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THE RELATIONSHIP BETWEEN TEACHING METHODS AND THE FORMATION OF STUDENTS' ENTREPRENEURIAL SKILLS

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Abstract: *This work stemmed from the researchers' desire to find the most suitable solutions to prepare students for an extremely dynamic, globalized and competitive labor market. The cultivation of entrepreneurial skills entails the meticulous training and nurturing of young individuals to swiftly adapt, demonstrate mobility, and deliver added value, irrespective of whether they assume roles as employees or entrepreneurs within the labour market in the future. The lack of vision among employees or entrepreneurs, an aversion to taking risks, diminished creativity, or a reduced capacity for innovation could be avoided on numerous occasions if the education system ensures the development of entrepreneurial skills. Following these considerations, the purpose of the present research aimed at identifying teaching strategies that support the development and flourishing of entrepreneurial skills amongst students. The study's results confirmed that choosing the most appropriate teaching strategies leads to increased entrepreneurial skills.*

Key words: *competence, entrepreneurial competence, teaching methods*

JEL Classification: *A13, A23, C93.*

1. Introduction

Competence represents a concept that has been used more and more during present times at an educational level as well as an economic level. Economically, competence takes into account elements that will allow employers to be competitive. The employer's interest is to display these elements at their highest degree. Educationally, competence stands at the core of the curriculum, the qualifications and professional standards. Analyzing the literature indicates a constant concern, regarding both the definition of the term and by relating to the competence's development modality.

In 1959, White Robert introduces the term competence in his paper called "Motivation Reconsidered: The Concept of Competences", defining it as the ability of an organism to efficiently interact with the environment.

In 1996, in the paper "Competences: measuring the unmeasurable", David Robotham Richman Jubb states that the term confidence can be used as the behavior of an individual relative to the way he acts in the process of task performing in organizational environment (Jubb, 1996). Mangham (1996) believes that the term competence can also refer to personal model, achievement models or training and education models, as well as addressing the standards to which comparative evaluation criteria are utilized. Competences are fundamentally behavioural and susceptible to learning (McClelland, 1998).

Another conceptual approach to competence takes into account an individual's ability to effectively raise and combine a wide range of internal and external sources within a type of issue or situation-problem (Serbanescu and Gabureanu, 2025). Competence means the student's proven ability to accurately choose, combine and use knowledge, skills, values and mindsets in some clearly stated situations, in order to efficiently and effectively conduct a learning task. From the point of view of the learning process, competence can be seen as an element that allows the student to act in relation to a previous experience, as well as from the

point of view of the student's potential that he will have to prove in certain cases. Starting and developing a curriculum based on entrepreneurial education is a feasible option that will train students to deal with the multiple opportunities that will appear during their lives. Entrepreneurship in education aims to develop entrepreneurial spirit. People require a set of skills, abilities and knowledge in order to generate creative ideas and need the entrepreneurial initiative to make them happen.

This type of perspective can ensure long-lasting development, the creation of new jobs, the development of new technologies (Munteanu, Iamandi and Tudor, 2014). The entrepreneurial education model identifies four aspects of the individual relative to the socio-economic environment: creativity, faith, support goods, structure and development (Rădulescu, Burlacu, Bodislav & Bran, 2020).

2. Methodology

The aim of the research was to identify those teaching strategies that can generate the growth of not only the students' entrepreneurial knowledge but also the particular skills and mindsets such as critical thinking, creativity, risk taking, decision making ability. Carrying out the research involved defining the goal of the research as registering, overseeing and comparing the results of the students in the initial test and the retest.

The research at the 10th D class of an important school in Rm. Valcea, Romania and the school subject in case was entrepreneurial education.

The arguments that support the idea of using research-action for improving the learning process are highlighted by the study of Chaves that shows that research-action has improved education in business and management (Chaves, 2014). It is stated that if the entrepreneurial education process would be exploited in basic education, it would allow for a continuum that would lead to professional education (Hietanen & Javi, 2015). Building abilities can also be insured by learning through action (Donnellon and Middleton, 2014) or by using surveys in the teaching system (Dumitru, 2012). Isamil, Awang & Pyng (2020) proved that students are more passionate about active learning activities held in class, particularly simulations, group chats, case studies and trips within school premises.

The stages of the research were:

1. Pretesting – during this stage, students took a docimological test that contained items that helped assess the students' knowledge level in entrepreneurial education at that point in time.

2. Intervention – this stage meant teaching the students and introducing new teaching methods in order to measure whether there is a direct connection between the teaching strategies used by the teacher and the student's knowledge level.

The teaching methods used were:

- *Reflection*, which allows students to carry out an introspection exercise which will help them analyze their own behaviour and actions, identify positive and/or negative aspects. Such a method allows students to positively approach the new elements.
- *The cube*- it is a teaching method which offers multiple perspectives for an examined phenomenon. The method allows students to create new connections that will provide them with new outlooks for the researched subject. Every face of the cube will allow students to create a connection with the contents of the analyzed matter.
- *Debating*- the choice of using debate as a teaching method was made as it encourages students to make an assessment of the information and link it with socio-economic reality. Using debate enlarges students' perspective on certain aspects that define the

surrounding world (Panisoara, 2022). Debate can be used as it allows for the improvement of the creativity and critical thinking of students, team work and verbal communication ability. The method allows the student to use the knowledge they possess, to exploit and show their potential, their values and skills.

The docimological test was used in order to examine the results of the intervention. In this case, the students' results in the first and second docimological test answered to the question of whether or not there was an improvement in entrepreneurial education knowledge levels for the students, which was the aim of the research. The subjects that participated in the research are students in the 10th D grade of a school that is representative for the county's educational system when taking into account the results obtained by students in the baccalaureate exam. Therefore, in 2021, this school was ranked 30th nationwide, with an 8.96 average and a 99,5% success rate. Out of 32 students, 28 answered the survey, resulting in an 87,5% success rate. In other words, 7 out of 8 students answered the questionnaire.

The gender structure of students:

- Boys – 18, approximately 2/3, respectively 64,29%;
- Girls- 10, respectively 35,71%.

Regarding age structure, the results of the survey show:

- Number of 15 year old students - 1 student, which means 3,57%;
- Number of 16 year old students – 15 students, which is 53,57%;
- Number of 17 year old students – 12 students, meaning 42,86%.

3. Results

The initial testing of the 28 students took place in order to address the objective of the research, and the average score at the initial moment was named m_0 . After teaching the entrepreneurial education knowledge, the students were tested once again, which generated a new average score, at the final moment, noted m_1 .

The figure down below shows the procedure in a schematic way:

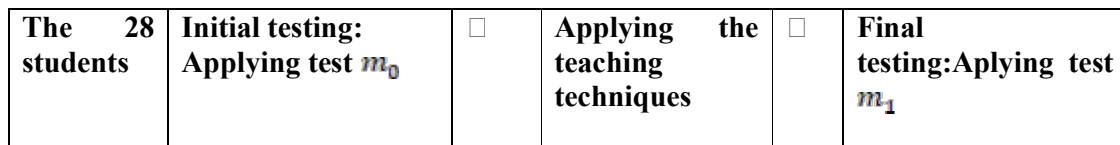


Figure 1: Working procedure

The t-test of difference was used in order to highlight whether or not there were significant differences between the two moments.

Based on the collected data, the average score, obtained based on the grades of the 28 students during the first testing, was roughly 7,357 points/student with a standard deviation of $\pm 1,161$ points/student. The average score during the second testing was 8,536 points/student, with a standard deviation of $\pm 1,201$ points/student.

As it can be noticed, the average score increased by roughly 1,179 points/student. It was statistically tested whether the difference is (H_1) or is not (H_0) relevant. The *Compare Means/ Paired-Samples T-Test of the SPSS programme* was used in this matter:

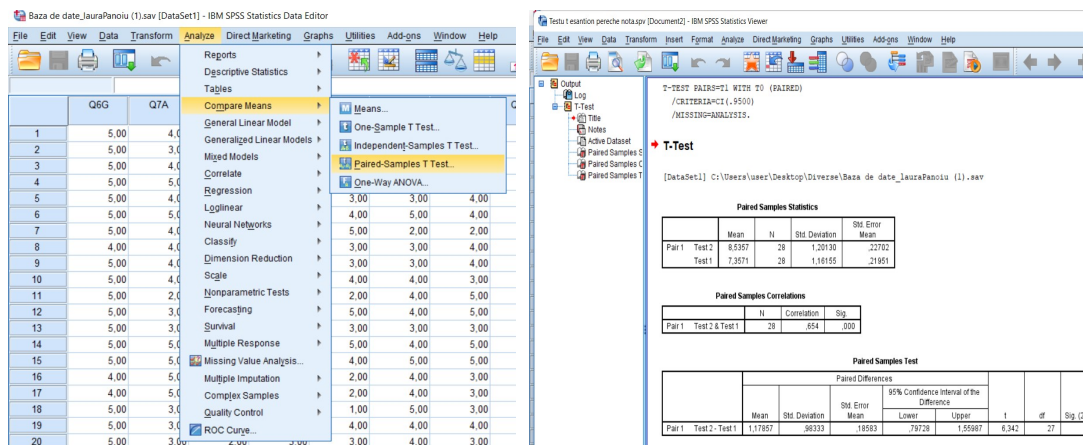


Figure 2 Applying the *Compare Means/Paired-Samples T-Test* procedure for testing the importance of the difference between the average scores in Entrepreneurial Education in 2 distinct moments.

The following information was obtained after applying the procedure shown in figure 2:
The average scores achieved by the 28 students before and after teaching the Entrepreneurial Education course (table 1)

Table 1 Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Test 2	8,5357	28	1,20130	,22702
Test 1	7,3571	28	1,16155	,21951

We also have information regarding the standard deviations previously mentioned. There is a strong connection between the two moments. The correlation ratio has a value close to 1 and, statistically, it is relevant in a 99% proportion (Sig.=,000).

Table 2 Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Test 2 & Test 1	28	,654	,000

Table 3 Paired Samples Test

	Paired Differences	t	df	Sig. (2-tailed)

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Paired Sample Test 2 - Test 1	1,17857	,98333	,18583	,79728	1,55987	6,342	27	,000

Table 3 presents the information important for us and shows that the difference between the two average values is statistically significant, as the value of Sig. is .000. In other words, the difference noticed is 99% relevant.

Conclusion

The students scored higher in Entrepreneurial Education after engaging with the taught courses by using reflection, debate and the cube, which highlighted an increase in average scores between the two moments. The objective of the research is confirmed in this way.

Table 4. The dynamic of the evolution in gaining knowledge in entrepreneurial education based on the gender of the students.

Gender	Average score for test 2 (AFTER)	Average score for test 1 (BEFORE)	Difference between test 2 and test 1
F	8,4	6,9	1,5
M	8,611	7,611	1,000
General average score	8,536	7,357	1,179

In order to interpret information in table 4, we need to test whether the differences are statistically relevant or not. The results gained after using the **Compare Means/ Paired-Samples T-Test** procedure for each of the two genders in two distinct moments are shown in tables 5 and 6 (BEFORE and AFTER):

Table 5 Paired Samples Test (Boys)

	Paired Differences				t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower Upper			

P a i r 1	Test 2 for boys	Test 1 for boys	1,00 000	,97014	,228 66	,517 56	1,48 244	4, 37 3	1 7	,000
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Table 6 Paired Samples Test (Girls)

	Paired Differences						t	d f	Sig. (2- taile d)
	Me an	Std. Deviat ion	Std. Error Mean	95% Confidence Interval of the Difference					
				Low er	Upp er				
P a i r 1	Test 2 for girls – Test 1 for girls	1,5 00	,972	,307	,805	2,19 5	4,8 81	9	,001

The values of *Sig.* are lower than 0,05 in both instances, which shows that the differences are statistically relevant. This fact allows for the following **conclusion**: the average score for the boys is higher than the one for the girls in both cases, although the girls register a bigger progress than the boys (the girls gained a 1,5 point per student increase compared to the 1 point per student increase for the boys). Gender obviously plays an important role in accumulating entrepreneurial education knowledge.

4. Conclusions

The aim of the paper was to highlight the connection between the teaching methods used by the teacher and the level of knowledge that the students have in their entrepreneurial education class. The research showed that there is a correlation between the teaching methods used and students' entrepreneurial skills, therefore using teaching methods such as reflection, the cube or debating generates an increase in students' knowledge, a fact proven through the tests that were taken. It also shows the influence that gender has in assimilating entrepreneurial education knowledge. The research is limited by the group of students, as the results can be influenced by the kids' level of intellect. The class where the research was conducted has a high level of intelligence. The profile that the kids are studying is mathematics-informatics. In order for the results to be relevant to the entire educational system, the research would need to be enlarged in order to include both students with high and lower academic results.

