regression (IPWRA), and instrumental variable (IV) regression approaches were employed to mitigate for endogeneity bias due to the cross-sectional nature of our data. PSM works by comparing each treated observation to a corresponding untreated observation, then calculating the average difference in the outcome variable between the two.

The underlying problem with using propensity score matching is that when the propensity score model is mis-specified, the estimates yield biased results (Robins, Sued, Lei-Gomez, & Rotnitzky, 2007; Wooldridge, 2007; Wooldridge, 2010). As a result, we utilized the IPWRA estimator, which combines regression and propensity score techniques to provide some robustness against parametric model mis-specification (Imbens & Wooldridge, 2009; Robins & Rotnitzky, 1995; Wooldridge, 2010). The IPWRA model predicts the following outcomes and treatment scenarios and assume the following liner regression function is the final model.

$$Y_i = \alpha_i + \theta_i x_i + \varepsilon_i \dots \dots \dots (1)$$

for i = [0 1]

where, Y_i = the outcome variable of interest;
 x_i = a set of controls;
 α and θ = parameters to be estimated;
 ε = the error term.

Assume that the propensity scores are computed using $p(x; \vartheta)$. In the first stage, we estimate the propensity scores using the formula $p(x, \hat{\vartheta})$. In the second stage, we use inverse probability-weighted least squares to estimate (α_0, θ_0) and (α_1, θ_1) using linear regression:

$$\min_{\alpha_0, \theta_0} \sum_i^N (Y_i - \alpha_i - \theta_i x_i) / P(x, \hat{\vartheta}) \text{ if } I_i = 0 \dots \dots \dots (2)$$

$$\min_{\alpha_1, \theta_1} \sum_i^N (Y_i - \alpha_i - \theta_1 x_i) / P(x, \hat{\vartheta}) \text{ if } I_i = 1 \dots \dots \dots (3)$$

The difference between Equations (2) and (3) is then used to estimate the average treatment effect (ATT).

$$ATT = \frac{1}{N_w} \sum_i^{N_w} [(\hat{\alpha}_1 - \hat{\alpha}_0) - (\hat{\theta}_1 - \hat{\theta}_0)x_i] \dots \dots \dots (4)$$

where,
 $\hat{\alpha}_1$ = estimated inverse probability-weighted parameters for rural entrepreneur that benefited from MSME survival fund
 $\hat{\alpha}_0$ = estimated inverse probability-weighted parameters for non-beneficiaries of MSME survival fund.
 N_w = total number of MSME survival fund beneficiaries.
 I_i = an indicator which takes a value of one if the rural entrepreneur benefited from MSME survival fund and zero otherwise.

Both observable and unobservable factors impacting rural entrepreneurs' participation in MSME survival funds as well as their income (outcome) must be controlled at the same time to determine and establish a causal effect. In this case, unobservable factor biases may cause estimations from equation (4) to yield biased

conclusions. An instrumental variable (IV) regression strategy was employed to compensate for the potential endogeneity of participation in the MSME survival fund scheme. This potential endogeneity resulting from rural entrepreneur participation in the MSME survival fund scheme could stem from the fact that rural entrepreneurs who participate in the MSME survival fund scheme may be doing so as a result of lost employment, high food insecurity, and difficulties accessing markets and healthcare, all of which are likely to be related to the outcome variable (income) (Chibwana, Fisher, & Shively, 2012; Ricker-Gilbert, Mason, Darko, & Tembo, 2013). The second reason is that rural entrepreneurs that participated in the MSME survival fund program may share socioeconomic characteristics such as access to information, membership in trade associations, and technical and management skills, all of which are likely to be linked to enterprise income. An instrumental variables (IV) regression technique was employed to solve these challenges. As a result, finding an instrument that meets the orthogonality criteria is critical. As a result, a valid binary instrumental variable that satisfies the exclusion limitation constraints, i.e., it must be uncorrelated with the possible outcome other than through the treatment variable, must be utilized. In this study, a suitable instrument must be linked to the entrepreneur's involvement in the Covid-19 strategy of the MSME survival fund while remaining unrelated to the outcome variable (enterprise income). According to recent studies by Abdoulaye et al. (2018) and Shiferaw et al. (2014), access to knowledge about advanced agricultural technology is an effective instrument for its adoption. In this study, entrepreneurs' access to varietal information was used as a criterion for participation in the MSME survival fund's Covid-19 strategy. Access to varietal information is thought to influence rural entrepreneurs' participation in the MSME survival fund's Covid-19 scheme, however this may or may not have an effect on their outcome (enterprise income). As a result, as shown in equation (5), the probit model was employed to complete this estimation:

$$Pr(D_i = 1|X_i, R_i, Z_i) = \Phi(X_i, R_i, Z_i, \psi) \dots \dots \dots (5)$$

where D_i represents the rural entrepreneurs' involvement or participation in the MSME survival fund scheme which takes the value of 1 if an entrepreneur involved or participated in in the MSME survival fund scheme and zero if otherwise; Pr denotes probability and Φ denotes the Cumulative Distribution Function. X_i represents a vector of socio-economic and plot-specific variables; R_i is the state-wise fixed effect that accounts for state-level heterogeneity in the participation of rural entrepreneurs in the MSME survival fund scheme; Z_i is adopted instrument: access to varietal information.

3. Results and Discussion

3.1. Socioeconomic characteristics of respondents: The descriptive statistics of key socioeconomic variables are presented in Table 2, including the difference in averages between male and female MSME entrepreneurs based on their involvement in the covid-19 survival fund scheme. The mean age of male entrepreneurs in the entire sample was 48.28 years, while the mean age of female entrepreneurs was 48.16 years, as shown in Table 2. When comparing the age of covid-19 survival fund beneficiaries (51.18 years) and non-beneficiaries (45.86 years) among male MSME entrepreneurs, there is a significant difference in age between the two groups. Similarly, at the 1% level of significance, we found a significant difference in age between covid-19 survival fund beneficiaries (46.31 years) and non-beneficiaries (49.70 years) among female MSME entrepreneurs. These data suggest that both categories of MSME entrepreneurs are still in their prime, active, and productive years. The majority of male and female entrepreneurs (80.0% and 87.0%,

respectively) are married, according to the findings. There is no significant difference between the two categories of MSME entrepreneurs in the study area, according to the findings. Furthermore, the majority of MSME entrepreneurs have a post-primary education, with an average of 8 and 7 years of schooling for male and female entrepreneurs, respectively. This shows that MSME entrepreneurs have a high rate of transition to higher education, which explains why the majority of them have completed primary school. The high level of literacy seen among entrepreneurs in the study area corroborates FAO (2013), which claims that middle-aged literacy in Nigeria has been increasing since 1991, rising from 66.4% in 2008 to almost 80% in 2015. It also suggests that education is valued more highly in some parts of the country, particularly in southwestern Nigeria. However, the male entrepreneurs were relatively more educated than their female counterparts. Table 2 shows that in the entire sample, the average household size for male entrepreneurs was 9.23 members and 8.95 members for female entrepreneurs. In comparison, among those who benefited from the covid-19 MSME survival fund, the average household size for male entrepreneurs was 9.06 people and for female entrepreneurs was 8.9 people, therefore there was no significant difference between the two groups. The significant number of household sizes observed in both male and female entrepreneurs would almost certainly offer labour for their business activities, particularly for those who rely substantially on family labour. Furthermore, the average enterprise experience for male entrepreneurs in the entire sample was 14.03 years, whereas the average enterprise experience for female entrepreneurs was 13.98 years. In terms of enterprise experience, there is no significant difference between male entrepreneurs (13.34 years) and female entrepreneurs (13.53 years) who have benefited from the covid-19 MSME survival fund. However, both male and female entrepreneurs had greater experience, and had accumulated enough entrepreneurship experience to assist them overcome business risk over time. This matched the findings of Tsue et al. (2014), who found that the majority of arable crop farmers had more than 10 years of experience. Also, the majority (98.0%) of male entrepreneurs who benefited from the Covid-19 survival fund scheme had access to credit, whereas only 59.0% of female entrepreneurs did. There is significant difference in mean between the two groups at 1%. This shows that entrepreneurs who have signed up for the covid-19 MSME survival fund scheme have higher access to credit than those who have not.

Table 2 showed that about 79% of male entrepreneurs and 87% of female entrepreneurs for the whole sample are members of cooperative societies. To compare the two groups, 88% of male entrepreneurs and 91% female entrepreneurs who had benefited from covid-19 MSME survival fund are members of one association or the other. This difference is also statistically significant at 1%. In addition, more than half of male and female entrepreneurs (66% and 58%, respectively) have access to extension services for the entire sample. We discovered a significant difference at 1% when comparing access to extension services between covid-19 MSME survival fund beneficiaries (81% of male and 38% of female entrepreneurs) and non-beneficiaries (54% of male and 32% of female entrepreneurs). Also, there is a significant difference in awareness of the Covid-19 MSME survival fund scheme between male and female businesses in the entire sample at 5%. In the study area, there was no significant difference in distance to the nearest market between the two groups of entrepreneurs. On a monthly basis, male entrepreneurs that are covid-19 MSME survival fund grantees had an average enterprise income of ₦226,629.63, compared to ₦97,734.57 for non-beneficiaries. Beneficiaries in the female category earned an average of ₦180762.96, while non-beneficiaries earned an average of ₦42388.89 a month. This research implies that male entrepreneurs earn more than their female counterparts in terms of enterprise income. On the number of years spent in the

community, there was no significant difference between the two groups. Table 2 also shows that male entrepreneurs had access to varietal information in 73.0 and 44.8% of covid-19 MSME survival fund beneficiaries and non-beneficiaries, respectively, while female entrepreneurs had access to varietal information in more than half (61%) of beneficiaries and only (37%) of non-beneficiaries in the study area. We discovered that male and female entrepreneurs who are beneficiaries of the covid-19 MSME survival fund scheme have better access to the varietal information than those who are not. The difference was determined to be statistically significant at 1%. As a result, having access to varietal information could be a useful tool for enlisting MSMEs in the covid-19 survival fund scheme. According to Issahaku and Abdulai (2019) and Abdoulaye et al. (2018), farmers who are aware of improved agricultural technology and so have access to it are more likely to use it.

3.2. Micro, Small, and Medium Enterprises (MSME) engaged in by male and female entrepreneurs

Table 3 shows that the majority (5.1 and 9.4%) of male entrepreneurs who are beneficiaries and non-beneficiaries of the Covid-19 survival fund scheme are ride sharing drivers, whereas none of the female entrepreneurs are. This suggests that ride-share driving is a male-dominated business. Table 3 shows that 16.6% of male entrepreneurs and 12.5% of female entrepreneurs who benefited from the Covid-19 MSME survival fund scheme engaged in crop farming, compared to 24.1 and 9.3% of non-beneficiaries, respectively. Female entrepreneurs (14.2%) engage in agro-processing operations more than their male counterparts (3.7%) who are recipients of the covid-19 MSME survival fund, according to the findings. This finding implies that in the study area, female entrepreneurs are more involved in processing business. Similarly, in the field of agricultural produce marketing, 6.5% of male and 19.4% of female entrepreneurs benefited from the covid-19 MSME survival fund, while 8.7 and 21.3% of male and female entrepreneurs who did not benefit from the scheme did. Also, among male feed milling entrepreneurs, 2.9% and 3.6% of beneficiaries and non-beneficiaries of the covid-19 MSME survival fund, respectively. Meanwhile, only 1.3% and 4.5% of female MSME survival fund beneficiaries and non-beneficiaries, respectively, sell animal feeds. This indicates that there are more feed millers among male entrepreneurs in the study area, as well as those who have benefited from the Covid-19 MSME survival fund scheme. Similarly, 4.4% and 5.8% of beneficiaries and non-beneficiaries of the covid-19 MSME survival fund scheme are involved in crafting, respectively, while 1.4 and 3.2% of their female counterparts (beneficiaries and non-beneficiaries of the covid-19 MSME survival fund scheme) are involved in crafting. Table 3 shows that the majority of taxi drivers that benefited from the covid-19 survival fund (8.4%) are male entrepreneurs. Table 3 also shows that male entrepreneurs have a higher percentage (15.5%) of beneficiaries of the covid-19 MSME survival fund scheme engaged in poultry/livestock enterprises than female entrepreneurs (5.6%).