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THE IMPACT OF DIGITALIZATION ON NATIONAL SECURITY

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Abstract: While digitalization considerably increases the risk of cyberattacks on the country's key infrastructures, it also offers novel solutions for detecting and responding as quickly as possible to threats, solutions for efficient cooperation between states, in order to help each other in critical situations and prevent cross-border attacks. Using the case study method, we identified and analyzed a major cyberattack against Romania in 2015, attributed to the Advanced Persistent Threat 28 group, also known as Fancy Bear/Sofacy, which aimed to obtain sensitive information and destabilize certain economic and political sectors of the country, among others. However, in situations such as the one mentioned above, the benefits of Romania's close collaboration with NATO and the European Union come to light, which provides support especially when it comes to an ATP-type attack, as is the case in this case. In recent years, this Romania-NATO alliance has been strengthened precisely because of the rapid evolution and diversity of risks to which we are exposed in the context of digitalization, which is why Romania is actively involved, participating in cyber attack simulation exercises, precisely out of the desire to prevent and limit their number. The digital age, viewed from the perspective of maintaining national order and security, can be considered both a threat and an opportunity, it depends on which angle we look at and which side we let weigh more. A decisive element is the state's position in the face of challenges and the degree of awareness of the dangers, as long as the government adopts innovative and effective protection strategies, appropriate to the context, the degree of national security is at least satisfactory.

Keywords: cyberattack, digitalization, cooperation, Advanced Persistent Threat, national security.

JEL Classification: F52, H56, O33.

1. Introduction

The technological transformations of the last decades have led to a profound digitalization of society, with direct effects on all social areas. This transition has created not only opportunities, but also significant risks, especially in terms of the evolution of criminal phenomena. Criminology, as a science of studying deviant behavior and its causes, is challenged to adapt quickly to the new conditions imposed by digital technologies.

The integration of digital technologies into everyday life has directly influenced the nature of crime. The defining elements of cyberspace — transnationality, anonymity, information encryption, and ease of access to technological tools — have created an enabling environment for the development of new types of crime (Holt & Bossler, 2016). In this context, the rapid expansion of areas with criminogenic potential is noteworthy, especially within hidden networks such as the DarkNet.

At the same time, criminals use sophisticated digital methods to evade detection, turning to cryptocurrencies, artificial intelligence and other emerging technologies, which complicates the mission of the authorities in maintaining order and security (Europol, 2023).

Digitalization allows the implementation of a proactive law enforcement model, centered on prevention. By identifying behavioural signals associated with criminal activities early, authorities can intervene promptly and effectively. At the same time, new perspectives are opening up regarding the analysis of individuals' online activity in order to anticipate the risk of deviant or criminal behavior.

This preventive model, supported by predictive analytics and the ability to process large volumes of data, can contribute to the significant reduction of societal risks and the formulation of strategic security decisions (Babuta, 2019).

The extensive collection of commercial data, but also the commercialization of sophisticated digital files, intended for marketing, can be used by foreign entities for espionage, sabotage or destabilization of the country. The digital format of this information offers them a higher resolution, the possibility of automatic reading, integration into automated processes, real-time monitoring and superior efficiency, compared to traditional methods, all of which can be an advantage, but at the same time a disadvantage, in the situation where they are exploited for illegitimate purposes, exposing the nation to risks regarding cyber attacks.

Also, the accelerated digitization of society, the proliferation of smart devices and the logic of surveillance capitalism favor intrusive access to privacy. The wide availability of data is becoming a serious concern, while personal data handling and breach practices lead to significant consequences for both public and national security. Privacy must be approached as a collective responsibility, and robust privacy legislation could be a key pillar of national defence. For example, in 2020, the Consumer Council found that the Grindr app, known as one of the most used social platforms internationally by LGBTQ+ people, transmitted users' personal information to third parties without obtaining their prior consent (NTB, 2019). At the time, U.S. authorities warned of the risk of this sensitive data being exploited by state actors, particularly in China, in order to exert pressure on individuals with access to classified information (Wells & O'Keeffe, 2019). Another eloquent example from practice is the leak of data from a company affiliated with the United States Republican Party, which centralized information obtained through acquisition, for political marketing strategies, which led to the exposure of extremely sensitive data on approximately 200 million American citizens; among the information disclosed were aspects such as religious beliefs, ethnic origin, political orientations and attitudes towards controversial topics such as firearms legislation, abortion rights or stem cell research (Borgesius et al., 2018).

The case study presented in this study analyzes a significant cyberattack on Romania, committed by a cyber actor with alleged ties to Russian intelligence services. This attack was one of the most complex and sophisticated cybersecurity incidents in the region, aimed at obtaining sensitive information and destabilizing key economic and political sectors of the country. The research question underlying this study focuses on assessing how Romania responded to APT cyberattacks and analyzing the effectiveness of its collaboration with international institutions such as NATO and the European Union in the field of cybersecurity. This analysis will highlight the importance of a rapid and coordinated response at national and international level, as well as the need to improve cyber defense strategies in the face of increasingly sophisticated threats.

2. Literature review

According to Mayer-Schönberger and Cukier (2013), the digitalization of critical infrastructures, such as energy, transport, and communication networks, has brought both significant benefits and risks. On the one hand, digitalization facilitates efficient management of resources and faster communication between state institutions; On the other hand, it exposes these infrastructures to sophisticated cyberattacks, which can have devastating effects on national security.

A key aspect of digitalization is the increased vulnerability to cyberattacks, which have become a means by which state or non-state actors can undermine national security. Advanced Persistent Threats (APT) attacks, which are difficult to detect and can last for

months or even years, have increased in frequency and complexity. Groups such as APT28 and APT29, allegedly linked to the Russian Federation, have demonstrated the ability to compromise critical infrastructures and obtain sensitive information from governments and international organizations (Zetter, 2014). These cyber threats not only affect national security, but can also destabilize national economies by disrupting economic or government infrastructures.

To respond to the challenges posed by digitalisation and cyberattacks, states have started to work more closely together at international and national level. Partnerships within NATO and the European Union, as well as through dedicated cybersecurity institutions such as CERT-RO in Romania, have become essential for protecting critical infrastructures and ensuring a rapid response to cyber threats. In addition, international regulations, such as the Budapest Convention on Cybercrime, provide a framework for collaboration between states to combat cybercrime and APT attacks (UNODC, 2020).

Another significant aspect of digitalization in the context of national security is data management and protection. The massive digitization of personal and government data increases the risk that sensitive information will be accessible to malicious actors, which can compromise national security and citizens' trust in state institutions (Kuner, 2017). Regulations such as GDPR in the European Union were created to protect personal data, but challenges remain, especially in the face of increasingly sophisticated cyberattacks that can circumvent traditional security measures.

According to Frolov (2019), ATP attacks have a particular impact on national critical infrastructure, with the potential to disrupt key economic sectors such as energy, transport, health and finance. In the report published by the FSB in 2019, it is pointed out that ATP groups can face a single target and infiltrate computer systems to obtain sensitive data, disrupt activity or even manipulate the internal economic processes of a state. This ability to confront critical infrastructures deepens national vulnerabilities and raises questions about the effectiveness of existing defence measures.

APT groups are often associated with geopolitical interests, especially in the context of information warfare and cyber espionage. Analysis of ATP attacks suggests that these groups are used by states to protect their strategic interests, obtain sensitive information, or destabilize opposing states. ATP attacks by groups such as APT28 and APT29 (also known as Fancy Bear and Cozy Bear) are often attributed to Russian intelligence services and have targeted governments in the European Union and the United States, causing significant damage to the economy and political security (Berghel, 2018). Thus, ATP attacks become a foreign policy tool, used to advance or defend the national interests of a state on the global stage.

According to a report by IBM (2020), the difficulty of preventing and combating such attacks lies in the use of advanced cyber tools and persistent infiltration methods, which are able to avoid detection by traditional security solutions. The report also points out that collaboration between multiple state and non-state entities is often found, which further complicates international responses.

Digitalization brings both significant opportunities for the development of national economies and for the improvement of government processes, as well as considerable risks for national security. As more and more critical infrastructures become digitally interconnected, cybersecurity is becoming a national priority, and states need to adopt a dynamic and adaptable security framework to face the new digital challenges. Moreover,

international cooperation is essential to build a global defense against cyber threats that threaten national and global stability.

3. Methodology and data related to the case study

In this research, the case study method was used, in a qualitative approach, to analyze a major cyber incident with implications for national security. The study focuses on the attack carried out in 2015 against strategic infrastructures in Romania, attributed to the APT28 (Advanced Persistent Threat 28) group, also known as Fancy Bear or Sofacy. Following the detailed analysis of the above-mentioned situation, the author wishes to answer the following research question: to what extent did the 2015 APT28 cyberattack on Romania highlight the vulnerabilities of the national cybersecurity system and what was the role of international cooperation in managing and mitigating its impact?

The case study method was chosen because of its ability to provide an in-depth understanding of a complex phenomenon, in a real, specific and dynamic context.

The research hypothesis of this case study is as follows: if APT (Advanced Persistent Threat) cyberattacks target critical infrastructures and strategic institutions of a state, then international cooperation in the field of cybersecurity — especially within NATO and the European Union — becomes an essential factor for preventing, managing and mitigating their effects on national security.

APT (Advanced Persistent Threat) attacks are, by their nature, sophisticated and extensive over time, involving advanced data infiltration, reconnaissance and extraction tactics. In this context, the case study provides the right framework for:

- detailed analysis of the technical mechanisms and strategic goals of the attack;
- assessing the institutional response of the Romanian state and international partnerships;
- identifying lessons learned and implications for cybersecurity policies.

The analyzed case took place in 2015, targeting information systems belonging to government institutions, strategic economic and political infrastructures and attempts to obtain sensitive information with geopolitical value.

The attack is attributed to the APT28 group, considered affiliated with the Russian military intelligence services (GRU), having previously been involved in attacks on NATO, EU and other allied institutions. The methods used included spear-phishing, zero-day exploits, and advanced malware such as *X-Agent* and *CHOPSTICK* (FireEye, 2015).

The analysis was based on:

- technical reports published by cybersecurity firms (FireEye, CrowdStrike, Kaspersky);
- information provided by CERT-RO (the current National Directorate of Cyber Security);
- NATO and EU documents on coordinated responses to cyber-attacks;
- interviews and public statements by Romanian officials and international partners.

In fact, Romania was the target of a complex cyberattack in 2015, orchestrated by the APT28 advanced group (see Table no. 1 for details on the key elements of the attack). This entity is associated, according to analyses from Western sources and cybersecurity organizations, with the military intelligence services of the Russian Federation (GRU) (Rid, 2020; FireEye, 2017). The attack was specifically directed against government institutions, strategic structures and sensitive areas of the central public administration, particularly targeting the IT infrastructures of ministries and agencies involved in the external and national defense decision-making process.

Table no. 1. Key elements of the 2015 cyberattack on Romania (APT28 group – Fancy Bear)

Date of the attack	Affected sectors	Specific targets	Methods used	External support (NATO/EU)	Major consequences
Summer 2015	Government sector, foreign policy, critical infrastructure	Ministries, strategic institutions, diplomats	Spear-phishing, malware (X-Agent), exploitation of software vulnerabilities	NATO technical assistance, exchange of information with the EU, CERT-RO cooperation	Increased security measures, initiation of attack simulations, increased awareness, strengthening international relations

Source: author's own creation

The APT28 campaign used spear-phishing techniques (sending personalized emails with infected files), exploiting software vulnerabilities, and implanting remote access trojan malware (such as X-Agent), which allowed prolonged and discreet access to compromised networks (CrowdStrike, 2018).

The main purpose of the attack was to steal classified or sensitive information, as well as to generate instability in the political and economic sphere by compromising critical digital infrastructures. Although the exact extent of the damage has not been made public in detail, cybersecurity experts believe that the incident represented an inflection point in the national cyber defense strategy (Dinu, 2021). Consequently, Romania has intensified partnerships with NATO and European Union structures, actively participating in cyber attack simulation exercises and strengthening its role as a regional actor in the field of digital security (CERT-RO, 2016).

The APT28 group has been active for over a decade and has been involved in numerous cyberattacks globally, particularly targeting government institutions, international organizations, the military, and the media in Europe and North America. The general purpose pursued by this entity is to obtain strategic intelligence and influence democratic processes, as observed in the attacks against the Democratic National Committee in the US (2016) or institutions in Germany and France (FireEye, 2017). Romania, as a NATO and EU member state, has become a strategic target in the regional geopolitical logic.

APT28 used advanced computer network infiltration techniques, such as spear-phishing combined with sophisticated malware such as X-Agent, XTunnel, and Zebrocy. These tools enable persistent cyber espionage and data theft without being detected by conventional IT defense systems. The malware used has been adapted to evade detection, intercept communications, and exfiltrate sensitive files (CrowdStrike, 2018). Exploiting vulnerabilities in the software used by the public administration was the key to penetrating compromised networks.

This case study provides a contextualized and applied perspective on how Romania manages highly complex cyber risks. The method also highlights the essential role of

international partnerships and integration into a collective cyber defense system. This analysis model can be replicated for other similar incidents, contributing to the development of a theoretical and practical framework for assessing APT threats.

Romania, as a NATO member state, benefited from support under the Alliance's Cyber Defense Platform, and subsequently, as a result of this incident, strengthened its commitments in the field of digital security. In the following years, the country actively participated in international cyberattack simulation exercises, such as the Cyber Coalition and Locked Shields (NATO CCDCOE, 2021), developed to test the capacity to react and resilience to APTs

4. Results and discussions

To the research question we raised at the beginning of this study, we got the following answer: the cyberattack attributed to the APT28 group (also known as Fancy Bear or Sofacy), attributed to the Russian military intelligence service (GRU) against Romania in 2015 demonstrated the country's significant vulnerabilities to sophisticated cyber threats and underscored the importance of international collaboration, in particular with NATO and the European Union, in protecting critical infrastructures. This incident also highlighted the need to strengthen internal cybersecurity capacities and a faster and more independent reaction from the Romanian authorities

The main targets of the attack included government institutions, political actors, and strategic economic entities, demonstrating the ability of state actors to launch complex cyber espionage campaigns aimed at obtaining sensitive information and influencing domestic decision-making (Rid, 2020; FireEye, 2016).

The campaign used sophisticated spear-phishing methods and personalized malware, taking advantage of the lack of a cybersecurity culture among the employees of the targeted institutions and the absence of robust real-time detection and response systems (Mitre ATT&CK, 2023). The attack was persistent and well-coordinated, signaling the acute need to strengthen the defense of critical infrastructures and to adopt a proactive approach in cyber risk management.

At the same time, this incident underlined the critical importance of international cooperation in the field of cybersecurity. Romania benefited from technical and informational support from the NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE) and the EU Agency for Cyber Security (ENISA), which facilitated the exchange of information on indicators of compromise and defence methods (ENISA, 2016). In addition, Romania's involvement in international exercises such as the "Cyber Coalition" and in real-time data sharing initiatives has allowed for a faster and more coordinated response, given an ever-evolving threat landscape.

In the long term, the APT28 incident has contributed to accelerating institutional and strategic reforms in Romania, including the strengthening of CERT-RO, the adoption of national cybersecurity policies and the strengthening of public-private cooperation. Moreover, Romania has intensified its engagement within NATO, hosting the Euro-Atlantic Resilience Center (E-ARC) and becoming an active actor in defining European cyber defense policies.

So, the APT28 attack in 2015 worked as a catalyst for identifying and correcting deficiencies in Romania's cybersecurity architecture. It also confirmed the strategic value of international alliances, especially in the face of complex and persistent threats generated by state actors.

The analysis of the cyber attack carried out by APT28 against Romania in 2015 reveals, in the author's opinion, a series of essential realities about the persistent vulnerabilities of states in the face of cyber threats coordinated by state actors. Despite a developing legislative framework and institutional strengthening efforts, the attack demonstrated that Romania, like other states in the region, remains exposed to systemic risks, especially when it comes to protecting critical information infrastructures and sensitive data.

I believe that Romania's reaction to this incident, although relatively prompt, was largely reactive and relied on external support rather than mature domestic capabilities. This raises questions about the level of operational autonomy that a state can have in the context of a sophisticated cyber threat. I also note that this case has brought to the fore the need for continuous education in the field of cybersecurity, both at the level of public administration and in the private sector.

On the other hand, collaboration with NATO and EU structures has proven crucial not only in limiting the effects of the attack, but also in recalibrating national cyber defense policies. In my opinion, Romania has correctly understood the message sent by this attack and has taken important steps towards strengthening its strategic position within the European and Euro-Atlantic digital security architecture.

From a broader perspective, the author believes that this case study confirms that cybersecurity can no longer be treated as an isolated technical subfield, but must be integrated into the national and international security paradigm. In the absence of a coherent, multidimensional and forward-looking effort, the risk of such attacks intensifying and diversifying remains high.

In the end, the APT28 attack in 2015 can be considered a turning point in Romanian cybersecurity policy, and the lessons learned from this event should be the basis of a national cyber defense doctrine based on prevention, cooperation and resilience.

5. Conclusions and recommendations

As I have tried to highlight throughout the study, I believe that the widespread integration of digital technologies in all key areas of society has generated not only significant progress, but also profound changes in the nature of crime and the drivers that drive it. Thus, this evolution requires a reassessment of approaches in criminology, adapted to the new technological realities, as well as a strengthening of the contribution of science to the protection of national security. Reinventing criminology in order to integrate it into the digital age is not only a theoretical necessity, but also a practical urgency to ensure public security.

At the same time, there is a need to develop up-to-date and efficient research methods. In this context, this study highlights the main criminal risks that threaten the digital environment, among which the accelerated trend of transforming it into a space increasingly vulnerable to criminal activities stands out.

Referring to the case study carried out within the study, it was found that the cyberattack attributed to the APT28 group in 2015 on Romania provided a unique opportunity to examine not only the vulnerabilities of the Romanian state's cybersecurity system, but also the importance of international partnerships in protecting critical infrastructures and sensitive data. The analysis of this attack revealed a number of deficiencies in cybersecurity, especially in terms of internal detection and response processes, but also in the continuous education of staff in vulnerable institutions.

Romania's response was swift, but largely dependent on external support, thus underlining the need for a more robust national cybersecurity framework that would allow for a faster and more independent response. International partnerships, in particular with NATO and the European Union, played a fundamental role in managing this attack and preventing possible major collateral damage. This highlighted that cybersecurity cannot be tackled in isolation, and a global and cooperative vision is essential for success in the face of complex cyber threats.

In particular, it is clear that APT attacks pose a significant challenge not only from a technical point of view, but also in terms of cyber defence policy. Romania, through this incident, understood the importance of strengthening internal defense structures and, implicitly, strengthening relations with international partners in the field of cybersecurity.

As recommendations, the author suggests the following:

- Strengthening internal detection and response capacities: Romania needs to invest more in developing and implementing advanced technological solutions for the continuous monitoring of critical infrastructures. The implementation of real-time threat detection systems, as well as the training of technical staff within public and private institutions, would help reduce vulnerabilities to APT attacks.
- Intensifying cybersecurity education and training: It is essential for Romania to develop continuous training programs for employees in vulnerable public and private institutions, in order to prevent spear-phishing attacks and other methods of cyber infiltration. The development of cybersecurity curricula at all levels would also contribute to the formation of a culture of digital protection.
- Increasing international collaboration: Given the complexity and transnational nature of cyber threats, Romania needs to continue and strengthen cooperative relations with international partners, especially NATO and the European Union. Participation in international exercises and simulations, such as the "Cyber Coalition" and other intelligence-sharing initiatives, is essential to improve the collective response to cyberattacks.
- Adoption of a national legislative framework adapted to new cyber challenges: Romania should adopt clear cybersecurity policies and regulations that impose protection standards for all entities involved in critical infrastructures. Implementing a regular cyber audit system and stricter security measures would significantly reduce the risks of attack.
- Implementation of a preventive defense model: Romania should adopt a preventive approach to cybersecurity, integrating predictive analytics and artificial intelligence methods into protection systems. This would allow for early identification of threats and reduction of exposure periods to attacks.

These recommendations are meant to contribute to strengthening Romania's cybersecurity, given the lessons learned from the APT28 attack and its analysis. If implemented correctly, these measures will strengthen the country's resilience to future cyber threats and contribute to national security in the context of rapid digitalization.

That said, ATP attacks pose an ongoing and expanding threat to national security, with major implications for governments, economies, and societies. While there is significant progress in preventing and combating them, the lessons learned suggest that cybersecurity must become a constant priority and be based on a dynamic, adaptable framework that takes into account technological and geopolitical developments. In addition, coordinated

international approaches and cross-border partnerships remain essential for effectively preventing and countering these threats.

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INTEGRATING ESG INTO RISK MANAGEMENT: A THEORETICAL FRAMEWORK FOR FINTECH IN A CHANGING REGULATORY LANDSCAPE

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Abstract: The growing prominence of environmental, social, and governance (ESG) risks in financial services is challenging the adequacy of traditional risk management theories, particularly in dynamic and innovation-driven sectors such as financial technologies (FinTech). This paper develops a conceptual framework for ESG risk management in the FinTech sector, informed by Institutional Theory. Through a critical review of the literature, it identifies the conditions, factors, and developments that have shaped the theory's evolution to accommodate ESG considerations over the past two decades. Institutional Theory provides a lens to understand how external pressures shape organizational behaviour and drive ESG integration into risk frameworks. The proposed framework demonstrates how these pressures are reshaping corporate practices and risk management in FinTech, while also highlighting sector-specific challenges and opportunities. By bridging theoretical analysis with regulatory dynamics, the paper contributes to a more adaptive and comprehensive risk management paradigm suited to the complexities of ESG in FinTech. The findings provide a foundation for further academic research and practical implementation of ESG-conscious risk strategies in technology-driven financial services.

Keywords: Institutional Theory, Risk Management, Environmental, Social, and Governance (ESG), Financial Technology (FinTech).

JEL Classification: G32, G18, M14, Q56.

1. Introduction

The rapid rise of financial technologies (FinTech) has transformed the financial sector, bringing innovation and increased agility but also introducing new complexities in risk management, especially as environmental, social, and governance (ESG) considerations become central to business strategy and regulatory compliance. As ESG factors gain prominence among investors, regulators, and stakeholders, FinTech companies face mounting pressure to embed these criteria into their risk management frameworks to maintain legitimacy, competitiveness, and access to capital.

This paper aims to develop a conceptual framework demonstrating how theoretical approaches, particularly **Institutional Theory**, can inform and support ESG risk management practices in the FinTech sector. By examining the unique challenges and opportunities FinTech firms encounter in integrating ESG considerations, the study connects theoretical perspectives with evolving regulatory dynamics, offering insights that are both academically grounded and practically applicable to advancing ESG integration in this rapidly evolving industry.

2. Literature Review

Recent literature highlights two main themes in ESG integration for FinTech risk management. First, Institutional Theory plays a central role in explaining how external pressures-such as regulatory changes, investor expectations, and stakeholder demands-drive FinTech companies to embed ESG into their risk frameworks to maintain credibility and competitiveness (Scott, 2013; DiMaggio and Powell, 2000; Meyer and Rowan, 1977). This evolution is reinforced by the globalization of sustainability discourse and the expansion of ESG into investment decisions, compelling organizations to adapt their practices to new

standards of legitimacy and responsibility (Latapí Agudelo et al., 2019; Ortas et al., 2015; Kotsantonis et al., 2016).

Second, the literature identifies both challenges and opportunities unique to FinTech. Key barriers include resource constraints, regulatory uncertainty, and ESG data gaps, which complicate effective adoption (Martiny et al., 2024; Baldini et al., 2018). However, FinTechs' agility and technological capabilities position them to lead in digital ESG solutions and market differentiation, particularly as European regulations increasingly mandate greater transparency and comprehensive sustainability reporting (Ortas et al., 2015; EU Fintechs, 2024; Directive (EU) 2022/2464)¹.

3. Methodology

This research adopts a qualitative approach, conducting a critical review of academic literature on economic and risk management theories—particularly Institutional Theory—to explore its relevance and adaptation for ESG risk integration. The methodology involves an in-depth analysis of scholarly publications, regulatory documents, and industry reports to identify the conditions, factors, and developments that have shaped the theory's evolution in the context of ESG. This assessment provides key insights into how Institutional Theory has evolved to address ESG-related risks, with particular attention to its application in the FinTech sector.

4. Theoretical Evolution and ESG Integration: Conditions, Factors and Developments

4.1 Embedding ESG into Risk Management

Risk management has become a critical discipline for navigating the uncertainties of today's complex business landscape. As organizations operate in an increasingly interconnected world, the integration of ESG factors into risk frameworks has gained prominence. This shift underscores the need to broaden traditional risk approaches to encompass sustainability and social responsibility, both of which can significantly influence long-term viability and profitability.

While risk management incorporates various theoretical approaches, this paper focuses on **Institutional Theory** as a foundational framework for understanding how FinTech companies respond to external pressures and embed ESG considerations to support sustainable growth (Aven, 2016).