Table 2: Descriptive statistics based on Covid-19 MSME survival fund enrolment

Socioeconomic variables	Male headed households (N=297)					Mean difference (2-3)	Female headed households (N=297)					Total sample Mean difference (1-4)		
	Total sample (N=297)	Beneficiaries (N=135)			Non-beneficiaries (N=162)		Total sample (N=297)	Beneficiaries (N=135)			Non-beneficiaries (N=162)			
	1	2		3			4	5		6			Mean difference (5-6)	
	Mean	Mean	S.D.	Mean	S.D.		Mean	Mean	S.D.	Mean	S.D.			
Age (actual age of entrepreneur in years)	48.28	51.18	11.056	45.86	9.696	5.320**	48.16	46.31	9.81	49.70	9.865	-3.393***	0.120	
Marital status (1=married)	0.80	0.85	0.356	0.77	0.425	0.086*	0.87	0.87	0.341	0.86	0.344	0.002	-0.07	
Education (1=literate, 0=otherwise)	7.59	7.12	5.912	6.95	5.163	0.169*	6.88	5.59	4.746	5.54	5.299	0.042	0.710*	
Household size (Numbers)	9.23	9.06	2.308	9.36	2.592	-0.305	8.95	8.9	2.159	8.98	2.396	-0.079	0.280	
Experience (Years)	14.03	13.34	2.186	14.61	2.782	1.270**	13.98	13.52	1.888	14.28	2.493	-0.765***	0.050	
Access to credit (1=yes, 0=otherwise)	0.95	0.98	0.148	0.56	0.252	0.420**	0.58	0.59	0.495	0.38	0.486	0.209***	0.370**	
Membership of association (1=yes, 0=otherwise)	0.79	0.88	0.324	0.72	0.449	0.159**	0.87	0.91	0.286	0.83	0.374	0.078**	0.080**	
Access to extension (1=yes, 0=otherwise)	0.66	0.81	0.396	0.54	0.500	0.270**	0.58	0.38	0.486	0.32	0.468	-0.058	0.08**	
Awareness of MSME survival fund (1=yes, 0=otherwise)	0.59	1.00	0.000	0.25	0.436	0.747**	0.47	0.87	0.341	0.14	0.35	0.725***	0.120**	
Distance to nearest market (km)	13.83	12.33	3.847	15.09	4.719	2.757**	12.29	12.19	3.882	12.46	3.869	-0.274	1.540	
Income from entrepreneur activities (₺)	15632 3.23	22662 9.63	4633 9.88	9773 4.57	8413 6.82	128895. 06**	1052 86.2	18076 2.96	4410 3.21	4238 8.89	11657. 775	138374.07 4**	51037. 03**	
Number of years of residence (years)	26.21	26.37	4.970	26.08	5.522	0.290	25.65	26.53	4.379	24.96	5.905	1.577**	0.560	
<i>Instrumental variable</i>														
Access to varietal information (1=yes, 0=otherwise)	0.61	0.73	0.448	0.52	0.501	0.207**	0.48	0.61	0.49	0.37	0.484	0.237***	0.130**	

status by gender

The t-test was conducted to test for difference in socio-economic characteristics between male and female headed entrepreneurs;

*, **, ***: Significant at 10, 5 and 1%, respectively.

Source: Field survey (2021)

Table 3: Distribution of respondents by Micro, Small, and Medium Enterprises (MSME)

Micro, Small, and Medium Enterprises (MSME)	Male entrepreneurs (%)		Female entrepreneurs (%)	
	Covid-19 survival fund beneficiaries (n=135)	Covid-19 survival fund non-beneficiaries (n=162)	Covid-19 survival fund Beneficiaries (n=135)	Covid-19 survival fund non-beneficiaries (n=162)
Ride share drivers	5.1	9.4	0	0
Crop farming	16.6	24.1	12.5	9.3
Agro-processing	3.7	5.5	14.2	15.5
Produce marketing	6.5	8.7	19.4	21.3
Feed milling	2.9	3.6	1.3	4.5
Crafting	4.4	5.8	1.4	3.2
Taxi drivers	8.4	10.3	0	0
Poultry/Livestock	15.5	12.2	5.6	8.7
Artisan	22.7	14.0	26.2	17.5
Restaurant/food vendor	1.8	0	10.1	12.3
Fisheries/aquaculture	9.3	6.4	2.4	0
Vegetable garden	3.1	0	6.9	7.7

Source: Field survey (2021)

According to the findings, the majority of male and female entrepreneurs who benefited from the covid-19 MSME survival fund are members of various Artisan groups (22.7 and 26.2%, respectively). This shows that the majority of entrepreneurs who took part in the Covid-19 survival fund scheme were affected by the lockdown and restrictions imposed by Covid-19, and because of their small size and limited resources they were the hardest hit. Because they lack the ability to absorb shocks, they are particularly vulnerable to the pandemic. Finally, both male and female entrepreneurs worked in businesses that focused on gender-specific activities, such as restaurants/food vendors, female-dominated vegetable gardens, and so on. These findings imply that the entrepreneurs are involved in a variety of on-farm, off-farm, and non-farm enterprises as a source of income, which helps to alleviate poverty and unemployment in the area. This supports Campaa, Giménez-Nadal, and Molina (2017), who believe that the encouragement of growth through entrepreneurship, the benefits on household welfare, and the decrease of poverty are all arguments for focusing on micro and small firms in emerging economies.

3.3. Determinants of MSME survival fund scheme among male and female entrepreneurs: Table 4 illustrates the probit model's maximum likelihood estimates, as well as the average marginal impacts of the covid-19 MSME survival fund on male and female entrepreneurs' enterprise income (outcome). The marginal effect, on the other hand, is more effective than the coefficient at describing the magnitude of a probability model. This is because the sign and amount of the marginal effect determine the direction and degree of the expected effect of socioeconomic variables on their decision to enlist/join or not (Bello et al., 2020). As a result, the marginal effect is used to account for the model's fitness. The model's log-likelihood of -102.05473, Pseudo R² of 0.5013, and LR (chi²) of 205.16 were all significant (p<0.01), indicating that it has considerable explanatory power and can influence the chance of male entrepreneurs participating in the covid-19 MSME survival fund scheme.

Table 4: Probit model estimates of determinants of Covid-19 survival fund among male and female MSME entrepreneurs

Variable	Male		Female	
	Coefficient	Marginal effects	Coefficient	Marginal effects
Age (actual age of entrepreneur in years)	0.031***(0.011)	0.012***(0.004)	-0.023*(0.020)	-0.010*(0.010)
Marital status (1=married)	-0.660*(0.351)	-0.257*(0.135)	-0.298(0.616)	-0.118(0.244)
Education (1=literate, 0=otherwise)	-0.019(0.020)	-0.007(0.007)	0.026(0.042)	0.010(0.017)
Household size (Numbers)	0.109**(0.057)	0.041**(0.023)	0.026(0.112)	0.010(0.044)
Experience (Years)	0.129**(0.059)	0.049**(0.023)	-0.167*(0.114)	-0.066*(0.045)
Access to credit (1=yes, 0=otherwise)	0.001*(0.497)	0.001*(0.189)	0.673*(0.474)	0.261*(0.178)
Membership of association (1=yes, 0=otherwise)	0.213(0.027)	0.079(0.102)	0.165(0.678)	0.065(0.023)
Access to extension (1=yes, 0=otherwise)	0.933***(0.327)	0.326***(0.100)	0.405*(0.413)	0.160*(0.016)
Distance to nearest market (km)	-0.046**(0.027)	-0.018*(0.010)	0.004(0.058)	0.00(0.023)
Awareness of MSME survival fund (1=yes, 0=otherwise)	0.001(1.386)	0.606(0.001)	0.9405***(0.065)	1.565***(0.001)
Number of years of residence (years)	0.036*(0.022)	0.014*(0.008)	0.073*(0.041)	0.029**(0.016)
Instrumental variable				
Access to varietal information (1=yes, 0=otherwise)	-0.114(0.304)	-0.044(0.116)	0.771*(0.428)	0.299*(0.157)
Constant	-3.281(1.289)		-3.292(2.074)	
Number of observations	297		297	
LR chi ² (12)	205.16		353.55	
Pseudo R ²	0.5013		0.8639	
Log likelihood	-102.05473		-27.858771	

Source: Author’s computation (2022). *, ** and *** represent 10%, 5% and 1% levels of significance, respectively. Standard errors are reported in parentheses.

Similarly, among female entrepreneurs, the probit regression revealed a log-likelihood of -27.858771, Pseudo R² of 0.8639, and LR (chi²) of 353.55, all of which were significant (p<0.01), indicating that the model has a strong explanatory power capable of jointly determining female entrepreneurs' participation in the covid-19 MSME survival fund scheme. Table 4 reveals that eight of the twelve model parameters are statistically significant in influencing the decision of male entrepreneurs to engage in the covid-19 MSME survival fund relief measures. Age, marital status, household size, enterprise experience, access to credit and extension services, distance to the nearest market, and number of years in the community are all socioeconomic factors that have a significant impact on male entrepreneurs' decision to join or enroll in the covid-19 MSME survival fund scheme. Ricker-Gilbert et al. (2011), Chibwana et al. (2012) in Malawi, and Olarewaju et al. (2020) in Nigeria all looked at similar government intervention initiatives and came to similar conclusions. The findings show that the age of male entrepreneurs has a positive and statistically significant relationship with the likelihood of enrolling in the covid-19 MSME survival fund scheme, implying that the age of male entrepreneurs increases the likelihood of enrolling in the covid-19 survival fund scheme by 3.1%. As a result, older male entrepreneurs are more likely than younger ones to engage in the covid-19 MSME survival fund scheme. At the 10% level, the marital status of male entrepreneurs was found to be adversely and substantially linked with participation in the covid-19 MSME survival fund program, meaning that male entrepreneurs were 66.0% less likely to benefit from the covid-19 survival fund scheme. With a value of 5%, the household size coefficient was determined to be positive and significant. Adding a family member boosted the log-likelihood of participating in the covid-19 MSME survival fund scheme by 0.041 unit, according to the marginal effect of the household size variable. This is consistent with Melesse's (2015) observation that high household sizes can assure a sufficient supply of family labour for crop production and the adoption of new agricultural technologies.

Years of business experience boost the likelihood of participating in the covid-19 MSME survival fund scheme, maybe because experienced entrepreneurs have a better knowledge of the benefits of participating in government intervention programs. At 10%, male entrepreneurs who have access to credit facilities have a strong good effect on their involvement in the covid-19 MSME survival fund scheme. This suggests that male entrepreneurs with financing are more likely to participate in the covid-19 MSME survival fund. Many financing institutions (both private and public) that grant credits or loans to individuals employ advisory specialists who educate the borrower on the conditions and other information related to the loans. As a result, these financial institutions may be able to educate entrepreneurs with credit access about the covid-19 MSME survival fund grant. Additionally, entrepreneurs with credit may be encouraged to join in programs that will assist them in expanding their current business. Twumasi, et al. (2019) and Maritim, et al. (2019) for agribusiness youth engagement in Ghana and Kericho County, Kenya, respectively, found a positive link between access to financing and male entrepreneurs. Access to extension was also found to be beneficial, particularly affecting male entrepreneurs' participation in the covid-19 MSME survival fund scheme. This demonstrates that extension agents can provide information on current government policies and programs relating to entrepreneur activities in order to supply them with grants and other incentives. As a result, male entrepreneurs with access to extension services are more likely to participate in government initiatives. Table 4's findings also reveal that the distance to the nearest market is a significant impediment for male entrepreneurs who want to participate in the MSME survival fund. The distance to nearest market variable has a marginal effect of 0.018, meaning that as the distance to nearest market increases, so does the likelihood of participating in the MSME survival fund scheme. This means that entrepreneurs who live far from a community market where information about the covid-19 MSME survival fund and other programs supporting entrepreneurs, such as conditional cash transfer, may easily be received from fellow business owners are less likely to join. Another major factor of participation in government programs like the covid-19 MSME survival fund scheme is the number of years the male entrepreneurs have lived in the town or community. This could be explained by the fact that male entrepreneurs who have resided in a town for a long time are more aware of government policies and programs, and thus have a better chance of participating in them.