4.2 Institutional Theory in ESG Context

Institutional Theory, originally developed in sociology and now widely applied in economics and risk management, explains how organizational behavior is shaped by the institutional environment in which it operates, including formal rules, informal norms, and cultural expectations (Scott, 2013). In the context of ESG, integration can be viewed as an outcome of institutional forces that encourage conformity to emerging standards of legitimacy and responsibility (DiMaggio and Powell, 2000). The theory provides a valuable lens for understanding the motivations behind organizational adoption of ESG factors within risk management frameworks.

According to Institutional Theory, as introduced by Meyer and Rowan (1977), organizations frequently adopt practices that reflect dominant social norms, cultural beliefs, and regulatory demands to build credibility, enhance their reputation, and secure access to resources. The theory suggests that firms are influenced not only by internal objectives but

also by the broader institutional environment, which exerts pressure to conform to accepted norms and practices. This perspective helps explain why many firms have embraced ESG considerations as part of their core business practices, responding to external pressures, such as regulatory shifts, investor priorities, and broader societal expectations.

4.3 Conditions Facilitating ESG Integration

Several key conditions have facilitated the integration of ESG considerations into Institutional Theory frameworks:

- **Globalization of sustainability discourse:** Sustainability has evolved into a global concern, driven by scientific consensus on climate change and increasing visibility of social inequalities. Academic contributions, international policies and significant social and political events have shaped its understanding. This shift was reinforced in the 2010s by the Paris Agreement and the 2015 Sustainable Development Goals, which established a new social contract where corporations are expected to contribute actively to global sustainability efforts. (Latapí Agudelo, Jóhannsdóttir and Davídsdóttir, 2019).
- **Expansion of ESG into investment and financial markets:** Institutional investors have begun integrating ESG into their screening and valuation processes, creating economic incentives for legitimacy through ESG (Ortas, Álvarez and Garayar, 2015). Kotsantonis et al. (2016) highlight the growing importance of ESG data in investment decisions, which further compels organizations to integrate ESG considerations into their risk management frameworks. Additionally, Palma-Ruiz et al. (2020) illustrate how institutional pressures are accelerating the growth of socially responsible investing, reinforcing the broader momentum for ESG integration. Aligning with institutional norms not only enhances competitiveness but also helps attract capital in a rapidly evolving financial landscape.
- **Stakeholder activism and transparency demands:** Civil society, customers, and employees are increasingly holding companies accountable for ESG outcomes, treating sustainability as a legitimacy issue rather than just a performance metric (Baldini et al., 2018). Aven (2016) underscores the need to evolve risk assessment practices to encompass broader considerations beyond traditional financial metrics. As stakeholders increasingly demand transparency and accountability regarding sustainability issues, organizations must adapt their risk management strategies to address these emerging concerns. This shift signals a growing recognition that ESG risks can significantly impact long-term organizational performance and reputation, prompting a redefinition of how such risks are conceptualized and managed.

4.4 Factors Influencing ESG Integration

Various key factors have driven the integration of ESG considerations into theoretical constructs:

- **Mimetic isomorphism through market emulation:** In sectors such as FinTech, where uncertainty is high, firms often imitate industry leaders with strong ESG reputations in an effort to gain legitimacy, mitigate reputational risk, and attract capital (DiMaggio and Powell, 2000). This behaviour is particularly prevalent when ESG factors are linked to financial performance, as demonstrated by Friede et al. (2015). Similarly, Liu et al. (2020) found a positive relationship between corporate environmental responsibility and financial performance among Chinese listed companies.

- **Normative pressures from professional communities:** The standardization of ESG disclosure frameworks by international bodies has created normative expectations that ESG practices should be part of responsible governance. These pressures emerge from shared values among organizations and professional associations within the financial industry. The proliferation of voluntary frameworks, such as those by the International Sustainability Standards Board (ISSB), Sustainability Accounting Standards Board (SASB), and Global Reporting Initiative (GRI), establishes industry norms that shape organizational behaviour even in the absence of formal regulations (Weaver, 2025). As these standards become increasingly institutionalized, organizations face growing pressure to adopt ESG practices to maintain credibility within their professional communities (ISO, 2024).
- **Regulatory pressures:** ESG-related regulations, have created binding obligations for firms to report and manage sustainability risks. Organizations that fail to integrate ESG into risk frameworks risk reputational, financial, and regulatory consequences (Aven, 2016). Aligning with institutional norms and evolving European regulatory frameworks enhances resilience, stakeholder trust, and long-term sustainability (Timuş and Timuş, 2022). The paper discusses European ESG regulations in greater detail in a subsequent section.

4.5 Recent Developments in ESG Integration Literature and Practice

Recent advances in integrating ESG within institutional theory are reflected in both academic research and organizational practice. Scholars increasingly frame ESG as a new institutional logic, positioning it as a foundational set of norms and values that shape organizational legitimacy and behaviour, much like traditional logics such as profit maximization or efficiency (Baldini et al., 2018). However, the literature also highlights the need for further research on how firms manage conflicting institutional logics, particularly when sustainability goals and traditional business priorities clash (Dahlmann and Gros vold, 2017).

In practice, ESG is being formalized through the adoption of reporting standards and governance structures. Yet, there remains a need for companies, especially agile and fast-moving FinTechs, to fully internalize ESG values beyond formal compliance and embed them into their organizational culture and day-to-day decision-making (ISO, 2024).

5. European ESG Regulatory Landscape for Fintech

As noted, regulatory pressure is a major driver of ESG integration into theoretical models. The European Union (EU) has been at the forefront of developing comprehensive regulatory frameworks for sustainable finance. These legislative initiatives have been characterized by a transition from voluntary to mandatory ESG disclosure, driven by concerns about reporting inconsistencies, greenwashing, and social washing practices. The European Green Deal is central to the EU's sustainability strategy, targeting climate neutrality by 2050. It offers an overarching framework encompassing several key regulations, with the following being particularly relevant to the Fintech sector:

- **Corporate Sustainability Reporting Directive (CSRD):** Expands ESG reporting requirements for all large and listed companies, requiring FinTech companies to disclose detailed sustainability impacts (Directive (EU) 2022/2464).

- **Sustainable Finance Disclosure Regulation (SFDR):** Mandates financial institutions, including FinTech firms, to disclose how sustainability risks are considered in their financial products (Regulation (EU) 2019/2088).
- **Corporate Sustainability Due Diligence Directive (CSDDD):** Introduces mandatory due diligence obligations for large companies, requiring FinTechs to identify, prevent, and mitigate adverse human rights and environmental impacts across their operations and value chains (Directive (EU) 2024/1760).
- **EU Taxonomy Regulation:** Provides criteria to classify environmentally sustainable economic activities, guiding FinTech companies in aligning with sustainability objectives (Regulation (EU) 2020/852).

Together, these regulations demonstrate the EU's commitment to embedding sustainability into the financial sector and the wider economy.

6. Challenges and Opportunities of ESG Integration for FinTech

FinTech companies face distinct challenges and opportunities when integrating ESG considerations into their risk management frameworks.

Challenges:

- **Resource constraints:** ESG integration can be costly and complex for small or early-stage FinTechs, which often lack the compliance capacity and financial resources needed to effectively manage ESG performance (Martiny et al., 2024).
- **Regulatory uncertainty:** ESG regulations often target large firms, leaving many FinTechs uncertain about their specific obligations (Directive (EU) 2024/1760).
- **Data and measurement gaps:** FinTechs frequently struggle with collecting and analyzing ESG data due to the lack of standardized metrics and methodologies (Baldini et al., 2018).

Opportunities:

- **ESG as a market differentiator:** Strong ESG credentials can attract impact investors, partners, and ethically minded customers (Ortas, Álvarez and Garayar, 2015).
- **Tech-enabled ESG solutions:** FinTechs can lead in developing digital tools for ESG reporting, carbon tracking, or ethical investing (EU Fintechs, 2024).
- **Agility and adaptability:** FinTechs can integrate ESG faster than legacy institutions if driven by purpose and leadership (BDO, 2022).

As seen above, the unique position of FinTech companies at the intersection of finance and technology creates both specific challenges in ESG integration and distinctive opportunities to lead in this space.

7. Conclusions

This paper highlights several key findings:

- **Integration of ESG in risk management:** ESG considerations are becoming an essential part of risk management, with growing complexity in decision-making and an increasing focus on long-term, multi-criteria risks like environmental impact, social issues, and governance factors.
- **Challenges and opportunities for FinTech:** While FinTech firms face regulatory uncertainties and limited resources, they possess unique opportunities to lead in the ESG space due to their flexibility and innovative capabilities.

- **The need for evolution of theories:** Traditional economic and risk management theories must further evolve to reflect the growing significance of ESG. These theories need to incorporate new dimensions like deep uncertainty, long-term perspectives, and complex stakeholder relationships to remain applicable.

Integrating ESG into risk management is no longer optional. This paper contributes to theoretical advancement by reinterpreting foundational theories through an ESG lens, proposing a conceptual framework aligned with regulatory dynamics, and presenting a typology to guide practical application in FinTech. These insights lay the groundwork for developing ESG-oriented risk strategies that are both theoretically grounded and responsive to real-world pressures, providing a robust foundation for FinTech companies to implement resilient and responsible ESG practices.

For practitioners, the proposed framework offers actionable guidance for embedding ESG into risk management processes, helping FinTech companies navigate regulations, enhance stakeholder trust, and achieve long-term sustainability. Future research should aim to further refine and empirically validate this framework across different FinTech contexts, ensuring that ESG risk strategies remain adaptive amid evolving regulations and stakeholder expectations.

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THE RELATIONSHIP BETWEEN THE NUMBER OF STUDENTS AND EMPLOYED POPULATION IN ROMANIA

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Abstract: *The paper aims to present the relationship between the number of students and employed population at the level of our country for a period of 11 years (2013 - 2023). The Kendall coefficient, one of the non-parametric methods for establishing the link between statistical variables, will allow us to observe the relationship between the two indicators. The values recorded the number of students and employed population are official data, provided by the National Institute of Statistics. The result obtained after calculating the Kendall coefficient demonstrates that there is a link between these indicators, it is reverse and of low intensity.*

Key words: *students, employment, Kendall coefficient, Romanian economy.*

JEL classification: *E24, I25.*

1. Introduction

Any economic activity actively utilizes the labor factor (Angelescu, 2003). All organizations involve people as a fundamental resource, as they ensure the development, existence, and success of those organizations.

The importance of the population in an economy is determined by its dual role: as a consumer in the goods and services market, and as a creator of goods and services through the use of labor. The employed population refers to people who have a job and represents the most important segment of the active population (Badea et al., 2020).

Popescu and Ciurlău state that the valorization of labor resources is based on the relationship between economic growth – competitiveness – employment – sustainable human development, as this paradigm increases the complexity of employment.

"The contemporary world is returning to the true purpose of economics, both at the individual and social level. Currently, a new mode of development is required, one that integrates the human dimension from a different perspective—that of complexity and diversity—in which education plays a key role. Education becomes an integral part of the globalization process and a fundamental economic resource that can support long-term competitive advantage." (Costea et al., 2010)

Considering the above statements regarding the importance of employment and education in an economy, this paper aims to analyze the relationship between the employed population and the number of students enrolled in bachelor's degree higher education. The values recorded for the number of students enrolled in bachelor's studies and for the employed population, presented below, are provided by the National Institute of Statistics.

The recorded values for the employed population are presented as totals and are not broken down by gender. The number of students enrolled in bachelor's degree programs includes both public and private educational institutions, as well as all forms of study (full-time, part-time, and distance learning).

The evolution of the employed population in the Romanian economy is presented in Figure 1. The data highlighted in this figure show a downward trend over the analyzed period (2013–2023). Although the overall trend is decreasing, fluctuations did occur during the 11 years covered by our analysis.

In 2013, there were 8.549 million employed persons in the Romanian economy, while in the most recent year, 2023, this number decreased to 7.696 million—showing a difference of 853 thousand employed persons. The highest number of employed people was recorded in 2018, with 8.688 million individuals. It can be observed that the three years prior to the COVID-19 pandemic (2017, 2018, and 2019) are the years in which the highest employment figures were registered.

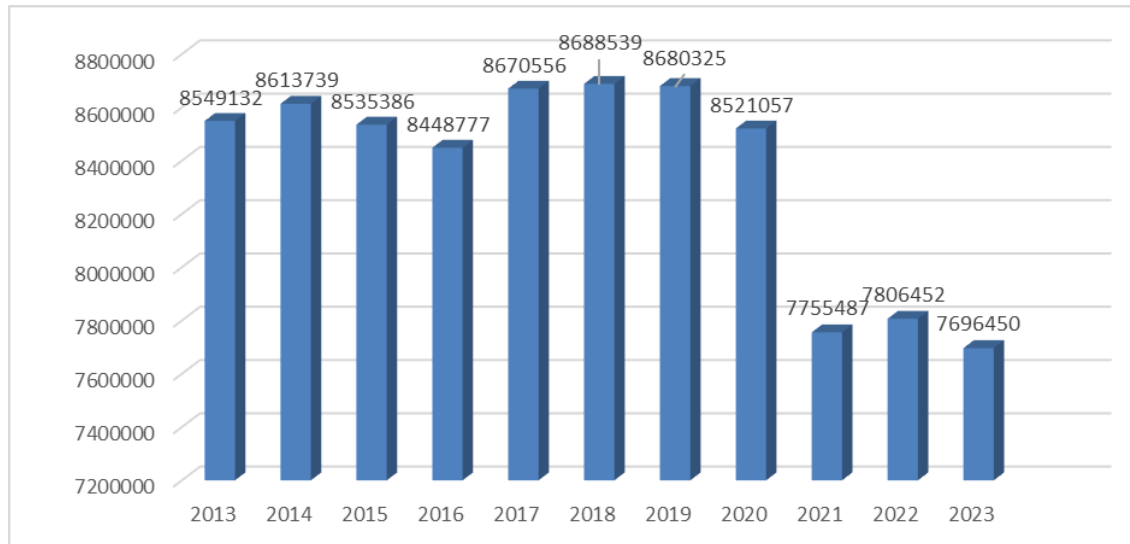


Figure 1. Employed Population (persons)

Source: Created by the authors using official data provided by the National Institute of Statistics, <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>

The number of students enrolled in bachelor's degree higher education is the second indicator analyzed in this paper. The analyzed period is the same, as we aim to further examine whether there is a relationship between the two indicators.

The evolution of the number of students enrolled in bachelor's degree programs in Romania is illustrated in Figure 2. The data presented in this figure show a downward trend over the analyzed period (2013–2023), as well as the presence of fluctuations throughout the entire timeframe.

In 2013, there were 433,234 students enrolled in Romania, while in the most recent year, 2023, the number decreased to 414,998 students—a reduction of 18,236 students. The highest number of students in Romania was recorded in the first year of the analyzed period.

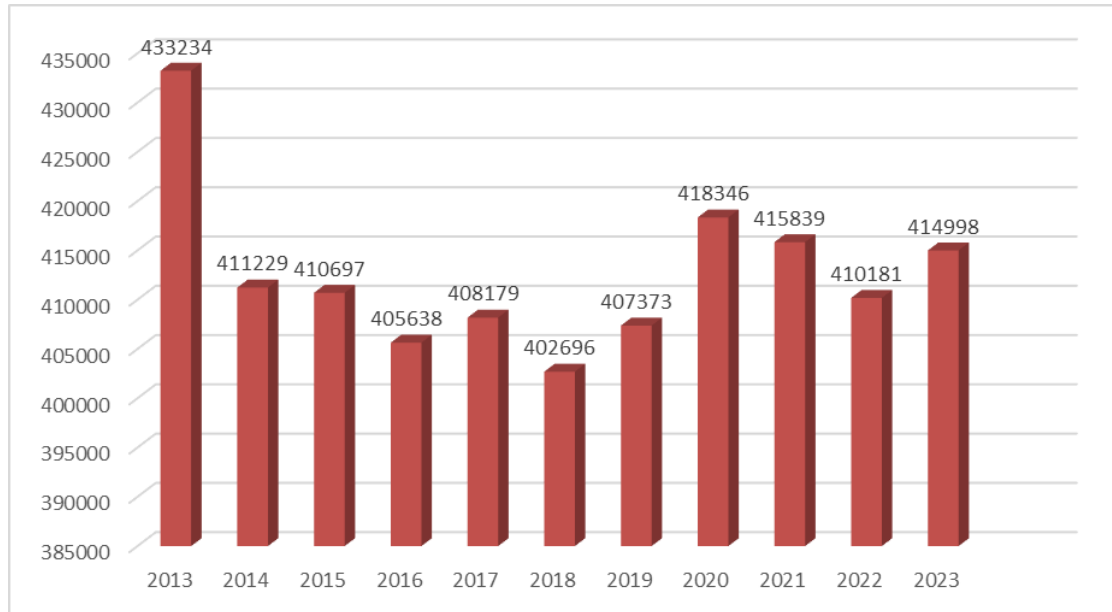


Figure 2. Number of Students Enrolled in Bachelor's Degree Higher Education (persons)

Source: Created by the authors using data provided by the National Institute of Statistics, <http://statistici.INSSE.ro:8077/tempo-online/#/pages/tables/INSSE-table>

After presenting the two indicators, which form the basis of this paper, it is interesting to analyze the employed population based on education level. The structure of the employed population by education level has primarily focused on university and high school studies in the last two years of the analyzed period.

Table 1. Employed Population by Education Level

Level of education	2022 (persons)	2023 (persons)	2022 (%)	2023 (%)
University level	1881921	1754620	24.11	22.80
High school level	3355956	3274128	42.99	42.54
Other level of education	2568575	2667702	32.90	34.66
Total	7806452	7696450	100	100

Source: Created by the authors using data provided by the National Institute of Statistics, <http://statistici.INSSE.ro:8077/tempo-online/#/pages/tables/INSSE-table>

Table 1 highlights the number of employed persons based on their level of education, as well as their structure for 2022 and 2023. We can observe that the percentage of the employed population with university education decreases from 24.11% in 2022 to 22.80% in 2023. A similar trend is seen in the percentage of the employed population with high school education, which decreases from 42.99% to 42.54%, a much smaller decrease compared to the one observed in the population with university education.

2. Research Methodology

In this paper, to demonstrate the relationship between the number of students enrolled in undergraduate university education and the employed population, we will use a statistical method that checks the dependency between two or more variables. The statistical method that will be used is a non-parametric method for analyzing statistical relationships, namely the Kendall coefficient. This coefficient allows us to analyze the relationship between the two indicators and prove the existence of a link between the variables, its direction, and intensity.

The result obtained after calculating the Kendall coefficient shows the intensity of the relationship between the variables. The Kendall coefficient takes values between 1 and -1 (Bădița et al., 1998). The closer the result is to 0, the weaker the relationship, and the closer it is to 1 or -1, the stronger the relationship (Grigorescu, 2010). The same result also provides information about the direction of the relationship, i.e., if it is positive, it indicates a direct relationship, while if it is negative, it indicates an inverse relationship.

In determining the Kendall coefficient, it is necessary to establish which variable is independent and which is dependent. We consider that the number of students enrolled in undergraduate university education influences the employed population. Clearly, this is not the only factor affecting the employed population.

Based on what has been mentioned above, the two variables in this paper are considered as follows:

- The number of students enrolled in undergraduate university education is the independent variable (denoted as X);
 - The employed population is the dependent variable (denoted as Y).
- The hypotheses we start with are as follows:
- There is a relationship between the number of students enrolled in undergraduate university education and the employed population;
 - The relationship between the number of students enrolled in undergraduate university education and the employed population is a direct relationship.

We will now verify whether the hypotheses we started with are true or not. By calculating the Kendall coefficient, we have the opportunity to demonstrate that there is a relationship between the number of students enrolled in undergraduate university education and the employed population in the Romanian economy. The values recorded by the two indicators over a period of 11 years (2013-2023) will be used in our calculations.

3. Main Results

The Kendall coefficient is one of the non-parametric methods for analyzing statistical relationships. To calculate the Kendall coefficient, it is necessary to determine the specific ranks for the two indicators.

The Kendall coefficient is calculated using the following formula:

$$C_K = \frac{2 \sum (P-Q)}{n(n-1)} \quad (1)$$

Where:

P - number of ranks higher than the rank being examined;

Q - number of ranks lower than the rank being examined;

n - number of pairs.

Table 2. Specific Ranks of the Kendall Coefficient

X	Y	R _x	R _y	P	Q	P-Q
402696	8688539	1	11	0	10	-10
405638	8448777	2	4	6	3	3
407373	8680325	3	10	0	8	-8
408179	8670556	4	9	0	7	-7
410181	7806452	5	3	4	2	2
410697	8535386	6	6	2	3	-1
411229	8613739	7	8	0	4	-4
414998	7696450	8	1	3	0	3
415839	7755487	9	2	0	0	0
418346	8521057	10	5	1	0	1
433234	8549132	11	7	0	0	0
Total						-21

Source: Created by the authors

The Kendall coefficient is one of the non-parametric methods for analyzing statistical relationships. To calculate the Kendall coefficient, we need to establish the specific ranks for the two indicators.

The Kendall coefficient is calculated using the following formula:

$$C_K = \frac{2 * (-21)}{11(11 - 1)} = -0,381$$

The value of the Kendall coefficient is -0.381. This result indicates that there is a relationship between the two indicators; this relationship is inverse and of medium intensity. The result obtained demonstrates that only one of the two hypotheses we started with is true. The first hypothesis stated that there is a relationship between the number of students enrolled in higher education and the employed population, which is true since we obtained -0.381 when calculating the Kendall coefficient. The second hypothesis referred to the direct relationship between the number of students enrolled in higher education and the employed population. This hypothesis is not true, as the result shows that the relationship between the two indicators is inverse.

4. Conclusions

A non-parametric method for establishing the relationship between variables has facilitated the analysis of the relationship between the number of students enrolled in higher education and the employed population, and helped demonstrate the existence of a relationship between the two indicators. Between the number of students enrolled in higher education and the employed population, there is an inverse relationship with medium intensity. This result shows that the number of students enrolled in higher education has a small influence on the employed population, but more importantly, this influence is inverse, meaning: when the number of students increases, the employed population decreases.

New directions for research emerge from the results obtained: identifying the factors that influence the employed population, observing whether students who have completed a bachelor's degree work in the field in which they graduated, etc.

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FROM LINEAR ECONOMY TO CIRCULAR ECONOMY IN THE ERA OF SUSTAINABILITY

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Abstract: Sustainability is based on the idea that human activities are dependent on the environment and resources. The economic model of the last decades is linear, with resource consumption being extremely high to meet the unlimited needs of a global population of over 8 billion inhabitants. In this context, it is obvious that strategies must be changed so as to respect the ecological limitations in the exploitation of the environment and the planet's resources. Therefore, the current economy is intended to be a circular one, in which the emphasis is placed on extending the useful life of products, through reuse, repair, remanufacturing and modernization. The circular economy emphasizes the efficient use of resources, on preserving the value and utility of products for longer periods of time, so that the speed of rotation of production factors also increases. Increasing the useful life of products will generate a decrease in waste. The new vision that is emerging regarding the future development of humanity starts from the need to ensure a sustainable economy, in which the pressure on the planet's resources is increasingly reduced, and meeting the needs of current generations does not affect the possibilities of future generations to meet their own needs. The circular economy supports sustainability by reducing the pressure on resources, by increasing the life cycle of products, by minimizing waste, offering new opportunities for both companies and consumers. The future economic model is therefore based on the reuse of resources already in circulation, instead of eliminating them.

Key words: sustainability, responsibility, reuse, linear economy, circular economy.

JEL Classification: E20, Q01.

1. Introduction

After the Second World War, as a result of how the outcomes of production factor development were used, the premises for a severe ecological imbalance accumulated at an extremely rapid pace. From the moment the natural environment could no longer absorb the shocks caused by human intervention, the ecological crisis erupted. It was the first time in history that humankind faced such a broad and deep phenomenon, generated by its own activity.

The ecological crisis is the expression of the contradiction between the man-made environment and the natural environment, between humans and nature. Humans have treated the planet's resources as an unlimited gift from nature, exploiting them excessively without considering the disturbances that could occur in the ecosphere. It is certain that the degree of exploitation of the natural environment and resources depends on technological progress. Environmental degradation was not inevitably caused by this progress, but rather by the way technology was used.

The resource crisis was caused by the irrational exploitation of resources.

Pollution, in its various forms, is a result of uncontrolled economic development. It consists of disturbing the natural ecological balance of an ecosystem under the pressure of harmful substances, mostly produced by human activity. Once it exceeds a certain threshold, pollution harms human well-being and health, causes damage to the economy, and can become a disaster for entire regions.

Several factors contribute to environmental degradation: improper agrotechnical methods, energy-intensive industries, transportation, urbanization, tourism, and the arms race.

2. From Linear Economy to Circular Economy

It is considered that the deterioration of the environment through pollution is caused by the way industry has developed over the last few hundred years—namely, a polluting industry and chaotic urbanization.