Table 4 shows, on the other hand, that seven of the twelve factors utilized in the model specification are statistically significant in explaining the chance of female entrepreneurs enrolling in the covid-19 MSME survival fund scheme. Age, enterprise experience, access to credit, access to extension, awareness of the covid-19 MSME survival fund, number of years lived in the community, and access to varietal information are some of the factors that influence female entrepreneurs' likelihood of enrolling in the covid-19 MSME survival fund scheme. The findings show that, at a 10% level of significance, the age of female entrepreneurs has a negative and statistically significant relationship with enrolment in the Covid-19 MSME survival fund scheme, implying that the age of female entrepreneurs reduces the likelihood of enrolling in the Covid-19 survival fund scheme by 2.3 percent. Female entrepreneurs' likelihood of participating in the covid-19 MSME survival fund plan was shown to be 10% lower as a result of their business experience. This shows that female entrepreneurs with less experience may lack a thorough knowledge of the advantages of participation in government intervention programs. Female entrepreneurs are more likely to participate or enroll in the covid-19 MSME survival fund if they have access to credit. This is due to the fact that having access to credit encourages entrepreneurs to invest more, gives them more purchasing power to acquire productive assets, and allows them to expand their firms. Access to extension was

also shown to be good and strongly associated to female entrepreneurs' participation in the covid-19 MSME survival fund scheme at 10%. This demonstrates the importance of extension services in alerting female entrepreneurs about government interventions for micro, small, and medium-sized businesses in the study area. At the 1% level, the marginal effect and the awareness coefficient of the Covid-19 MSME survival fund scheme are both positive and statistically significant, showing that proper and timely awareness of government assistance would promote its uptake among female entrepreneurs. The amount of years female entrepreneurs have lived in the community is also beneficial and significantly associated with their involvement in the Covid-19 MSME survival scheme, which accounts for 5% of all female entrepreneurs. This means that female entrepreneurs who have lived in a community for a long time are more likely to be aware of government and other development partners' intervention programs, increasing their chances of participating in the program. Finally, the marginal effect and coefficient of access to varietal information are both positive and statistically significant at the 10% level among female entrepreneurs, implying that the instrumental variable adopted has an impact on the likelihood of participating in the covid-19 MSME survival fund program. Entrepreneurs that are aware of government intervention programs are more likely to participate in COVID-19 relief fund measures, demonstrating the usefulness of our instruments, particularly during the COVID-19 epidemic. A previous study yielded similar results (Abdoulaye et al., 2018).

3.4. Impact of Covid-19 survival fund on MSME entrepreneurs' income (outcome): Using matching techniques and inverse probability weighted regression adjustment (IPWRA) parameters, the impact of the covid-19 MSME survival fund on the outcome (enterprise income) of male and female MSME entrepreneurs is compared.

3.4.1. Propensity Score Matching

Before applying the PSM to evaluate the causal influence of the covid-19 MSME survival fund scheme on male and female entrepreneurs' income, various diagnostic tests were conducted to ensure that the matching procedure was consistent and reliable. To ensure that the variables did not differ, the common support condition was evaluated after generating the propensity score for male and female entrepreneurs. The density distribution of estimated propensity scores for covid-19 MSME survival fund among male and female entrepreneurs is depicted in Figures 2 and 3.

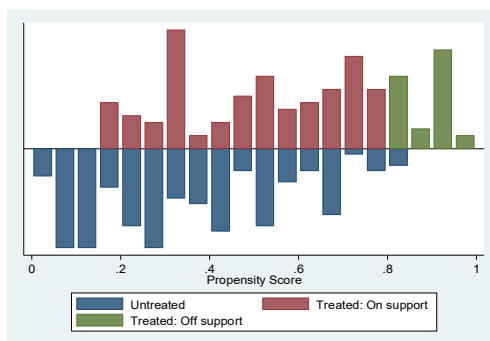


Fig 2. Propensity score matching and common support region for Covid-19 MSME survival fund among male entrepreneurs. Source: Author's computation (2022)

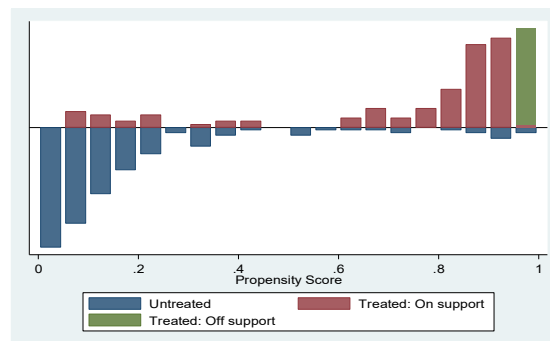


Fig 3. Propensity score matching and common support region for Covid-19 MSME survival fund among female entrepreneurs. Source: Author's computation (2022)

The treatment (male and female entrepreneurs who had benefited from the covid-19 MSME survival fund) and control groups (male and female entrepreneurs who had not benefited from the covid-19 MSME survival fund) have similar characteristics, as shown in Figures 2 and 3. Figures 2 and 3 also show the distribution of propensity scores as well as the common support region for covid-19 MSME survival fund beneficiaries (upper portion) and non-beneficiaries (lower portion) (lower portion). According to a close examination of the distribution of calculated propensity scores, the common support requirement is met, as there is significant overlap in the propensity scores of both male and female entrepreneurs. Because the study reduced selection bias in covid-19 MSME survival fund beneficiaries due to observable variables, any change in enterprise income (outcome) can now be attributed to covid-19 MSME survival fund enrollment. The propensity scores of covid-19 MSME survival fund beneficiaries and non-beneficiaries (treated and untreated) revealed that 89.6% of the male entrepreneurs' profiles were matched, with only 10.4% of the profiles being eliminated, demonstrating the model's applicability (Table 5). Similarly, for both treated and untreated female entrepreneurs, the propensity score of covid-19 MSME survival fund beneficiaries and non-beneficiaries revealed that 89.9% of their profiles matched, while about 10.1% of their profiles fell, supporting the model's fitness.

Table 5: Distribution of propensity score matching outcome

Treatment assignment	Male			Female		
	Off support	On support	Total	Off support	On support	Total
Untreated	0	162	162	0	162	162
Treated	31	104	135	30	105	135
Total	31	266	297	30	267	297

Source: Author's computation (2022)

Table 6 shows the unmatched (before matching) and matched (after matching) covariates balancing test estimates. The Pseudo- R^2 indicates the importance of the explanatory factors in defining the probability of male and female entrepreneurs engaging in the covid-19 MSME survival fund scheme. The joint significance of equality in the variables' distribution between covid-19 MSME survival fund beneficiaries and non-beneficiaries was further demonstrated using the p-values of the probability ratio test.

Table 6: Overall matching quality indicators before and after matching

Sample		Male	Female
Pseudo R^2	Unmatched	0.501	0.947
	Matched	0.067	0.018
LR χ^2 (p-value)	Unmatched	205.16 ($p > \chi^2 = 0.000$)	387.59 ($p > \chi^2 = 0.000$)
	Matched	193.51 ($p > \chi^2 = 0.000$)	291.12 ($p > \chi^2 = 0.000$)
Mean Standard bias	Unmatched	42.10	30.30
	Matched	15.70	9.30
% reduction (Bias)		62.71	69.31

Source: Author's computation (2022). Note: ***significance level at 1%.

Furthermore, results in Table 6 show a significant decline in the value of the Pseudo- R^2 among male entrepreneurs, from 0.501 (50.1%) pre-matching to 0.067 (6.7%) post-matching. According to the likelihood ratio test p-values, the joint significance was accepted for both the unpaired and matched samples (p-value = 0.000). Meanwhile, the

standardized mean bias fell from 42.10 percent prior to matching to 15.7 percent afterward. Matching lowers bias in male entrepreneurs by about 62.71 percent. Table 5 also reveals a considerable decline in the value of the Pseudo- R^2 in the female entrepreneurs' group, from 0.947 (94.7%) pre-matching to 0.018 (1.1%) post-matching. According to the likelihood ratio test p-values, the joint significance was accepted for both the unpaired and matched samples (p-value = 0.000). Also, following matching, the standardized mean bias for covariate variables dropped from 30.30 percent to 9.30 percent. Matching, on the other hand, reduces bias by roughly 69.31 percent among female entrepreneurs. As a result, the reduction in high total bias, significant p-values of the likelihood ratio test after matching, reduced Pseudo- R^2 , and a significant reduction in the mean standardized bias for both male and female entrepreneurs are indicative of successful balancing of the distribution of covariates between covid-19 MSME beneficiaries and non-beneficiaries.

3.4.2. Estimation of impact of covid-19 survival fund on outcome variable (MSME entrepreneurs' income)

Table 7 shows the distributional effect of the covid-19 MSME survival fund on the outcome variable (enterprise income) across male and female entrepreneurs using propensity score matching (PSM) and inverse-probability weighted regression adjustment (IPWRA).

Table 7: Distributional impact of covid-19 survival fund on entrepreneurs' income (outcome) based on PSM and IPWRA

MSME entrepreneurs	Treatment variable=1 if rural entrepreneurs benefited in Covid-19 Survival Fund Scheme		PSM		IPWRA	
			Coefficient	Robust Std. Err.	Coefficient	Robust Std. Err.
Male	Income from enterprise activities (Naira)	Control	113702.70***	10545.52	103147.90***	8773.928
		Treated	150606.80***	13001.31	128747.30 ***	8482.449
	% impact of covid survival fund ^a		[24.50]		[19.88]	
Female	Income from enterprise activities (Naira)	Control	118627.10***	6127.363	114551.90***	4113.352
		Treated	139558.40***	4043.606	138413.20***	138413.2
	% impact of covid-19 survival fund ^a		[14.99]		[17.24]	

Source: Author's computation (2022), ***represent significance level at 1%. PSM= Propensity score matching; IPWRA= Inverse probability-weighted regression adjustment.

^aDenotes the percentage impact of covid-19 survival fund in each of the estimate of MSME entrepreneurs' income. All estimations include set of controls included in Table 3.

The results in Table 7 show that the percentage impact of the covid-19 MSME survival fund on male and female entrepreneurs' enterprise income (outcome) varies between the two estimates. When comparing the PSM to the IPWRA estimates, it was discovered that the percentage impact of the covid-19 MSME survival fund was higher in the PSM among male entrepreneurs, whereas the impact of the covid-19 MSME survival fund was relatively higher in the IPWRA than PSM among female entrepreneurs. This study's findings were interpreted using IPWRA, which appears to be more robust than PSM and may be less prone to selection bias and endogeneity. The findings also demonstrate that for both male and female entrepreneurs, participation in the covid-19 MSME survival fund scheme has a positive and statistically significant effect on the outcome (enterprise income) indicator. Table 7 reveals that in the male entrepreneurship category, participation in the covid-19 MSME survival fund scheme increased enterprise

income by 24.50% and 19.88%, respectively. In addition, the covid-19 MSME survival fund scheme raised enterprise income by 14.99% and 17.24% for female entrepreneurs. Due to their degree of engagement in the covid-19 MSME survival fund scheme, both male and female entrepreneurs appear to have acquired an additional point. However, there is a considerable disparity in the number of level points gained by male and female entrepreneurs, with male entrepreneurs gaining more points. The trustworthiness or reliability of the PSM and IPWRA outputs, on the other hand, is determined by the quality of our matching (Table 5).

Table 8 shows that male entrepreneurs that benefited from the covid-19 MSME survival fund improved their income by 30.1% as a result of the IV-2SLS. Our findings reveal that education, access to credit, and access to extension all considerably increase enterprise income among male entrepreneurs, however the number of years spent in the community has a negative and statistically significant impact on enterprise income at 10%. Table 8 also shows that female entrepreneurs that took part in the covid-19 MSME survival fund initiative saw a 14.2% increase in their enterprise income. Female entrepreneurs' level of education, access to credit and extension services, and awareness of the covid-19 MSME survival fund scheme were all key factors in increasing their enterprise income. This finding agrees with Wossen et al. (2017), who found that GESS participants in Nigeria increased corn production by 26.1%. In addition, Jayne and Rashid (2013) observed that in Sub-Saharan Africa, increased maize output was positively associated with fertilizer subsidies. However, both male and female entrepreneurs record considerable increases in their enterprise income, with male entrepreneurs seeing higher increases than female entrepreneurs.

Table 8: IV-2SLS estimation of treatment effect on MSME entrepreneurs (income) outcome

Variable	IV-2SLS (Income)			
	Male		Female	
	Coefficient	Std. error	Coefficient	Std. error
MSME survival fund scheme	0.301*	0.069	0.142*	0.087
Age (actual age of entrepreneur in years)	-0.001	0.002	-0.003	0.003
Marital status (1=married)	0.066	0.062	0.029	0.09
Education (1=literate, 0=otherwise)	0.004*	0.004	0.005*	0.006
Household size (Numbers)	0.004	0.012	-0.004	0.016
Experience (Years)	0.007	0.012	-0.009	0.016
Access to credit (1=yes, 0=otherwise)	0.201**	0.112	0.055*	0.058
Membership of association (1=yes, 0=otherwise)	-0.051	0.057	-0.054	0.085
Access to extension (1=yes, 0=otherwise)	0.637***	0.052	0.059*	0.061
Awareness of covid-19 MSME survival fund (1=yes, 0=otherwise)	-0.033	0.069	0.108*	0.086
Distance to nearest market (km)	-0.016	0.006	0.023	0.008
Number of years of residence (years)	-0.004*	0.004	0.001	0.005
Joint significance of all regressors (F-test)	21.6066***		1.68574*	
R ²	0.4801		0.1137	
Durbin (score) chi ² (1)	0.091983(p=0.7617)		0.218936(p=0.6399)	
Wu-Hausman F(1,293)	0.090772(p=0.7634)		0.216146(p=0.6423)	
Wald chi ² (2)	254.51		1119.88	
Prob>chi ²	0		0	
R-squared	0.4614		0.79	
Observations	297		297	

Source: Author's computation (2021). *, ** and *** represent 10%, 5% and 1% levels of significance, respectively.

The level of education coefficient was statistically significant at 10% among male and female entrepreneurs and was associated to their involvement in the covid-19 MSME survival fund scheme. The positive sign of the coefficient corresponds to the a priori expectation, implying that entrepreneurs with a specific level of education are more likely to be aware of the government's MSME intervention program and to have been enrolled in the covid-19 MSME survival fund scheme. This could be due to a flow of information that is hostile to the society's elite yet addresses popular interests. Entrepreneurs with credit are more likely to participate in the covid-19 MSME survival fund scheme, and financial institutions may urge entrepreneurs with credit to participate in initiatives that will help them expand their business. Furthermore, the access to extension coefficient was significant at 1% for male entrepreneurs and 10% for female entrepreneurs, and it had a beneficial impact on their involvement in the covid-19 MSME survival fund scheme. The positive link between access to extension services and male and female entrepreneurs' participation in the covid-19 MSME survival fund scheme could imply that entrepreneurs may benefit from extension contact. This research implies that having access to extension services boosts one's chances of engaging in the government's Covid-19 intervention program. The implication is that having access to extension services allows entrepreneurs to benefit from government assistance.

We also conducted a post estimation test using “estat endogenous” to test the hypothesis that participation in government intervention (covid-19 MSME survival fund scheme) program may be endogenous. Durbin (score) $\chi^2(2) = 0.091983$ ($p=0.7617$); the robust regression-based test of Wu-Hausman F-statistics $(1,293) = 0.090772$ ($p=0.7634$) among male entrepreneurs, and for female entrepreneurs, the statistics are: Durbin (score) $\chi^2(2) = 0.218936$ ($p=0.6399$); the robust regression-based test of Wu-Hausman F-statistics $(1,293) = 0.216146$ ($p=0.6423$). Furthermore, we rejected the null hypothesis and found that male and female entrepreneurs' participation in the covid-19 MSME survival fund program is endogenous at a 1% significant level, implying that probit estimation might be used to evaluate treatment effect consistency. As a result, the results support the use of the instrumental variable method to calculate the treatment effect. To assess the validity of instruments for both types of entrepreneurs, we used the Stata command "estat first stage." The minimal eigenvalue (21.6066) is greater than the nominal 5% eigenvalue, and the Wald test at 5% bias tolerance and the joint significant test ($F=18.57$, $p=0.000$) suggest that the instruments are strong. Similarly, the minimum eigenvalue (1.6857) in female-headed households is greater than the nominal value of 5%, Wald test at 5% bias tolerance, and the joint significant test ($F=1.06$, $p=0.000$), indicating that the instruments are robust.

4. Conclusion

This study examined the impact of a government intervention program (covid-19 MSME survival fund) to counterbalance the effect of covid-19 on the local economy in southwestern Nigeria using cross-sectional data from micro, small, and medium enterprises (MSME) in the region. To compensate for probable endogeneity that could come from the nature of the data collected, the researchers used propensity score matching (PSM), inverse probability-weighted regression adjustment (IPWRA), and instrumental variable (IV) regression. The matching approach compared male and female entrepreneurs who had benefited from the covid-19 MSME survival fund scheme and came to gender-specific conclusions. Age, marital status, household size, and enterprise experience, as well as access to credit and extension services, distance to nearest market, and number of years resident in community, all have statistically significant relationships with male entrepreneurs' participation in the covid-19 MSME survival fund scheme to varying

degrees, according to the findings. Female entrepreneurs' participation in the government's Covid-19 relief scheme is influenced by their age, business experience, access to credit and extension services, awareness of the Covid-19 MSME survival fund scheme, number of years lived in the community, and access to varietal information. Findings suggest that participation in the covid-19 MSME survival fund scheme improved male entrepreneurs' enterprise income by 24.50% and 19.88%, respectively, using PSM and IPWRA estimates. Participation in the covid-19 MSME survival fund scheme increased female entrepreneurs' income by 14.99% and 17.24%, respectively. Due to their level of awareness and engagement in the government intervention (covid-19 MSME survival fund scheme) program, there was a significant difference in income earned by male and female entrepreneurs. As a result, the impact of the Covid-19 MSME survival fund scheme was felt more strongly by male entrepreneurs than by female entrepreneurs, resulting in a gender disparity in the research area.

Using instrument variable (IV) estimations, male and female entrepreneurs who benefited from the covid-19 MSME survival fund scheme have their income increased by 30.1% and 14.2%, respectively. The implication is that the covid-19 MSME survival fund scheme assisted entrepreneurs in reviving their enterprises and increasing their income, which is a compelling cause for the government to act. Given that the scheme has increased beneficiaries' income in the study area, it was suggested that the Federal Government of Nigeria build on the successes and gains of the covid-19 MSME survival fund scheme by increasing funding and ensuring that more entrepreneurs are captured in the next phase of the scheme, given that the scheme has increased beneficiaries' income. This is because the study discovered that access to credit has a significant impact on entrepreneurs' participation in government programs aimed at revitalizing their businesses, closing the gender gap, and expanding MSME financial markets, all of which would undoubtedly maximize MSME's economic impact. Gender-sensitive policy and regulatory frameworks (as well as their implementation) are critical for closing the gender gap and encouraging female entrepreneurs to participate in programs that will help them grow their enterprises and earn more income. Furthermore, fundamental policy frameworks that will strengthen the scheme, as well as measures by key institutions to rebuild and support the economy, are vital to the MSME's long-term existence. Additionally, increasing access to extension services and credit facilities, particularly among female entrepreneurs, should be pursued and encouraged in order to improve their information source and sustain and expand their businesses. This is because the study found that having access to extension services and credit has a significant impact on entrepreneurs' engagement in government intervention programs and boosted their earnings.

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CORPORATE BOARD FEATURES AND DIVIDEND POLICY IN NIGERIAN BANKS

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***Abstract:** The study examined the influence of corporate board attributes on dividend policy decision in twelve Nigerian banks for the period 2009-2021. The independent variable, corporate board features, was surrogated by four attributes (board size, composition, gender diversity and meetings). Dividend per share served as a proxy for the dependent variable, dividend policy. Fixed effects least square regression model was adopted as the study's analytical instrument. Findings reveal that board size, board composition and board meetings have an inverse and significant relationship with dividend per share. The finding further indicates a direct and insignificant association between gender diversity and dividend per share. Overall, result provides empirical evidence in support of substitution hypothesis perspective of agency theory.*

***Keywords:** Agency cost, board size, board composition, board gender, corporate governance, dividend pay-out.*

***JEL Classification:** C24, G34, G35.*

1. Introduction

The importance of effective corporate governance in every business organisation has received greater attention from investors, management of corporations, policy makers, regulatory bodies and the public for some decades. This may be attributed to series of corporate failures recorded in the last three decades around the world, which was remarkably traced to poor corporate governance mechanisms in these organisations.

Poor or ineffective corporate governance in a public limited entity occurs due to separation of ownership and control (Jensen & Meckling, 1976). Corporate managers, as agents of shareholders, create agency conflict between them and the shareholders by pursuing their selfish interest, which is contrary to the overall interest of the shareholders.

The board of directors is an internal corporate governance structure employs by shareholders to monitor activities of the management and ensures that decisions made at meetings are in line with the interest of the shareholders' maximisation objective. This act invariably tends to reduce the agency conflict and its associated costs to a moderate level. The board has different attributes, such as the size, composition and gender diversity, which help in shaping its structure and members contribution to the attainment of the corporate objectives (which includes protection of the interest of shareholders).

The shareholders are entitled to dividends from profits made by corporate entities at the end of the financial year. The decision to pay dividend or not is due to many factors as

documented in extant literature. However, dividend payment sends signal to the investors and the public on what is happening and what is expected to happen in the future to the company. Also, when dividends are paid, the free cash that will be available to the management to play with will be drastically reduced. This suggests that payment of dividend is another means of ameliorating the conflict between the management and the shareholders.

There is plethora of empirical studies on corporate governance-dividend policy nexus in the literature with their individual limitations. For instance, some studies used firm-specific attributes, such as profitability (Hameed, Hussain, Naheed & Shahid, 2021), firm size (Kajola, Desu & Agbanike, 2015), leverage (Marfo-Yiadom & Agyei, 2011; Rafique, 2012), and cash flows (Afza & Mirza, 2011), as corporate governance attributes. Little attention was made in the use of board attributes in spite of the fact that corporate board has been seen to explain dividend policy in some previous studies in both developed and developing countries. Most of the existing studies used the conventional agency proposition to offer explanation on the topical issue, thereby producing mixed results. Very limited studies (such as Elmagrhi, Ntim, Crossley, Malagiha, Fosu & Vu, 2017; Pahi & Yadav, 2018; Sendur & Dogukanh, 2019; Nharo, Moloji & Hlobo, 2021; Saliya & Dogukanli, 2022), have considered the role of quality corporate governance regime existing in the organisations and its influence on dividend policy from the perspectives of outcome and substitution hypotheses of agency theory. However, most of these studies as found in previous works, were carried out in the developed countries which have different corporate governance jurisdiction and enforcement from those in the developing/emerging countries.

Gaps noticed in some of the existing studies are expected to be mitigated in this study. This objective is expected to be achieved by using data from Nigerian deposit money banks to explain the interaction between four corporate board attributes (size, composition, gender diversity, meetings) and dividend policy from the perspectives of outcome and substitution hypotheses.

2. Literature Review

Theoretical Framework

The agency theory as postulated by Jensen and Meckling (1976) was adopted as the theory that underpinned this study. Agency theory proposes that due to separation of ownership and control in corporate entities, the relationship between the principal (owners/shareholders) and the agent (management/directors) may not be cordial, thereby resulting into conflict. According to Jensen (1986), the agents may decide to pursue their own interest by engaging in some actions that profit them as agents but inconsistent with the expectations of the principal (who delegates the running of the activities of the company to them). In order to align the interest of both parties, the principal has to find means of curtailing the excesses and opportunistic behaviours of the agents.

The agency theory submits that dividend payment is one of the best known methods of reducing agency costs and resolving the conflict between the principal and the agent in corporate organisations (Idris & Hussaini, 2016; Chang, Kang & Li 2016; Al Sa'eed & Amin, 2018).

La Porta, Lopez-de- Silanes, Shleifer and Vishny (2000) introduced two competing propositions to explain the efficacy of agency theory in corporate governance-dividend policy decision. These propositions are the substitution and outcome hypotheses. The substitution hypothesis suggests that companies that are weakly governed and with lower protection of rights of minority shareholders have tendency to pay higher dividends. Dividend payment in this case is used to cover their inefficiencies, such that they

(management) will be in good book of the shareholders and new investors. An inverse relationship is therefore expected between corporate governance attributes (of which board attribute is part of) and dividend payout. The outcome hypothesis proposes that companies having sound corporate governance practices tend to pay higher dividends due to the boards' effective monitoring mechanism and the need to align the interest of the shareholders (which they represent) and the management (Nharo *et al.*, 2021). Similarly, companies that are poorly governed pay lower dividends because managers are only interested in their selfish aggrandisement (Al-Taleb, 2012). A direct association between corporate governance attributes and dividend payout is expected under the outcome hypothesis.

Related empirical studies and development of hypotheses

Board size and dividend policy

Board size is the total number of directors on the board of an entity in a financial year. Its membership includes the executive (internal) directors, independent and non-executive (external) directors. In various countries' codes of corporate governance, the functions and duties of corporate boards are clearly defined. One critical function of the board is to efficiently and effectively monitor and supervise the management as well as provide policy direction in the running of the corporation so as to achieve its objectives. There is no universally acceptable opinion on the size of corporate board in the literature. However, most countries' codes of corporate governance provide that every corporate entity should have sufficient number of directors on board that will be necessary to drive the operations of the business unhindered.

The substitution hypothesis favours smaller board size. It submits that companies with smaller board size are more effective in monitoring activities and have less coordination costs, which eventually lower agency costs (Lipton & Lorsch, 1992 cited by Shafana & Safeena, 2022; Manzoor & Joiya, 2018; Mardani & Indrawati, 2018; Tarus, 2020) unlike companies with larger boards with coordination problems resulting in poor governance structure (Jensen, 1993). Companies that are poorly governed are likely to pay higher dividends as compensation for their ineffective corporate governance structure. This implies that an inverse relationship should be expected between board size and dividend payout.