That is precisely why the concept of the circular economy emerged as a reaction to the traditional "linear" economic model—i.e., "extract, produce, consume, discard"—which proved unsustainable in the long term due to the depletion of natural resources and excessive pollution. The 1970s and 1980s were years when industrialization, pollution, and population growth reached alarming rates, negatively impacting the environment and generating reactions from scientists and the international community.

Thus, in 1972, the first report to the Club of Rome, titled "The Limits to Growth," presented the concept of zero economic growth—a situation in which absolute macroeconomic results and total population increase at the same rate, keeping per capita outcomes constant. The 1972 report includes a model of the world designed to formulate various growth scenarios up to the year 2100. According to the report's authors (who considered parameters such as global population, natural resources, per capita industrial production, per capita food, and pollution), both economic and demographic expansion will halt during the 21st century due to the depletion of natural resources. This led them to propose zero growth to enable the establishment of a state of equilibrium. The report sounded the alarm about the waste of natural resources, which are limited and exhaustible. The main criticism of the report was that it did not account for technological progress, which creates new possibilities for substituting raw materials.

At the same time, the 1972 Stockholm Conference on the Human Environment marked the recognition that human activities contribute to environmental degradation, which threatens the future of humanity. A few years later, in 1983, the World Commission on Environment and Development (WCED), led by Brundtland, began its work and introduced the concept of sustainable development—a concept still highly relevant in the 21st century.

The oil crises and environmental movements of the 1970s emphasized the need for more sustainable alternatives.

Amid all these environmental crises, in the 2000s, the term circular economy began to be used more frequently in scientific research and public policy. The Ellen MacArthur Foundation (founded in 2010 in the UK) played a key role in popularizing and structuring the concept globally. The European Union also integrated the circular economy into its policies through the Circular Economy Package (2015), which became a landmark for the green transition.

The main difference between the linear economy and the circular economy lies in how resources are used and waste is managed:

The linear economy is a traditional production and consumption model based on:
Extract → Produce → Consume → Discard

In the linear economy:

- Natural resources are extracted to produce goods;
- Products are used for a time, then discarded as waste;
- It creates a significant environmental impact: pollution, waste, depletion of resources.

The circular economy is a sustainable model that aims to keep resource value in the economy for as long as possible, through: Reduce → Reuse → Repair → Recycle

In the circular economy:

- Products are designed to be durable, easy to repair, and recyclable;
- Waste becomes a resource for other processes or industries;
- Raw material consumption and environmental impact are minimized.

Given the environmental issues we face, the circular economy is a key solution for sustainability and combating climate change. It is clear that the linear economy consumes and discards, while the circular economy reclaims and reduces waste.

Differences between the linear economy and the circular economy

Criterion	Linear Economy	Circular Economy
Principle	Extract → Produce → Consume → Discard	Reduce → Reuse → Repair → Recycle
Resource Use	Extensive	Intensive
Product Lifespan	Short	Long
Waste	Is discarded	Is reused
Environmental Impact	High (pollution, resource depletion)	Low (reduced emissions, less waste)
Consumer Behavior	Buys → Uses → Discards	Buys → Uses → Repairs/Recycles

Table 1

Source: Based on information from the following websites:

<https://conquestcreatives.com/linear-economy-vs-circular-economy/>;

<https://www.reconomy.com/2025/05/12/linear-economy-vs-circular-economy/>

Against the backdrop of the alarming growth of the global population, it is clear that the pressure humanity places on resources is immense, starting from the basic principle of economics: unlimited needs and limited resources. Even those resources that are renewable regenerate at a much slower pace than the rate at which human needs multiply and diversify.

According to the United Nations, the circular economy contributes to a stable system by minimizing the risks associated with resource depletion.

3. The Transnational Corporation – A Key Player in the Circular Economy

The key players in the circular economy are transnational corporations—those giant companies with financial assets that often exceed the GDP of some small developed countries. These firms have expanded to such an extent that, in a certain sense, they have lost their national character. Precisely because we are dealing with such powerful economic agents, whose sole goal is profit maximization, the managers of transnational corporations are sometimes reluctant toward the interventionist tendencies of local and national communities, which seek to impose rules to prevent the excessive consumption of the resources in the countries they invest in.

Transnational corporations have a huge environmental impact, but also an enormous potential to positively influence the transition to a circular economy. They play a key role through: *Promoting sustainable innovation*, namely: investments in research and development for renewable or biodegradable materials, products designed for durability and recycling; *responsible supply chain management*, namely: involving suppliers in ecological standards,

optimizing logistics to reduce the carbon footprint; *material recovery* through: “take-back” programs, factories that reuse secondary materials instead of raw ones; *global influencer* through: setting new sustainability standards in the industry, public-private collaborations for regulations favorable to the circular economy.

Thus, in order to make the transition from the linear economy to the circular economy, corporations must adopt a series of strategies that reduce waste, extend the product life cycle, and harness resources in a sustainable way, such as:

1. Product Redesign: - design for durability and recycling - products should be easy to disassemble, repair, and recycle; - sustainable materials - choosing renewable, recycled, or recyclable materials.

2. Circular Business Models: - product-as-a-service (PaaS) - instead of selling products, companies offer services (e.g., leasing, renting, subscriptions); - recovery and refurbishment - collecting used products for repair, refurbishing, or recycling; - collaborative economy - encouraging resource sharing among consumers (e.g., rental platforms).

3. Circular Supply Chains: - reverse logistics - systems in which products and materials are returned to the production chain; - partnerships with sustainable suppliers - integrating circularity across the entire value chain.

4. Digitization and Technology: - traceability technologies (blockchain, IoT) - monitoring resources and products throughout their life cycle; - digital platforms - optimizing reuse and redistribution of materials.

5. Internal Education and Organizational Culture: - employee training - understanding circular economy principles at all levels; - culture of innovation - encouraging regenerative thinking and experimentation.

6. Collaboration and Regulation: - cooperation with authorities and other companies - developing common policies and standards; - ESG transparency and reporting - clearly communicating progress to stakeholders.

The circular economy can generate new challenges for these companies, such as high initial costs for the circular transition, inadequate infrastructure in some regions, resistance to change within organizational structures, and the need for collaboration among multiple stakeholders. At the same time, it also brings opportunities such as market differentiation through sustainability leadership, long-term cost reduction, improved consumer loyalty, and access to new markets and business models.

Transnational corporations represent key sources of capital, technology, and market access for nearly every country. Their activities have a significant impact on the global distribution of wealth and economic activity among national economies. They provide benefits to both consumers and economies worldwide, and can therefore become primary promoters of the circular economy.

4. Conclusions

Today, the circular economy and sustainability can be seen as two sides of the same coin. Fundamental changes in economic models are needed if we want an inclusive green recovery and to accelerate progress toward achieving the Sustainable Development Goals. Alongside climate change, biodiversity loss, and pollution, humanity is also facing challenges related to rising inequality and poverty, economic stagnation, conflict, political polarization, and fragility. The COVID-19 pandemic has led to a decline in global human development for the first time in 30 years. Extreme poverty is on the rise, and we have witnessed one of the

largest drops in global GDP per capita in the last 100 years. It is no longer possible to have a separate development agenda and a parallel environmental agenda. Concerns related to nature and climate must be at the core of all economic planning and investment decisions.

Transnational corporations are in constant pursuit of advantages: low costs, new markets, cheap labor, and so on. Therefore, changing the strategies and production systems of these transnationals opens up new opportunities for the world's economies, which seek to meet the unlimited needs of their populations while promoting responsibility and respect for the environment.

For too long, recent decades' economies have been built on the relentless extraction, use, and waste of resources—practices that destroy nature, drive climate warming, pollute ecosystems, sustain inequalities, and squander materials that still hold immense value for society.

The model of the future is the circular economy, which offers a viable alternative to the 20th-century linear economy built on waste and extensive production.

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SUSTAINABLE MARKETING STRATEGIES: NAVIGATING CONSUMER VALUES IN A CHANGING LANDSCAPE

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Abstract: *This paper explores the evolution of sustainable marketing strategies in response to growing consumer demand for environmentally and socially responsible practices. The research examines the core tenets of sustainable marketing, focusing on its integration with the marketing mix (product, price, place, and promotion), and its role in building brand trust and loyalty. A comprehensive literature review analyzes the impact of consumer awareness, governmental regulations, and technological advancements on the adoption of sustainable marketing approaches. The methodology incorporates a mixed-methods approach, combining a comprehensive review of academic publications and case studies of leading sustainable brands. The findings highlight the effectiveness of transparency, authenticity, and stakeholder engagement in fostering positive consumer perceptions and driving business success. Furthermore, these emphasize the importance of a proactive and holistic approach to sustainability, recognizing it as a key driver of competitive advantage and long-term value creation in the contemporary marketplace.*

Keywords: *sustainable marketing, green marketing, corporate social responsibility, strategy, marketing mix, environmental sustainability.*

JEL Classification: *M10, M30, L19.*

1. Introduction

The 21st-century business environment is characterized by rapid and often disruptive changes in a globalized world (Toma, 2005). A fundamental transformation is underway, driven by a confluence of factors: escalating global environmental concerns as highlighted by the Intergovernmental Panel on Climate Change (IPCC, 2023), increasing social inequalities as argued by Stiglitz (2012), and a heightened awareness of the impacts of corporate practices on the planet and society as observed by Carroll (1999). This collective consciousness is reshaping consumer values and expectations, demanding a paradigm shift in how businesses operate (Catană, 2021) and market their products and services (Marinescu and Toma, 2015). Consumers are no longer solely driven by price, convenience, or brand image; they are increasingly prioritizing ethical considerations (Toma, 2006), environmental responsibility, and social impact in their purchasing decisions (Deloitte, 2023). This shift represents a significant challenge and an unprecedented opportunity for businesses (Catană and Toma, 2021a). Organizations that proactively embrace sustainability, integrating environmental and social considerations into their core business strategies and marketing practices, are poised to gain a competitive advantage, build brand loyalty, and thrive in the evolving marketplace (Marinescu et al., 2010; Toma et al., 2011a). Conversely, those that fail to adapt risk losing market share, damaging their reputations, and ultimately, becoming obsolete (Porter and Kramer, 2011).

This paper delves into the evolution and application of sustainable marketing strategies as a response to these crucial challenges and opportunities. It seeks to provide a comprehensive and nuanced understanding of sustainable marketing principles, analyzing their integration into the marketing mix, scrutinizing the crucial role of consumer behavior, and evaluating the effectiveness of different strategic approaches in building brand trust, driving customer engagement, and generating long-term business value. The research will also examine the influence of technological innovation, governmental regulations, and evolving consumer

values on the adoption and execution of sustainable marketing initiatives. The paper's central aim is to provide practical insights and strategic recommendations that enable businesses to successfully navigate the complex and dynamic landscape of sustainable marketing, ultimately leading to more responsible, resilient, and profitable business practices. The paper will also address the persistent challenge of greenwashing, the difficulty of measuring sustainability, and how regulatory structures may help drive sustainable consumption.

2. Literature Review

Sustainability has become a major concern for human society in the last decades (Toma, 2019). The shift towards sustainability in marketing is not merely a trend; it is a fundamental transformation in how businesses conceptualize and execute their marketing strategies. Sustainable marketing represents a significant evolution beyond “green marketing,” which typically focuses primarily on environmental concerns. Sustainable marketing adopts a holistic approach, integrating environmental, social, and economic considerations into all aspects of marketing activities (Fuller, 1994). This approach recognizes that businesses operate within complex ecosystems and are interconnected with various stakeholders, including consumers, employees, suppliers, communities, and the environment (Freeman, 1984). Sustainable marketing seeks to create value for both consumers and society while minimizing environmental impact and promoting social well-being (Sheth et al., 2011). The core tenet is that long-term business success is inextricably linked to environmental and social responsibility (Cornescu et al., 2004; Toma et al., 2011b; Toma et al., 2012; Toma and Tohănean, 2019).

The academic literature provides a range of definitions for sustainable marketing, reflecting its multifaceted nature. While variations exist, several core themes consistently emerge. Ottman (2017) defines sustainable marketing as “the innovation and value creation in the firm’s marketing strategy that is good for customers, shareholders, and the planet.” This succinctly captures the core purpose, emphasizing the creation of value for stakeholders and the environment. Kotler and Armstrong (2018) emphasize the need to “meet the present needs of consumers and businesses while also preserving or enhancing the ability of future generations to meet their needs,” underscoring the long-term perspective inherent in sustainable marketing and considering the intergenerational equity of resources. Belz and Peattie (2009) offer a more comprehensive view, highlighting the integration of environmental, social, and economic dimensions, defining sustainability marketing as “the marketing of products and services based on their environmental and social performance.” These definitions, while differing in emphasis, converge on the idea that sustainable marketing aims to create value for both consumers and society while minimizing environmental impact and promoting social well-being as noted by Sheth et al. (2011).