The outcome hypothesis favours a larger size. The proponents of this hypothesis argue that a larger board has people of diverse skill, experience and opinions, which might improve the effectiveness of the monitoring process and eventually support the management in reducing the agency costs (Ntim, Opong & Danbolt, 2015; Elmagrhi *et al.*, 2017; Emmanuel, Uwuigbe, Teddy, Tolulope, & Eytomi, 2018; Osemene & Fagbemi, 2019). The interests of shareholders are therefore protected through payment of higher dividends; hence a direct association is expected between the two variables.

Empirical evidence has so far shown mixed results. Consistent with the predictions of outcome hypothesis, Litai, Chuan and Kim (2011) utilised data from 1,056 listed Australian firms during 2001-2008, found a direct relationship between board size and dividend payments. Ikuanda, Muiru and Kamau (2016) used a sample of Kenya manufacturing companies for the period, 2008-2014. The findings produced a direct association. Dissanayake and Dissabandara (2021) employed data from 170 Sri Lankan companies during the period 2015-2019. Findings from the panel regression indicated board size and dividend policy are directly related. Pahi and Yadav (2018) and Salya and Dogukandi (2022) studies also produced positive outcomes.

In support of substitution hypothesis, Ghasemi, Madrakian and Keivani (2013) employed data from 81 listed companies in Iran for the period 2005-2011 and result

showed board size and dividend policy are inversely related. Same negative association result was established in a study conducted by Batool and Javid (2014) in Pakistan where data from 100 listed manufacturing companies for the period 2003-2011 were utilised. However, few other studies did not support the predictions of outcome and substitution hypotheses as findings produced an insignificant relationship. Sani and Musa (2017) assessed the effect of board attributes on dividend policy of 8 Nigerian banks for 2006-2015 financial years. Regression results of pooled OLS and random effects model produced a weak (insignificant) negative relationship. Nharo *et al.*, (2021) utilised data from a sample of 29 firms in South Africa for financial years, 2013-2018. Results from the fixed effects regression revealed an insignificant effect. Shehu (2015); and Shafana and Safeena (2022) also indicated an insignificant relationship in their studies.

Following the discussion above, the study hypothesizes that:

H₁: Board size has a relationship with dividend policy.

Board composition and dividend policy

Board composition, also known as board independence, refers to the proportion of outside/independent directors in the boardroom. It is regarded as the most crucial component of a firm's internal corporate governance monitoring mechanism (Gregory, 2000 cited by Mili, Sahut & Teulon, 2017). Outside directors bring to the boardroom unique qualifications, diverse experience, skills, expertise and objective opinions (Kajola, Adewumi & Babatolu, 2015; Hussain, Rigoni & Orji, 2018).

With all these traits, the outcome hypothesis suggests that outside directors are capable of protecting the interest of the shareholders from opportunistic behaviours of managers (Easterbrook, 1984 cited by Dissanayake & Dissabandara, 2021; Uwuigbe, Olusanmi, & Iyoha, 2015; Elmagrhi *et al.*, 2017), thereby mitigating the agency conflict through payment of dividends. The outcome hypothesis predicts a direct association between board composition and dividend payout.

According to the substitution hypothesis, the presence of outside directors can help in limiting the amount of dividends payable to shareholders through their monitoring activities especially for firms that are poorly governed (Benjamin & Zain, 2015; Mili *et al.*, 2017).

The findings from previous empirical studies are mixed. For example, consistent with predictions of outcome hypothesis, Riazi, Liu and Ahmad (2016) used data from Pakistani listed companies for the period, 2009-2015 to test the possible interaction between board composition and dividend payments. Regression result exhibited a positive and significant relationship between the two variables.

Supporting the substitution hypothesis, Mili *et al.*, (2017) study of firms in Asian and GCC emerging markets during the financial crises revealed that Asian firms, GCC firms and all firms showed that board composition and dividend policy were inversely related. Similar negative association outcomes were established in studies by Pahi and Yadav (2018); Mirza and Malik (2019); Suwaidan and Khalaf (2020) and Nazar (2021).

In line with the reviewed theory and empirical findings, the study hypothesizes that:

H₂: Board composition has a relationship with dividend policy.

Gender diversity and dividend policy

Agency theory recognises the impact of women directors as a corporate governance attribute on the board as their presence have effect on boardroom discussion and decision-making.

The outcome hypothesis submits that women directors improve board effectiveness (Seto-Pamies, 2015; Pucheta-Martinez, Bel-Oms, & Oleina-Sempere, 2016; Mustafa, Ahmad & Chanfren, 2017; Anuar *et al.*, 2020), thereby using dividend payment as a means

of reducing agency costs and opportunistic behaviour of management to a manageable level (Ye, Deng, Liu, Szewczyk, & Chen, 2019; Gyapong, Ammad, Ntim, & Nadeem 2021). Other qualities of women directors that have been empirically validated in previous studies indicated that they are hardworking, skillful, professionals and with high sense of integrity in their dealings with management and other directors on the board (Carter *et al.*, 2003 cited by Elmagrhi, *et al.*, 2017; Ingley and Walt, 2005; Elmmagrhi, *et al.*, 2017), enhance strategic decision making and possession of strong leadership trait (Lee, 2015). All these features are necessary for smooth running and participation in a modern corporate organisation. Accordingly, a direct association is expected between board gender diversity and dividend payout.

Substitution hypothesis, however proposes that the presence of women in corporate boards can lead to increase in conflict among board members, thereby exuberating agency costs. With this, firms with high presence of women on board will need to pay higher dividend to mitigate the weak corporate governance structure in place (Elmagrhi, *et al.*, 2017).

Empirically, a number of previous studies following outcome hypothesis approach suggested a direct association between gender diversity and corporate dividend policies. For example, Adamu, Ishak and Hassan (2017) used data from 89 Nigerian firms for 2013-2015 to explain the board structure and dividend policy puzzle. The findings reported that women directors and dividend policy were positively related. Studies by Al-Amarnah, Yaseen and Iskandrani (2017); Kristianto (2018); Kajola, Olabisi, Soyemi and Olayiwola (2019); and Dissanayake and Dissabandara (2021), also revealed a direct relationship between the two variables.

By contrast to findings above and in support of substitution hypothesis, Saeed and Sameer (2017) employed data from a sample of some international countries, showed that companies that engaged larger number of female directors paid lower amount of dividends. This negative relationship was also confirmed by Elmagrhi *et al.*, (2017); and Mustafa, Saeed, Awais and Aziz (2020).

Following the above discussion, the study hypothesizes that:

H₃: A relationship exists between gender diversity of the board and dividend policy.

Board meetings and dividend policy

Board meeting is an internal corporate governance mechanism where issues of strategic importance that concern the corporate entity are discussed. It affords the directors the opportunity to perform their duties in line with the tenant of a country's code of corporate governance (Laksmna, 2008 cited by Mili *et al.*, 2017).

Regular meetings of the board, according to the outcome hypothesis, avail the directors the opportunity to effectively monitor and evaluate the activities of the management. This is achieved through seamless communication of information to management; thereby using the medium to mitigate agency conflict between management and the shareholders. This will therefore encourage the alignment of the interest of management with the owners through pursuit of higher dividend payment (Ntim, 2013). The outcome hypothesis proposes a direct association between board meetings and tendency to make dividend payments.

Substitution hypothesis, however submits that companies that meet regularly can increase agency costs as a result of less time that will be available for serious monitoring function. As a result of this poor corporate governance practices, dividend payment is used by management as substitute for mitigating agency problems they have with shareholders (Benjamin & Zain, 2015). The substitution hypothesis therefore suggests an inverse relationship.

Empirical studies in this area are scarce. Mili *et al.*, (2017) used data from emerging markets of countries from Asia and GCC during the financial crises of 2003-2011, reported a significant direct relationship between board meetings (board intensity) and dividend policy. The finding is consistent with the prediction of outcome hypothesis. Riazi *et al.*, (2016) also revealed a positive result in the study conducted in Pakistan between 2009 and 2015.

On the contrary, in Turkey, Saliya and Dogukanli (2022) utilised data from 55 companies for the period 2011-2019 to explore how board meetings respond to dividend payments. The finding from fixed effects regression suggested an inverse association between meetings of board and dividend policy, which provided evidence in support of substitution hypothesis.

Consistent with the prediction of agency theory, the study hypothesizes that:

H₄: Board meeting has a relationship with dividend policy.

3. Methodology

Data source

The research design employed was basically *ex-post facto* as all required data necessary for the attainment of the objective of the study were historically available in the banks' annual reports. As at December 2021, Nigeria had fourteen listed banks and this served as the population of the study. Due to issue of incomplete data necessary for the accomplishment of the objective of the study, two banks were excluded from the population and a sample of twelve listed banks was employed. Relevant data were extracted manually from the banks' annual financial reports that were downloaded from their websites.

The variables

Dependent variables

Dividend policy, the study dependent variable, was surrogated by dividend per share. This variable was adopted in this study because of its peculiar feature of not being volatile as firms' earnings approach zero.

Independent variables

Following the review of relevant empirical studies, four factors (board size, composition, board gender diversity, board meetings) were identified as corporate board attributes capable of influencing dividend policy of listed business organisations; and subsequently adopted as the independent variable's (board attributes) proxies.

Control variables

There are some other variables not captured in the study's model that can have effect on the dependent variable, dividend policy (Nharo *et al.*, 2021; Hameed *et al.*, 2021; Saliya & Dogukanli, 2022). Failure to recognise the importance of these variables may affect the explanatory power of the model and produce spurious findings. The study included four of such variables (firm size, profitability, firm age and leverage) as control variables.

Theoretically, a larger firm has the capacity to raise funds from the capital market, enjoys better economies of scale, and generates bigger cash flow and profit than a smaller firm. Thus, a larger firm is expected to pay higher dividends to its shareholders as compensation for their investment in the company (Farrelly *et al.*, 1985 cited by Noorhavati, Zuraida & Nurul, 2018).

The effect of firm age on dividend policy depends on the growth cycle which the firm is. A matured (older) firm may not have great incentive in future investment growth and will therefore prefers the distribution of its profits in form of dividends to its

shareholders and vice-versa for a growing firm (Al-Malkawi, 2007 cited by Batool & Javid, 2014).

In compliance with statutory requirements, dividends are paid from corporate profits, hence, it is expected that firms with higher profits have the likelihood to pay higher dividends (Kajola, Adewumi & Oworu, 2015; Nyere & Wesson, 2019).

Agency theory provides that in order to avoid the cost of external financing, firms that are highly levered do have higher transaction costs and will find it difficult to use earnings generated to pursue robust dividend policy (Al-Shubiri, 2011).

The study expects a positive association between each of the first three control variables (firm size, age, profitability) and dividend pay-out, while a negative relation is envisaged between leverage and dividend pay-out.

Model Specification

The study model is specified in equation 3.1:

$$DPS_{it} = \beta_0 + \beta_1 BDZ_{it} + \beta_2 BCO_{it} + \beta_3 BGD_{it} + \beta_4 BMG_{it} + \beta_5 FSZ_{it} + \beta_6 FAG_{it} + \beta_7 PRF_{it} + \beta_8 LEV_{it} + e_{it} \quad (3.1)$$

Where,

DPS = Dividend per share

BDZ = Board size

BCO = Board composition

BGD = Board gender diversity

BMG = Board meetings

FSZ = Firm size

FAG = Firm age

PRF = Profitability

LEV = Firm leverage

e = stochastic error term.

Measurement of variables

Table no. 1 depicts the description and measurement of the study variables.

Table no. 1. Measurement of variables

Variable	Description	Measurement	Source
DPS	Dividend per share	Ratio of cash dividend paid to total equity shares issued	Mirza & Malik (2019); Anh & Tuan (2019); Hameed <i>et al.</i> , (2021)
BDZ	Board size	Number of directors sitting on the board in a financial year	Shafana & Safeena (2022); Dissanayake & Dissabandara (2021)
BCO	Board composition	Proportion of external directors to total board membership in a financial year	Hussain <i>et al.</i> , (2018); Anuar <i>et al.</i> , (2020)
BGD	Board gender diversity	Proportion of female directors to total board membership in a financial year	Adamu <i>et al.</i> , (2017); Mustafa <i>et al.</i> , (2020)
BMG	Board meetings frequency	Number of meetings held in a financial year	Dewasiri <i>et al.</i> , (2019); Nguyen & Nguyen (2021)
FSZ	Firm size	Natural log of total asset	Kajola <i>et al.</i> , (2019); Tarus (2020)

FAG	Firm age	Log of the number of years of the company to the study period	Mili <i>et al.</i> , (2017); Salah (2018)
PRF	Firm profitability	Ratio of profit after tax to total asset	Noorhayati <i>et al.</i> , (2018); Nharo <i>et al.</i> , (2021)
LEV	Firm leverage	Ratio of total debt to total asset	Dissanayake & Dissabandara (2021)

Source: Authors' compilation from various empirical studies, 2022

4. Results and Discussion

Descriptive

Table no. 2 provides the summary result of the descriptive statistics.