The effective implementation of sustainable marketing hinges on its integration into all elements of the marketing mix (Catană and Toma, 2021b), the traditional 4Ps product, price, place (distribution), and promotion. However, a truly sustainable approach often requires strategic thinking (Toma and Marinescu, 2015; Toma et al., 2016) beyond these traditional elements and considering the broader implications for the planet and its people. Also, sustainable marketing should be part of the corporate strategy of the business organization (Toma and Marinescu, 2013; Toma and Grădinaru, 2016), linked with its business model (Tohănean and Toma, 2018; Toma and Tohănean, 2018) and various concepts such as corporate social responsibility (Toma and Marinescu, 2012), lean management (Marinescu

and Toma, 2008; Naruo and Toma, 2007), creativity (Toma et al., 2013), Six Sigma (Toma, 2008), balanced scorecard (Toma et al., 2010), and entrepreneurship (Catană et al., 2020).

Sustainable product development is a cornerstone of a successful sustainable marketing strategy. This involves designing products with reduced environmental impact throughout their lifecycle, from raw material extraction to end-of-life disposal. Key strategies include eco-design, which means minimizing the use of harmful materials, optimizing energy efficiency, and designing products for durability and repairability. The use of sustainable materials is also vital, prioritizing recycled, renewable, or sustainably sourced materials such as organic cotton and Forest Stewardship Council-certified wood. Product-as-a-Service models offer products as services, for example car-sharing and subscription services, to encourage product longevity and resource efficiency as explored by Mont in 2004. Cradle-to-Cradle design aims to ensure that all components can be reused in a closed-loop system for complete material recyclability (McDonough and Braungart, 2002). This helps close the loop and minimize waste.

The transition to a circular economy is paramount, involving the design of products that are easy to disassemble, repair, and recycle, minimizing waste and maximizing resource utilization. This shift requires businesses to move away from the traditional take-make-dispose linear model towards a closed-loop system. The circular economy model offers significant opportunities for businesses to innovate, reduce costs, and build brand loyalty (Ellen MacArthur Foundation, 2013). This involves designing products that can be readily dismantled and their components reused, repurposing materials, and minimizing the environmental impact of product lifecycles.

Pricing strategies in sustainable marketing should consider the environmental and social costs associated with a product. While sustainable products may have higher production costs due to the use of sustainable materials, ethical sourcing, and reduced environmental impact, businesses can justify a premium price by clearly communicating the added value to consumers. Value-based pricing focuses on communicating the unique benefits of a sustainable product to consumers, such as improved health, reduced environmental impact, and support for ethical labor practices (Anderson and Hansen, 2007). Cost-plus pricing incorporates the full cost of production, including environmental and social externalities, into the price, helping to internalize the costs of environmental damage (Banerjee, 2008). Transparency in pricing means being open about the costs of production and the environmental impact of the product, building trust with consumers (Schwartz, 2019). This also includes fair-trade practices.

The challenge lies in effectively communicating the value proposition of sustainability to justify the higher price. Consumers need to understand the benefits, both tangible and intangible, to be willing to pay more. This requires clear and transparent communication that showcases the benefits of a sustainable choice, such as environmental protection, ethical sourcing, or health benefits.

Sustainable distribution strategies focus on minimizing the environmental impact of getting products to consumers, encompassing the entire supply chain, from sourcing raw materials to delivering the final product. Sustainable sourcing means partnering with suppliers who adhere to ethical and environmental standards as highlighted by Srivastava in 2007. Efficient transportation involves optimizing transportation routes, utilizing fuel-efficient vehicles, and using alternative modes of transport like rail and shipping to minimize emissions. Eco-friendly packaging means using recycled, recyclable, and compostable

packaging materials, minimizing packaging waste. Local sourcing and distribution involves sourcing products locally to reduce transportation distances and support local economies. This can also reduce emissions from transportation and benefit local communities.

Effective supply chain management is crucial. Businesses must assess the environmental and social impact of their entire supply chain and work with their partners to reduce their footprint. This includes selecting suppliers who share a commitment to sustainability and implementing robust monitoring systems to ensure compliance with environmental and social standards.

Promotion plays a critical role in communicating the benefits of sustainable products and building brand trust. However, the potential for greenwashing, misleading consumers about a product's environmental benefits, is a significant risk as identified by Polonsky in 2011. Authentic communication requires providing accurate and verifiable information about the product's environmental and social benefits. Transparency means being open about the product's entire lifecycle, including any potential negative impacts. Third-party certifications involve utilizing credible certifications such as USDA Organic, Fair Trade, and B Corp to demonstrate commitment to sustainability. Engaging consumers means involving them in the sustainability journey and soliciting feedback. Avoiding exaggerated claims means refraining from making unsubstantiated environmental claims. Digital marketing and social media are important here.

Building trust is paramount. Greenwashing can quickly erode consumer trust and damage a brand's reputation. Authenticity, transparency, and verifiable claims are essential for effective promotion. This also includes providing consumers with clear, concise information about product attributes and the business's ethical and environmental performance.

Beyond the traditional marketing mix, sustainable marketing requires a shift in organizational culture and a commitment to innovation, including internal buy-in which means engaging employees at all levels in the sustainability journey. Data-driven decision-making involves measuring the environmental and social impact of marketing activities and using data to inform decision-making. Continuous improvement means constantly seeking ways to improve sustainability performance and innovate. Collaboration means working with other businesses, NGOs, and government agencies to advance sustainability initiatives. This can include creating partnerships with non-profit organizations, community groups, or industry associations to address sustainability challenges.

Consumer attitudes towards sustainability are a critical factor in the success of sustainable marketing initiatives. Understanding consumer motivations, values, and behaviors is essential for developing effective marketing strategies. Consumers are becoming increasingly aware of the environmental and social impacts of their purchasing decisions. This rise of the conscious consumer is driven by a confluence of factors, including increased access to information, growing awareness of environmental problems, and a demand for ethical consumption. Factors such as the rise of the internet, social media, and citizen journalism provide consumers with more information and the power to influence corporate behaviour. Also, there is a wider recognition of the scientific evidence behind climate change and other environmental problems.

Several key factors influence consumer decisions to purchase sustainable products. The level of concern that a consumer has about the environment is a strong predictor of their willingness to purchase sustainable products as Laroche and colleagues found in 2001. Consumers are also increasingly concerned about social issues, such as fair labor practices,

ethical sourcing, and community impact, as demonstrated by Auger and colleagues in 2003. Consumers are also motivated by the perceived health benefits of sustainable products like organic food and non-toxic products. While many consumers are willing to pay a premium for sustainable products, price remains a significant factor. The perceived value of the product, including its environmental and social benefits, must outweigh the price for the consumer. Consumers must also trust the brand and believe its claims about sustainability, as greenwashing can quickly erode trust (Schwartz, 2019). Making sustainable choices must also be convenient and accessible for consumers.

Understanding consumer segments is crucial for developing targeted sustainable marketing strategies. Segmenting consumers based on their sustainability attitudes and behaviors includes environmental segmentation, values-based segmentation, and behavioral segmentation. Environmental segmentation groups consumers based on their level of environmental concern. Values-based segmentation groups consumers based on their core values. Behavioral segmentation groups consumers based on their purchasing behaviors. Effective segmentation allows marketers to tailor their messaging, product offerings, and distribution channels to specific consumer groups. This includes using data analytics to understand consumer preferences and behaviours.

Sustainable marketing is not just about selling products; it is about building relationships with all stakeholders. This includes engaging with consumers through transparent communication, providing opportunities for feedback, and involving them in the sustainability journey. Empowering employees to contribute to sustainability initiatives and fostering a culture of environmental responsibility are also key. Working with suppliers to ensure ethical sourcing and sustainable practices throughout the supply chain is also crucial. Investing in the communities where the business operates and supporting social and environmental initiatives is important, as is communicating the long-term value of sustainability and attracting investors who share the company's values.

Freeman's 1984 stakeholder theory argues that businesses should consider the interests of all stakeholders, not just shareholders. This requires a shift from a profit-maximizing mindset to a value-creation perspective that considers the needs of society and the environment. Effective stakeholder engagement fosters trust, builds brand loyalty, and creates a more resilient and sustainable business model. The importance of stakeholder engagement is growing rapidly.

Government regulations and technological innovations are crucial drivers of sustainable marketing practices. Government regulations can incentivize sustainable behavior and create a level playing field for businesses. Examples include carbon pricing, emission standards, renewable energy mandates, and product labeling and standards. Technology can reduce the reliance on fossil fuels. Technological innovations are creating new opportunities for sustainable marketing, including renewable energy, sustainable packaging, digital marketing, smart technology, and blockchain.

Despite the growing importance of sustainable marketing, businesses face numerous challenges and criticisms. Greenwashing, the deceptive practice of falsely promoting products as environmentally friendly, erodes consumer trust and damages the credibility of sustainable marketing efforts (Polonsky, 2011). Accurately measuring and reporting the environmental and social impact of marketing activities is complex and challenging. Some critics argue that sustainable marketing initiatives can be expensive and reduce profitability. Some consumers remain skeptical of corporate sustainability claims and may not be willing to pay a premium

for sustainable products. The lack of standardized definitions and metrics for sustainability can make it difficult for Deep Dive into the Published Knowledge. There needs to be transparency in these practices.

3. Methodology

A comprehensive and systematic literature review formed the foundation of this research. This involved a detailed examination and synthesis of existing knowledge, identifying key themes, debates, and gaps in the current understanding of sustainable marketing. The literature review was conducted using a systematic search strategy developed to identify relevant academic publications. The search was conducted using multiple databases including Scopus, Web of Science, JSTOR, and Google Scholar. The search terms included a combination of keywords and phrases related to sustainable marketing, green marketing, corporate social responsibility, consumer behavior, marketing mix, brand trust, environmental sustainability, and stakeholder engagement.

Specific inclusion and exclusion criteria were established to ensure the relevance and quality of the selected publications. The search results were screened based on titles, abstracts, and keywords. The full texts of relevant publications were then reviewed to determine their suitability for inclusion. This process resulted in the selection of 50 peer-reviewed publications for in-depth analysis.

Data from the selected publications were extracted and synthesized using a structured approach. This involved identifying key themes and concepts, analyzing the methodologies, findings, and conclusions of each publication, identifying commonalities, contradictions, and gaps in the literature, and synthesizing the findings to create a cohesive and comprehensive overview of the research topic.

Complementing the literature review, this research incorporated an in-depth case study analysis to examine how leading brands are implementing sustainable marketing strategies in practice. The selection of case studies was based on brands that demonstrated a strong commitment to environmental sustainability, social responsibility, or both; integrated sustainability into multiple aspects of their marketing mix; had measurable outcomes such as increased market share, brand recognition, customer satisfaction, or environmental impact reduction; and offered diversity of industries. The availability of sufficient publicly available information was also considered. Based on these criteria, ten leading sustainable brands were selected for in-depth analysis providing a comprehensive view.

Data for the case studies was gathered from a variety of sources including company reports, industry publications, academic research, and media coverage. The case studies were analyzed using a qualitative approach, specifically thematic analysis, involving familiarization, coding, theme development, interpretation, and reporting. The thematic analysis allowed for the identification of common strategies, challenges, and outcomes across the selected case studies. The qualitative data analysis, therefore, complemented and enriched the quantitative results from the literature review.

4. Findings

The mixed-methods approach produced a series of interconnected findings that illuminate the key aspects of sustainable marketing. The analysis provides compelling evidence to support that the key principles of sustainable marketing are critical for success. The research identified crucial areas of analysis.

A consistent finding across the case studies and literature review was the need for a holistic approach to the marketing mix (4Ps). Successful brands don't simply tack on a "green" initiative; they integrate sustainability into the core of their business model. Sustainable product design, the circular economy, and the use of recycled or renewable materials were central to all the analyzed case studies, which emphasized a conscious effort to minimize environmental impact. Brands generally found ways to justify a premium price through value-based pricing. This was not as simple as pricing a more environmentally friendly product higher, but it involved communication, transparency, and a compelling value proposition. Efficient distribution systems, eco-friendly packaging, and partnerships with retailers who embraced sustainable practices became crucial. The emphasis was on transparency, authentic communication, and the avoidance of greenwashing. Third-party certification was a key factor.