Table no. 2. Descriptive statistics

Variable	Mean	Minimum	Maximum	Standard dev.	Skewness	Kurtosis
DPS	0.560	0.000	3.600	0.828	1.863	2.612
BDZ	13.237	6.000	20.000	2.965	-0.195	-0.328
BCO	0.651	0.467	0.923	0.117	1.051	0.102
BGD	0.209	0.000	0.571	0.119	0.070	-0.075
BMG	6.071	1.000	16.000	2.402	1.288	2.389
FSZ	11.984	10.033	12.985	0.595	-0.896	0.786
FAG	1.534	0.602	2.107	0.278	-0.179	1.169
PRF	0.023	-0.242	0.266	0.053	0.800	10.648
LEV	0.092	0.000	0.684	0.114	3.151	11.760

Source: Authors' computation, 2022

The mean dividend per share (DPS) of the sampled banks from Table no. 2 is 56% and it ranges from 0% to 360%. It suggests that the corporate managers and their boards, on the average, have used the profits available to the banks for payment of higher dividends. This perhaps may be to cover their corporate governance structure inefficiencies during the study period.

The mean board size (BDZ) is 13, with minimum of 6 and a maximum of 20 members. This suggests that the board of each of the selected banks have sufficient board members that will enable them to accomplish their tasks efficiently and effectively.

The proportion of outside/non-executive/independent directors sitting in the board (BCO) averaged 65.1%, with minimum of 46.7% and a maximum of 92.3%. This is substantially in compliance with the principle of the country's code of corporate governance issued in 2018, which requires more of non-executive directors than executive directors as a result of their high degree of objectivity which they bring to the board.

The proportion of female directors to the board membership (BGD) has an average of 20.9%. This indicates that there is imbalance in the diversity representation as more males are favoured than females in the Nigerian banks' boardrooms.

The code of corporate governance of 2018 specifies that a public or private listed company should have board meetings at least on a quarterly basis in a financial year. The mean board meeting (BMG) of the sampled banks is about 6, with minimum of 1 and a maximum of 16 times in a financial year. There is a substantial compliance with the provision of the corporate governance code in this respect.

Regarding the control variables, the bank size (FSZ) has a mean of ₦963.8 billion (\log^{-1} 11.984), with minimum of ₦10.8 billion (\log^{-1} 10.033) and a maximum of ₦9,660.5

billion (\log^{-1} 12.985). The average age (FAG) of the sampled banks is 34 years (\log^{-1} 1.534). The average profitability (PRF) is 2.3%, indicating poor usage of the asset by the management in generating profits. The average leverage (LEV) is 9.2%, suggesting that the banks are lowly levered.

Board size (BDZ) with standard deviation of 2.965 has the highest dispersion from mean, while leverage has the least dispersion from mean (with standard deviation of 0.114).

Correlation

Table no. 3 shows the direction of association between the study variables.

Table no. 3. Pearson correlation matrix

Var	DPS	BDZ	BCO	BGD	BMG	FSZ	FA G	PRF	LEV
DPS	1								
BDZ	-.070	1							
BCO	-.157**	-.538***	1						
BGD	.141**	-.056	-.030	1					
BMG	-.274***	.172**	-.082	-.006	1				
FSZ	.218***	.405***	-.413***	-.196***	.208***	1			
FAG	-.078	-.059	.173**	.074	.214***	.208***	1		
PRF	.381***	-.155**	.287***	.322***	-.224***	-.288***	-.041	1	
LEV	-.151**	-.255***	-.171**	.061	.046	-.068	.019	-.324***	1

* $p < 10\%$; ** $p < 5\%$; *** $p < 1\%$,

Source: Authors' computation, 2022

From Table no. 3, dividend per share (DPS) has a negative but insignificant association with board size (BDZ). DPS has a negative and significant association with two of the explanatory variables- board composition (BCO) at 5% level and board meetings (BMG) at 1% level. DPS however has a direct association with board gender diversity (BGD) at 5% level. These results suggest that there is an inverse association between dividend payment and all the explanatory variables, except BGD. As for the control variables, DPS has a direct and significant association with firm size (FSZ) and profitability (PRF) both at 1% level, but negative and significant association with leverage (LEV) at 5% level. The association between DPS and firm age (FAG) is negative and insignificant.

The result in Table no. 3 further reveals that highest coefficient of 53.8% occurs between board size (BDZ) and board composition (BCO). This is less than the acceptable threshold for occurrence of multicollinearity between explanatory variables of 0.7 and above (Nharo *et al.*, 2021). Since no variable has a coefficient of 0.7 and above, then there is absence of multicollinearity issue between the explanatory/control variables.

Collinearity test

Table no. 4 provides the result of the multicollinearity test among the explanatory/control variables.

Table no. 4. Multicollinearity test result

Variable	VIF	Tolerance Value (1/VIF)
BDZ	1.829	0.547
BCO	1.958	0.511
BGD	1.234	0.810
BMG	1.143	0.875
FSZ	1.572	0.636
FAG	1.225	0.816
PRF	1.493	0.670
LEV	1.465	0.682
Average	1.490	0.693

Source: Authors' computation, 2022

The variance inflation factor (VIF) was employed to further determine if multicollinearity issue existed between the explanatory/control variables or not. The result of the test in Table no. 4 reveals that board composition (BCO) has the highest value of 1.958, while board meetings (BMG) has the least value of 1.143. The average VIF is 1.490. There is no variable that has a value of more than 10.0. This suggests absence of multicollinearity issue between the study variables (Wooldridge, 2012). Thus, all the variables are fit to be included in the regression.

Regression

Table no. 5 shows the results of the three separate regressions conducted (pooled ordinary least square, fixed effects and random effects, and summary results of diagnostic tests.

Table no. 5. Regression results

Variable	POLS		FEM		REM	
	t-stat	p-value	t-stat	p-value	t-stat	p-value
Constant	-2.130**	0.035	-0.993	0.323	-1.385	0.168
BDZ	-3.764***	0.000	-4.332***	0.000	-3.029***	0.003
BCO	-3.299***	0.001	-5.899***	0.000	-3.682***	0.000
BGD	1.023	0.308	0.534	0.594	0.443	0.658
BMG	-3.165***	0.002	-3.004***	0.003	-2.068**	0.040
FSZ	5.206***	0.000	7.216***	0.000	3.527***	0.001
FAG	-1.040	0.300	-0.698	0.486	0.101	0.920
PRF	5.383***	0.000	5.076***	0.000	5.078***	0.000
LEV	-1.473	0.143	-2.235**	0.027	-0.797	0.427
R ²	0.409		0.391		0.236	
Adj. R ²	0.377		0.362		0.195	
F-stat	12.711***		22.271***		5.682***	
F-stat (prob)	.000		.000		.000	
Durbin-Watson stat	1.944		1.695		1.714	
Observations	156		156		156	
Redundant fixed effects tests	138.528*** (0.000)					
Hausman test	72.160*** (0.000)					

* p < 10%; ** p < 5%; *** p < 1%,

Source: Authors' computation, 2022

There are similarities in the results of the three regressions. Board size, board composition and board meetings have an inverse and significant relation with dividend per share, while board gender diversity and dividend per share are positively and insignificantly related.

To determine which of the three regression techniques to be used for inference, two diagnostic tests were performed. The redundant fixed test was employed to discriminate between the pooled OLS (POLS) and fixed effects least square regression (FEM). Result in Table no. 5 shows that the chi-square value is 138.528 and significant at 1% level ($p < 0.01$). It suggests that FEM has preference over POLS technique. Hausman (1978) specification test was later conducted to select the better analytical technique between the FEM and random effect generalised least square regression (REM). Result in Table no. 5 indicates a chi-square value of 72.160 and significant at 1% level ($p < 0.01$). It clearly reveals that for this study, the FEM is a better technique than the REM. Inference of this study will therefore be made using the result of the fixed effects least square regression as shown in Table no. 5 (columns 4 and 5).

From Table no. 5, the adjusted R^2 of 0.362 indicates that about 36.2% variation in the dividend policy (dividend per share) is explained by the four board attributes and four control variables, while about 63.8% cannot be accounted for by the study models. The F-stat value is 22.271 and this is significant at 1% level ($p < 0.01$), suggests that the model is properly fitted. The Durbin-Watson value of 1.695 is within allowable benchmark of 1 and 3 (Alsaeed, 2006), indicating absence of autocorrelation among the series used in the study.

Result in Table no. 5 reveals that board size (BDZ) is negatively related to dividend per share (DPS) and this is significant at 1% level ($t = -4.332$; $p = 0.000$). This shows that as board size increases, dividend paid by the sampled banks, decreases and vice-versa. It therefore implies that dividend payment was not used by these banks as a monitoring mechanism but as substitute for ameliorating the poor governance structure in the system. The finding, which is consistent with the prediction of substitution hypothesis, is supported by studies conducted by Ghasemi *et al.*, (2013) and Batool and Javid (2014). The finding is however at variance with the outcomes of the studies conducted by Pahi and Yadav (2018) and Salya and Dogukandi (2022), which produced a direct and significant relationship between the two variables. Hypothesis 1 is hereby validated, as board size and dividend policy are negative and significantly related.

Table no. 5 indicates that board composition (BCO) has an inverse and significant effect on DPS at 1% level ($t = -5.899$; $p = 0.000$). This indicates that as more non-executive/ external/independent directors are engaged in the boardroom, the dividend per share reduces. This can be interpreted from the substitution hypothesis perspective which submits that the outside directors can help in limiting the amount of dividends payable to shareholders through their presence especially for firms that are poorly governed. The finding is supported by the studies conducted by Suwaidan and Khalaf (2020); Nazar (2021); and Nharo *et al.*, (2021). The finding is however inconsistent with Kulathunga, Weerasinghe and Jayarathne (2017) and Shafana and Safeena (2022) that produced positive relationship. Hypothesis 2 is empirically supported as board composition and dividend policy are negative and significantly related.

Board gender diversity (BGD) and DPS, as indicated in Table no. 5, is positive but not significant at 5% level ($t = 0.534$; $p = 0.594$). It indicates that the presence of more women in the boardroom affects the likelihood to pay dividend due to their effective monitoring of the management, although this is not having any strong impact. The finding is inconsistent with the predictions of both outcome and substitution hypotheses. The finding of the study has the support of the studies conducted by Nharo *et al.*, (2021) and

Saliya and Dogukanli (2022). It is not in line with the studies of Al-Rahahleh (2017); Al-Amarneh *et al.*, (2017); and Dissanayake and Dissabandara (2021), which reported a positive and significant relationship. Hypothesis 3 is not empirically supported as board gender diversity and dividend policy have no significant relationship.

Board meetings (BMG) has a negative and significant impact on DPS at 1% level ($t = -3.004$; $p = 0.003$). This finding indicates that having many meetings in a financial year show presence of poor governance structure as agency costs tend to increase. This is consistent with the prediction of substitution hypothesis and supported by empirical studies conducted by Elmagrhi *et al.*, (2017); and Saliya and Dogukanli (2022). Hypothesis 4 is supported as board meetings and dividend policy are negative and significantly related.

For the control variables, profitability and firm size have a positive relation at 1% level, while leverage has an inverse relationship at 5%, with dividend per share. These results are consistent with agency theory. Firm age however, has an inverse and insignificant relationship with dividend per share.

5. Conclusion and recommendations

In trying to resolve the corporate governance-dividend puzzle, this study empirically explored the influence of four board attributes have on the dividend policy of listed banks in Nigeria. Twelve (12) banks were selected as sample for study time frame of thirteen (13) years (2009-2021).

Regression result from fixed effects least square model revealed an inverse and significant relationship between three of the attributes (board size, board composition, board meetings) and dividend per share (dividend policy proxy). A direct association between the fourth attribute (board gender diversity) and dividend policy was reported, the relationship is however insignificant.

Arising from the results of the study, it is evidenced that Nigerian banks, during the period of the study, operated in a poor corporate governed environment. Dividend payments made to shareholders was not as a result of effective monitoring of the management by the board members to reduce agency costs. The dividend payment was used as a strategic mechanism to cover the board's inefficiency so as to be in good book of the shareholders, future investors and the general public. The finding of the study therefore validated the proposition of the substitution hypothesis perspective of agency theory.

It is recommended that regulatory bodies in Nigeria, particularly the Securities and Exchange Commission and Financial Reporting Council of Nigeria, should endeavour to consistently revise their regulations so as to institutionalize the principles of corporate best practices in Nigerian corporate entities. Special attention should be directed to the boards of listed companies, being the internal mechanism that is responsible for provision of leadership and formulation of strategic policies that will enhance and sustain the prosperity of the corporations. The size of the board; its composition; and frequency of board meetings, should be adequately considered whenever such revisions to the regulations are being considered.

Corporate shareholders are also advised to encourage more representation of female directors in the boardroom. This will enable the organisation to reap the benefits of the effective monitoring skills of the female directors, which subsequently will reduce agency costs and the conflict between the management and shareholders, to the barest level.

For future line of study, efforts should be made by researchers to conduct similar studies in other economic sectors, particularly companies in the non-financial sector, which perhaps have a larger population size. Cross-country studies may also produce a more robust result, which can be fairly generalised.

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MONEY MARKET OPERATIONS AND ECONOMIC DEVELOPMENT IN NIGERIA

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Abstract: *The study examines effect of money market operation on economic development of Nigeria. The study adopts Treasury bill, 3months deposit rate, 6 months deposit rate, 12 months deposit rate and over 12 months deposit rate as proxies for money market operations while unemployment rate was used as a measure of economic development. Based on this, the study formulated five hypotheses and these were tested through Vector Error Correction Mechanism. Expos-facto research design is adopted in this study which is characterizes with quantitative or numeric description of historical data. The data for this study were obtained from secondary sources. This includes Central Bank of Nigeria Annual Report and CBN Statistical Bulletin. The data covers the period of thirty-three years from 1985-2017. The study found that Treasury bill has a negative effect on economic development. Also the over 12 months deposit rate has a negative but insignificant effect on economic development in Nigeria. The 12 months deposit rate on has a positive but insignificant on economic development in Nigeria. The result also shows that the deposit rate for 3 month and 6 month have a negative but significant effect on economic development in Nigeria. In line with the findings, the study concluded that money market operation has effect on economic development in Nigeria. Based on this the following recommendation are made. The Central Bank of Nigeria should implement flexible policies on the acquisition of Treasury bill and this will enhance the performance of money market in Nigeria.*

Keywords: *Money market operations, Treasury bill, Deposit rates, economic development.*

JEL Classification: *C24, G34, G35.*

1. Introduction

The financial system of any entity serves as a catalyst through financial intermediation for productive activities to ensure economic growth and development (Olowo, 2008). The sector provides fund for investment and also allocates these funds efficiently as possible to those project that offers best returns to fund owners.

The sector combines banks and non-banks which are institutional arrangement that facilitates the intermediation of funds in an economy. The non-bank institution comprises of insurance companies, money market, capital market, pension fund among others. The market which deals with sort term funds and the capital market that is for long term dealings in loanable funds (Anyanwu, 1996).

The basic of distinction between money market and the capital market lies in the degree of liquidity of instrument bought and sold in each of the market which can be subdivided into the primary and secondary market. The primary market is concerned with raising of new fund while the secondary market exists for the sale and purchasing of existing securities. Afolabi, (1991) is of the opinion that financial market bridges the gap between the savers who purchased securities when they had surplus to recover their money when they are in need of cash. The major concern for the study is the money market and its impact on Nigeria Economic development, the money market is an intermediary for short

term financial asset that are close substitute for money and it was established by the Central Bank of Nigeria primarily for mobilizing domestic savings for productive investments as well as providing government with funds to enable implement programmes (Nibeabuchi, 2004).

The Nigeria money market offers opportunity for trading short term instrument which is very liquid and has negligible risk and the money market also provides the basis for implementation of monetary policy. The types of instrument traded are treasury bill, treasury certificate, commercial paper, bankers acceptance etc. commercial papers are the dominant players in the market while the market provides the basis of operations, manipulation and execution of monetary policy (indirect instrument) with discount houses intermediary between the Central Bank and other banks where the former is playing the role of the lender of last resort to the market. (Jhingan, 2004). Not surprisingly, over the last decade, the financial development and economic growth nexus has drawn immense attention among researchers and policymakers from both the developed and developing countries.

A number of studies have been conducted to investigate different proxy variables of financial development and empirical studies have confirmed the positive association between them (Azam et al. 2016; Bwire and Musiime 2015; Chang and Caudill 2005; Comin and Nanda 2014; De Gregorio and Guidotti 1995; Kassimatis 2000; Kyophilavong et al. 2016; Ram 1999; Hasan and Barua 2015; Saad 2014; Shahbaz et al. 2015).

The contribution of financial development towards economic development comes with either bank-based financial development, market-based financial development, or both. Different countries experience financial development in both or either way. The main objective of this study is to examine the effect of money market operations on economic development in Nigeria. Other specific objectives are as following: To assess effect of Treasury bill on economic development in Nigeria; to assess effect of 3 months deposit rate on economic development in Nigeria; to examine effect of 6 months deposit rate on economic development in Nigeria; to assess effect of 12 months deposit rate on economic development in Nigeria; o examine effect of Over 12 months deposit rate on economic development in Nigeria. In line with these objectives, the following research questions are stated as follow; Does Treasury bill have effect on economic development in Nigeria? What effect does 3 months deposit rate have on economic development in Nigeria? Does 6 months deposit rate have effect on economic development in Nigeria? What effect does 12 months deposit rate have on economic development in Nigeria? What effect does Over 12 months deposit rate have on economic development in Nigeria? In consonance with these research questions, the following research hypotheses are formulated as follow; Treasury bill has no significant effect on economic development in Nigeria; Over 12 months deposit rate has no significant effect on economic development in Nigeria; 12 months deposit rate has no significant effect on economic development in Nigeria; 6 months deposit rate has no significant effect on economic development in Nigeria; 3 months deposit rate has no significant effect on economic development in Nigeria.

In order to answer these questions and test the formulated hypotheses the remaining part of the paper is structured as follow: section two reviewed literature on money market operations and economic development, section three outlines the methodology adopted for the study. Data analysis and discussion were presented in section four while section five concludes the paper and proffer recommendations.

2. Literature review

The money market is a market for short term funds and as the name suggest, it is a market in which money is bought and sold, the market is used by business enterprise to

raise fund for the purchase of inventories, by banks to finance temporary reserve loss, by companies to finance consumer credit and by government to bridge gap between its recipient and expenditure.

Based on its importance, the followings are some of the documented studies; Ajao and Festus (2011) examined the effect of the global financial meltdown on the Nigerian money market in two separate time periods, 2000 – 2005 and 2006 – 2009 using Ordinary Least Square (OLS) techniques. The Study found that during the non-crises era (2000 – 2005) all the explanatory variables met the a-priori expectations; but during the crises era (2006 – 2009) only the coefficient of inflation retains its a-priori expectations or sign. The study avert that economic activities were adversely affected by the global financial meltdown. Based on this, the study recommended that adequate procedures for handling financial sector crisis should be drawn up promptly and that the monetary authorities should identify the vulnerabilities of the money market and safe guide its effectiveness. Also, Okpe (2013) studied the impact of money market on the Nigerian economic development for the period 1987 – 2007 using Ordinary Least Square (OLS) method.

The study found that Nigerian Stock Exchange has contributed to some extent in financing small and medium scale enterprises, and that the market appears to be bright considering the current position of government and players of the industry in the area of formulation and implementation of favourable policies. In the same token, Maduka and Nnwuka (2013) examined both the short-run and long-run relationships between financial structures and economic growth, using secondary time series data. The results indicated that financial market structure has a negative and significant effect on economic growth. According to them, information on the Nigerian financial market suggests a low level of development of the country's financial sector. Thus, the study recommended that there is need to put appropriate financial policies in place that would encourage the growth of per capita GDP in Nigeria.

Ogege and Shiro (2013) studied the role of banks deposit money in the growth of the Nigerian economy, for the period 1974 to 2010, using Co-integration and Error Correction Model (ECM) and structural analysis technique to analyse data. The study found that there exists a long-run relationship between the dependent variable and the explanatory variables; and that the results conform to economic a priori expectations. The study therefore recommended that policies which tend to increase the gross domestic product through financial sector operations such as increase in banks deposit liabilities, low interest rates, and high liquidity ratios be encouraged.

Ehigiamusoe (2013) examined the link between money market and economic growth in Nigeria, using data for the period 1980 – 2013 using Ordinary Least Square (OLS) method, Johansen Co-integration test and Vector Error Correction Model. The found a long-run relationship exists between money market and economic growth, but that the present state of the Nigerian money market is significantly and negatively related to economic growth. The study concluded that government should create the appropriate macroeconomic policies, legal framework and also sustain the present reforms with a view of developing the market so as to promote productive investment activities and ultimately economic growth.

Iwedi and Igbanibo (2015) investigated the nexus of money market operations on economic growth in Nigeria during the period 1980–2013, using Vector Auto Regression (VAR), Johansen Co-integration and Granger causality tests. The study found that there is a positive significant short-run and long-run relationship between money market operations and economic growth in Nigeria. The results of the Causality test confirm that causality flows from economic growth proxy by gross domestic product (GDP) to money market operations but not vice versa. The study concluded that money market operations (as key

components of the financial system) produced short-term growth tendencies and help to ensure long-run impressive and steady economic growth rates in Nigeria. The study recommended that government should both in the short and long run prioritize policies geared towards increasing or developing money market operations in Nigeria in order to make the economy more stable.

In a related study, Ehigiamusoe (2016) examined the challenges of money market development and its impact on economic growth in Nigeria, using Ordinary Least Square (OLS) techniques for data analysis. The results suggest that the Nigerian money market is significant but negatively related to economic growth. The study found that the Nigerian money market is not yet virile enough to produce the needed growth that will propel the economy to meaningful development, and that the link between the money market and real sector of the economy remains very weak.

Agbada and Odejimi (2015) investigated the developments in money market operations and economic development in Nigeria for the period 1981 – 2011, using multiple regression techniques for data analysis. The study found that the variations in the growth trends of GDP and the explanatory variables in the graphical representation appears to cast doubt on whether money market operations made significant contribution to GDP growth for the period under review. The study found that the Pearson correlation coefficient matrix substantially attested to strong linear relationship between the explained and explanatory variables. The study therefore recommended among others that monetary authorities should initiate policies to boost money market operations and also be proactive in their surveillance role in order to check practices that are capable of sabotaging market soundness.

Pavtar (2016) investigated the link between money market and economic growth in Nigeria using time series data for the period 1985-2014. The study adopted an ex-post-facto research design, and employed descriptive statistics, OLS multiple regression techniques for data analysis. The findings revealed that TBs, TCs and CPs had no effect on GDP, but CDs had significant impact on GDP. The study recommended among others the creation of appropriate macroeconomic policies by government to promote economic growth in Nigeria.

It is very explicit that none of the empirical studies reviewed showed emphasis on deposit rates offered in the money market which ranges from 3 month, 6 month, 9 months, 12 months and over 12 months. Also most of these studies focused on gross domestic product as proxy for measuring economic growth. Aside from this most of the study employed ordinary least square techniques as method of data analysis. Based on these aforementioned gaps, the study examines effect of money market on economic development in Nigeria.

3. Methodology

The data to be used for this study are time series data collected over a successive point in time. Therefore, the research design appropriate for the study, considering the research problem, the questions and the hypotheses to be tested is ex post -facto research design. Ex-post-facto research design is adopted in this study which is characterized with quantitative or numeric description of historical data. The data for this study were obtained from secondary sources. This includes Central Bank of Nigeria Annual Report and CBN Statistical Bulletin. The data covers the period of thirty-three years from 1985-2017. The secondary data will be very appropriate and most be fact that money market indicators are largely quantitative. The study adopts VECM model and this is specified below:

$$\Delta^{k0} UNER_t = \Theta_0 + \sum_{i=1}^n \Theta_1(\Delta^{k1} TB_{t-i}) + \sum_{i=1}^n \Theta_2(\Delta^{k2} 3MTH_{t-i}) + \sum_{i=1}^n \Theta_3(\Delta^{k3} 6MTH_{t-i}) + \sum_{i=1}^n \Theta_4(\Delta^{k4} 12MTH_{t-i}) + \sum_{i=1}^n \Theta_5(\Delta^{k5} Over 12MTH_{t-i}) + \mu_t \dots \dots \dots (3.1)$$

$$\Delta^{k0} UNER_t = \Theta_0 + \sum_{i=1}^n \Theta_1(\Delta^{k1} TB_{t-i}) + \sum_{i=1}^n \Theta_2(\Delta^{k2} 3MTH_{t-i}) + \sum_{i=1}^n \Theta_3(\Delta^{k3} 6MTH_{t-i}) + \sum_{i=1}^n \Theta_4(\Delta^{k4} 12MTH_{t-i}) + \sum_{i=1}^n \Theta_5(\Delta^{k5} Over 12MTH_{t-i}) + \sum_{i=1}^n \Theta_6(ECM_{t-i}) + \mu_t \dots \dots \dots (3.2)$$

UNER represents unemployment rate, TBI represents Treasury Bill Issue, Over 12DR represents Over 12 months deposit rate, 12DR represents 12 months deposit rate, 6DR represents 6 months deposit rate, 3DR represents 3 months deposit rate, Δ represents Difference Operator, Θ₀ and Θ_i=Parameters to be estimated, *t-i* represents unknown lags to be estimated, ECM represents error correction mechanism and μ_{*t*} represents the error term.

4. Result and discussion

The data set on the variables for this study is summarized in table 4.1 showing the mean, median, minimum, maximum, standard deviation, skewness , kurtosis among other.

Table 4.1 Descriptive Statistics

Statistic	TB	UNER	12MTH	3MTH	6MTH	OVER 12MT
Mean	12.40975	4.661000	12.23969	12.16834	12.26992	12.36169
Median	12.00000	4.403000	10.88000	10.60000	10.94000	10.44000
Maximum	26.90000	7.060000	23.99000	23.60000	23.26000	28.02000
Minimum	3.715000	3.500000	4.704871	5.693061	4.899284	5.460000
Std. Dev.	4.668996	0.919260	5.105390	4.258317	4.628388	5.310947
Skewness	0.834384	1.577450	0.760908	0.842879	0.887710	1.138130
Kurtosis	4.371291	4.726449	2.837180	3.256897	3.142308	3.857118
Jarque-Bera	6.414691	17.78427	3.220850	3.998191	4.362005	8.134512
Probability	0.040464	0.000137	0.199803	0.135458	0.112928	0.017124
Obser.	33	33	33	33	33	33

Source: Author’s computation from E-view Output (2019)

Table 4.1 shows the summarized descriptive statistics computed on the series of economic development (proxy with unemployment rate) and money market operations which are proxy with Treasury bill, deposit rate for 3 months, 6month, 12 months and over 12 months respectively. It is remarkable that both the median and average values are positive in each case. The study also observes that there is a significant margin between the median and mean. This means these variables displayed an increasing tendency through the period of investigation. Also the study reveals that the range of these variables, unemployment rate has the lowest range (7.060000- 3.500000) with an associated largest standard deviation value of 0.919260 and this implies that unemployment rate is the least volatile variable among the variable under consideration. In a different token, the deposit rate of over 12 month has the largest range of (28.02000-5.460000) with an associated lowest standard deviation value of 5.310947 and this implies that over 12 months deposit rate is the most volatile variable among the variable under consideration. The scales of skewness with respect to all variables are positively skewed and this implies that they have large values over a short period. The values of kurtosis that are larger than 3 show that Treasury bill, unemployment rate, deposit rate for 3 months, 6 months and over 12 months are leptokurtic and therefore, they have tin tail in their distribution pattern, suggesting that there are presence of outliers or large values in the expected future date. However, while

the deposit rate over 12 months is plytokurtic in nature. Finally, the probability values corresponded to Jarque Bera statistics with respect to 3 month deposit rate, 6 months deposit rate, and 12 months deposit rate are lesser than 5 percent, meaning that the distribution pattern of these variables is not normal. However, the probability values in respect to Treasury bill, unemployment rate, and over 12 month deposit rate are larger than 5 percent. This implies that these variables are not normally distributed. After the description of the data, the study proceed to check the stationarity of the variables using Augmented dickey Fuller mechanism and the result are reported below:

Table 4.2 Unit Root Test

Variables	ADF- Stat.	5% CR	Probability	Int.
UNER	-3.542301	-2.971853	0.0479	
I(1)				
TB	-6.252354	-2.960411	0.0000	
I(1)				
3MTH	-6.326070	-2.960411	0.0000	
I(1)				
6MTH	-6.795302	-2.960411	0.0000	
I(1)				
12MTH	-6.322016	-2.960411	0.0000	
I(1)				
Over 12MTH	-7.122386	-2.960411	0.0000	
I(1)				

Source: Author's computation from E-view Output (2019)

From the result above, it shows that all the variable are integrated at first difference i.e. I(1). Thus, the necessary too is Vector error correction mechanism (VECM) to capture the relationship between the market operations and economic development. In view of estimating this relationship there is need for cointegration test which serve as pre-estimation test to confirm if there is establish long run relationship between economic development and money market operations. The result of the cointegration test is presented in Table 4.3 below;

Table 4.3: Cointegration Test

No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
Panel A				
None *	0.834612	117.8876	95.75366	0.0007
At most 1	0.567405	63.90374	69.81889	0.1354
At most 2	0.474565	38.76515	47.85613	0.2697
At most 3	0.291874	19.45927	29.79707	0.4603
At most 4	0.242846	9.105250	15.49471	0.3557
At most 5	0.025003	0.759611	3.841466	0.3834
Panel B				
None *	0.834612	53.98390	40.07757	0.0008
At most 1	0.567405	25.13860	33.87687	0.3757
At most 2	0.474565	19.30588	27.58434	0.3913
At most 3	0.291874	10.35402	21.13162	0.7109
At most 4	0.242846	8.345639	14.26460	0.3447
At most 5	0.025003	0.759611	3.841466	0.3834

Source: Author's computation from E-view Output (2019)

As shown in table 4.3, the outputs of the trace test are reported in panel A, and those of the maximum Eigen test are presented in panel B. In the first row of panel A, the trace statistic (117.8876) is larger than the 5 percent critical value (95.75366), meaning that the trace test rejects the null hypothesis that there is no cointegration. However, in the second row, the trace statistic (63.90374) is less than the critical value (69.81889), and as such the null hypothesis that there is only one cointegrating vector cannot be rejected. In an analogous vein, the null hypothesis that there is no cointegration is rejected in panel B based on the maximum Eigen value test. So also, the hypothesis of only one cointegrating vector is not rejected. Therefore, the trace and maximum Eigen tests unanimously consent that there is one cointegrating vector. This is also confirmed by the result of the probability values displayed in both panel A and B. This simply implies that there is strong evidence that economic development and money market operations correlate together in the long run. The nature of this long run relationship is shown in table 4.4.

Table 4.4: Long run cointegration

Variables	Coefficients	Standard Error	T-Statistics
Prob			
TB(-1)	-1.703007	(0.27100)	[-6.28422]
0.0000			
Over 12MTH(-1)	-0.199262	(0.79663)	[-0.25013]
0.4022			
12MTH(-1)	12.59632	(1.69731)	[7.42133]
1.0000			
3MT(-1)	-7.190162	(2.73891)	[-2.62519]
0.0070			
6MTH(-1)	-6.799438	(2.75511)	[-2.46793]
0.0101			

Source: Author's computation from E-view Output (2019)

The long run coefficient with respect to Treasury bill is -1.703007 and the associated t-value of -6.28422. This means in the long run Treasury bill will decrease significantly with increase in economic development in Nigeria. The long run coefficient of over 12 months deposit rate is -0.199262 and the associated t-value of -0.25013 and this imply that the deposit rate of over 12 months has a negative but insignificant effect on economic development in Nigeria. The 12 months deposit rate has a coefficient is 12.59632 with associated t-value 7.42133 and this implies the 12 months deposit rate has a positive but insignificant on economic development in Nigeria. The result also shows that the deposit rate for 3 month and 6 month has -7.190162 and -6.799438 with the associated t-value -2.62519 and -2.46793 respectively. This implies that the 3 month and 6 month deposit rate have a negative but significant effect on economic development in Nigeria. The disequilibrium in the long run must be corrected otherwise; long run relationship does not exist. The correction mechanism is referred to error correction model (ECM). The study estimates the ECM coefficient along with short run dynamic coefficients, and the values of these coefficients are presented in table 4.5.

Table 4.5 Short-run Dynamism

Variables Prob	Coefficients	Standard Error	T-Statistics
D(UNER(-1)) 0.9349	0.283673	(0.18178)	[1.56055]
TB(-1) 0.0002	-0.150979	(0.03681)	[-4.10193]
Over 12MTH(-1) 0.9551	0.328747	(0.18686)	[1.75929]
12MTH(-1) 0.9933	0.651269	(0.24578)	[2.64975]
3MT(-1) 0.0095	-0.736223	(0.29491)	[-2.49642]
6MT(-1) 0.0462	-0.438926	(0.25157)	[-1.74476]
ECM(-1) 0.0059	-0.081580	(0.03017)	[-2.70395]

Table 4.5 uniquely presents the coefficients of short run dynamic variables- D(UNER(-1)), D(TB(-1)), D(Over 12MTH(-1)), D(12MTH(-1)), D(6MTH(-1)), D(3MTH(-1)) and ECM coefficient. The dynamic coefficient of unemployment rate at lag 1 is positive. This means an increase in previous unemployment rate in Nigeria could lead to increase in current unemployment rate in the short run. While previous over 12 months deposit rate and 12 months deposit rate influence current unemployment rate positively. Hence, in the short run dynamic changes in the Treasury bill, 6 months deposit rate and 3 months deposit rate have negative effect on unemployment rate. The ECM coefficient is negative -0.081580, suggesting that any disequilibrium can be corrected at the speed or rate of 8 percent within a year. In view of this, there is long run dynamic causality or influence running from money market operations to economic development in Nigeria.

Discussion of findings

The study found that Treasury bill has a negative effect on economic development and this is contrary to a priori expectation and does not conform to the findings of Ajao and Festus (2011).. Also the over 12 months deposit rate has a negative but insignificant effect on economic development in Nigeria. This does not conform to the finding of Ajao

and Festus (2011) and it is contrary to a priori expectation. The 12 months deposit rate on has a positive but insignificant on economic development in Nigeria. This conforms to the appropriate expectation and is in line with the finding of Ajao and Festus (2011). The result also shows that the deposit rate for 3 month and 6 month has - have a negative but significant effect on economic development in Nigeria. This is does not conform to appropriate expectation and against the findings Ajao and Festus (2011).

5. Conclusion and recommendation

The result from the study is inconclusive because some of the money market operations reveals negative effect on economic development and some of the money market operations reveals positive effect on economic development. However, it can be concluded that money market operations have effect on economic development. In line with the conclusion, the follow recommendations are in this study. The Central Bank of Nigeria should implement friendly policies on interest rates on loans so as to encourage credit availability to the government by various institutions. Effective policies that affect will enhance flexibility of Treasury bill as effective tool of money market should be put in place by the Central Bank of Nigeria as this will increase the volume of trading activities in the money market. The study is limited to Nigeria alone, so further studies in this area should consider cross countries in West Africa region.

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APPENDIX

year	UNER	TB	3mth	6mth	12month	over 12mth
1985	6.1	8.50	9.25	9.50	9.75	10.00
1986	5.3	8.50	9.25	9.50	9.75	10.00
1987	7	11.75	14.90	15.30	15.10	15.80
1988	5.1	17.50	13.40	12.10	13.70	14.30
1989	4.5	17.50	18.90	21.60	21.40	21.20
1990	3.5	15.00	19.60	20.50	22.10	23.00
1991	5.269	21.00	15.71	17.09	20.10	20.10
1992	5.273	26.90	20.80	22.30	22.10	20.50
1993	4.436	12.50	23.60	23.26	23.99	28.02
1994	4.429	12.50	15.00	15.00	15.00	15.00
1995	4.421	12.25	13.62	13.65	13.96	14.27
1996	4.427	12.00	12.94	13.21	13.43	13.55
1997	4.423	12.95	7.04	7.49	7.46	7.43
1998	4.415	17.00	10.20	10.50	9.98	10.09
1999	4.401	12.00	12.68	12.75	12.59	14.30
2000	4.396	12.95	10.60	10.27	10.67	10.44
2001	4.399	18.88	10.20	10.50	9.98	10.09
2002	4.403	15.02	16.31	16.99	16.50	15.57
2003	4.397	14.21	14.31	13.07	13.04	11.88
2004	4.397	7.00	13.69	12.47	13.32	12.21
2005	4.304	8.80	10.53	10.38	10.82	8.68
2006	4.215	6.91	9.75	9.33	8.35	8.26
2007	4.13	7.025	10.29	9.74	8.10	9.49
2008	4.048	3.715	11.95	11.85	11.84	11.95
2009	3.971	5.595	12.96	13.03	12.85	12.63
2010	3.899	11.155	6.52	6.28	5.67	7.19
2011	3.826	13.6	5.69	4.90	4.70	6.30
2012	3.761	10.42	8.40	7.85	7.18	7.63
2013	3.7	10.42	7.94	7.47	5.54	6.72
2014	4.56	11.995	9.34	9.60	9.16	9.89
2015	4.31	9.14	9.15	9.15	8.68	8.26
2016	7.06	10.85	7.50	7.35	6.22	5.46
2017	7.043	13.99	9.55	10.94	10.88	7.73

Source: Central Bank Statistical Bulletin of various years.