For example, the case of Patagonia, derived from multiple sources including company reports and academic studies, showed how the company designed durable, repairable products, incorporated recycled materials, and offered take-back programs. It communicates its commitment to environmentalism, transparency, and ethical sourcing through its marketing. The brand has a well-established culture of environmentalism and a strong brand image. Tesla's case, derived from various sources, demonstrates the importance of product innovation. The electric vehicle company's promotion focuses on environmental benefits. Through sustainable design, it has built a brand image. These examples, and many others, show that the whole marketing mix must be considered to make meaningful change.

The research shows that transparency and authenticity are crucial in building brand trust and driving consumer loyalty. Greenwashing is a significant threat, and brands that are seen as disingenuous face major risks. Clear and consistent communication about sustainability practices, including both positive and negative impacts, is essential. Demonstrating a genuine commitment to sustainability, not just through marketing messages, but also through corporate actions, is also vital. Backing up sustainability claims with credible data and third-party certifications provides additional support. These steps help foster credibility, and reinforce their claims.

Brands like Ben & Jerry's, discussed in various company reports and industry publications, which has a long history of promoting ethical sourcing and fair labor practices, demonstrate that consumers respond positively to brands that are transparent, honest, and socially responsible. This has also led to increased brand loyalty and customer advocacy. This also highlights the impact of being perceived as trustworthy.

The findings revealed a significant shift in consumer behavior, with more and more people embracing sustainable products and services. This change is driven by increasing environmental awareness, and an interest in ethical sourcing and a broader understanding of social responsibility. Environmental concern is a key driver of consumer willingness to pay more for products, especially among younger generations. Health and wellness are also playing an important role, motivating consumers to seek out products with a positive environmental footprint, such as organic foods and eco-friendly cleaning products. Trust is key. Consumer skepticism is high and the need for authenticity is paramount. Convenience is still a factor. Sustainable choices must be made easy to make. The changing preferences of the consumer are leading to a greater adoption of sustainable choices.

Consumer segmentation is an important point. Marketing teams need to identify and target consumers who value sustainability and create messaging that is tailored to them. This also

emphasizes how data analysis can assist in effective marketing. By understanding consumer preferences, businesses can meet the needs of their target audience.

The case studies and literature review underscored the importance of engaging with stakeholders to build trust, drive innovation, and create a more sustainable business model. This includes empowering employees to contribute to sustainability initiatives through training programs, and setting achievable sustainability goals. Engaging with suppliers to create ethical supply chains and supporting local communities is also valuable. Communicating the long-term value of sustainability to attract and retain investors can also support sustainability activities.

For example, Interface, the carpet tile manufacturer, focused on creating a sustainable business through employee engagement, ethical sourcing, and initiatives in the community. By involving all stakeholders, the firm built a strong brand image. This demonstrates the role of stakeholders in building an organization.

Government regulations, such as carbon pricing and emission standards, drive businesses to prioritize sustainability. In addition, technological innovations provide new opportunities. Regulations incentivize sustainable practices, such as pollution reduction and carbon offsetting, creating a level playing field for businesses. Technological advances provide new options for improving sustainability across the board, with renewable energy, eco-friendly packaging, digital marketing, and smart technology that allows for precise resource management and real-time tracking of environmental impact. These regulations are also creating a more level playing field.

5. Conclusions

Sustainable marketing is now a strategic imperative. Businesses that integrate sustainability into their core operations are poised for long-term success. A proactive and holistic approach is needed, where businesses must adopt such an approach to sustainability. Honest and open communication are crucial for positive consumer perceptions and loyalty. Brands must understand and respond to evolving consumer values. Proactive engagement with employees, suppliers, and communities fosters sustainability. Sustainability is a key driver of competitive advantage. The research's validity is supported by a detailed review of the literature, case studies, and reputable sources. There are a number of strategies that can create competitive advantage.

The study's scope is limited, and further study is needed. The core principles of sustainable marketing are universally applicable but must be adapted to specific contexts. A key challenge of sustainable marketing is the need to prevent greenwashing, which damages brand trust. Measurement, through reliable, independent audits, is vital to show the positive impact of a brand's efforts. Governments can support sustainability through incentives and regulatory actions. This can include encouraging sustainability, carbon pricing, and emissions standards. There needs to be continued efforts to address this through public policy.

Further research, especially those exploring consumer behavior, is needed to assess the efficacy of sustainability marketing and to measure the impacts of various initiatives. Future research should also carry out longitudinal studies to help understand the correlation between sustainable marketing initiatives and performance. Research into how businesses can incorporate sustainability is needed.

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ANALYSIS OF STRATEGIC DIRECTIONS ON THE COMPETITIVENESS OF THE ROMANIA ECONOMYS

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Abstract: *In recent times, the world economy is marked by a variety of fundamental transformations that reshape the interdependencies that underlie it. In a multipolar world, the European Union represents a pole of power that, through its actions, can considerably influence the balance of power. Competitiveness and productivity have been at the heart of European Union policy for decades. The various directions of evolution of the world economy affect, to varying degrees, the competitiveness of the European Union. Faced with successive recent crises, the European Union has adopted common and coordinated response measures, launching in 2023 the European Economic Security Strategy, which represents a strategic repositioning for the future. The paper aims to analyze the developments in the competitiveness of the European Union and Romania in this global and regional context, presenting the main strategic directions regarding the competitiveness of the Romanian economy. The research methodology uses the logical analysis method, the systemic method, the comparative method, the historical method, and the situation analysis used in geopolitical theory.*

Keywords: *competitiveness, international trade, European Union, strategy.*

JEL Classification: *F15, F51.*

1. Introduction

Developments in recent years, especially in the geopolitical arena, have fundamentally changed the approaches to trade, interdependencies between states and the trade-security nexus. Security concerns no longer refer only to conflicts, but cover the much broader notion of economic security. Despite the disruptions in global supply chains, trade remains a source of security, especially when it is part of a multilateral rules-based system. Beyond crises, the diversification effect of trade reduces asymmetric dependencies and the likelihood that dominant suppliers can use trade as a weapon. Empirical research often shows that the beneficial effects of trade on resilience outweigh its harmful effects. Over the past 50 years, greater openness to trade has limited macroeconomic volatility in most economies. The positive effect of trade on resilience has been demonstrated by recent crises, including the COVID-19 pandemic and the war in Ukraine. The multilateral trading system embodied by the WTO is fundamental to reaping the benefits of resilience in international trade. The war in Ukraine highlights that this allows trade flows to adapt rapidly when unforeseen shocks occur. (WTO, 2023)

Empirical work supports the idea that trade has a pacifying power, although it is certainly not capable of preventing conflict. Most empirical studies conclude that the conflict-reducing effect of trade tends to be stronger. Recent studies show that both bilateral and multilateral interdependence encourage peace-building. Greater bilateral trade independence contributes to a pacifying effect for neighboring countries, while openness to global trade promotes peace among more geographically distant economies. (WTO, 2023)

The COVID-19 pandemic and the war in Ukraine have deepened the cracks in the global economic order. Production chains and financing networks that functioned relatively well under benign global conditions have proven to be less resilient in times of COVID-19 and heightened geopolitical tensions. Rising geopolitical tensions have led to increased protectionism and the increasing use of cross-border restrictions for national security reasons. According to the World Economic Forum (2023), the main risks with the greatest potential

impact on a global scale are: "energy supply crisis"; "cost of living crisis"; "rising inflation"; "food supply crisis" and "cyberattacks on critical infrastructure".

2. Analysis of the competitiveness of the European Union

2.1 The competitiveness-economic security relationship

The European Union is one of the world's three major economic regions; trade in goods and services with the rest of the world accounts for 16.2% of world trade and the EU-27's share of world GDP is around 17%. However, a closer look shows that since the mid-1990s, average productivity growth in the EU has been weaker than in other major economies, which has widened the gap in productivity levels.

Figure 1. Determinants of the competitiveness of the European Union at the horizon of 2030



Source: (European Commission, 2023)

Europe now faces three major transformations, the first of which is the need to **accelerate innovation and find new growth engines**. The EU's competitiveness is currently being squeezed from two sides. On the one side, EU companies are facing weaker foreign demand – especially from China – and rising competitive pressures from Chinese companies. The ECB finds that the share of sectors in which China is directly competing with the euro area exporters is now close to 40%, up from 25% in 2002. The EU's share in world trade is declining, with a notable fall since the onset of the pandemic. On the other side, Europe's position in the advanced technologies that will drive future growth is declining. Only four of the world's top 50 tech companies are European and the EU's global position in tech is deteriorating: from 2013 to 2023, its share of global tech revenues dropped from 22% to 18%, while the US share rose from 30% to 38%. Europe urgently needs to accelerate its rate of innovation both to maintain its manufacturing leadership and to develop new breakthrough technologies. Faster innovation will, in turn, help raise the EU's productivity growth, leading to stronger growth in household incomes and stronger domestic demand. Europe still has an opportunity to change track. With the world now on the cusp of another digital revolution,

triggered by the spread of artificial intelligence (AI), a window has opened for Europe to redress its failings in innovation and productivity and to restore its manufacturing potential.(European Commission, 2024)

The main threats to Europe's industrial competitiveness are:

- the dynamics of the energy market for Europe.
- high energy costs and falling demand are forcing European industry to slow down its growth.
- chemicals and metallurgy will be the most affected sectors due to their high dependence on natural gas as an input, but downstream industries such as the automotive sector will suffer.

Globally, China will be the main beneficiary of these developments; regionally, we expect a shift in production from central to southern Europe, with services holding up better than goods production.

European Economic Security Strategy

The European Union launched the European Economic Security Strategy on 20 June 2023, a strategy that focuses on bilateral and plurilateral cooperation - in different formats and degrees of institutionalization, from the G-7 to high-level economic discussions, investment partnerships and raw materials clubs.

The European Union now needs a comprehensive strategic approach to economic security, so as to reduce risks and promote its technological advantage in critical sectors.

The aim is to provide a framework for a robust assessment and management of risks to economic security at EU, national and enterprise level, while maintaining and enhancing economic dynamism.

Priorities of the European Union Economic Security Strategy

- Promoting the competitiveness of the European Union by increasing the resilience of the economy and supply chains, as well as by strengthening innovation and industrial capacity, while maintaining the social market economy.
- Protecting the European Union against jointly identified economic security risks by making better use of the instruments the European Union already has at its disposal, such as those on trade defence, foreign subsidies, 5G/6G security, foreign direct investment screening and export controls, as well as the new instrument to combat economic constraints.
- Building partnerships with countries that share the European Union's economic security concerns, as well as with those that have common interests and are willing to cooperate with the European Union to achieve the transition to a more resilient and secure economy.

2.2 European Union competitiveness – projections for 2030

Compass for competitiveness

In January 2025, the European Commission presented the Competitiveness Compass, a new roadmap for restoring Europe's dynamism and stimulating economic growth.

The Competitiveness Compass is based on the analysis in the Draghi Report on the future of European competitiveness. The Draghi Report's radiography of the European Union's competitiveness problems can be adapted to each national economy, where some local particularities can represent assets in the attempt to shape a more competitive economy. Romania has several such assets, starting from the observations in the Draghi Report: the simple improvement of economic policies can double the valorization of the national

economy's potential and connect it to a set of common policies with other European Union states to improve its geo-economic position. (Grosu, Pele, 2025)

The Draghi Report initially identified three things that are needed for the EU to stimulate its competitiveness:

- ☐ eliminating the innovation gap
- ☐ decarbonizing the economy
- ☐ reducing dependencies.

The Competitiveness Compass sets out an approach to translating these needs into reality.

► **Closing the innovation gap**

The Compass sets out how the European Union will boost innovation:

- ☐ by creating a favourable environment for young businesses to start up and scale up, with a dedicated EU strategy on start-ups and scale-ups
- ☐ by helping large companies to adopt new technologies such as artificial intelligence (AI) and robotics, thanks to a strategy on AI deployment
- ☐ by making it easier for businesses to do business across the EU by simplifying rules and legislation, with a proposal for a 28th legal regime that will ensure a single set of rules across the EU
- ☐ by supporting the development of new technologies, with action plans for advanced materials, quantum technologies, biotechnology, robotics and space technologies

► **Decarbonising the economy**

The Compass sets out how we can move to clean and affordable energy by:

- ☐ promoting the Clean Industrial Pact, which will help reduce carbon emissions, in particular for energy-intensive companies, and facilitate their transition to low-carbon technologies carbon
- ☐ presenting tailored action plans for energy-intensive sectors such as chemicals, steel and metals, which are most vulnerable at this stage of the transition
- ☐ developing an affordable energy action plan to help reduce energy prices and costs

► **Reducing dependencies**

The EU's network of trade agreements, covering 76 countries, is the largest and fastest growing in the world.

The compass identifies how we can further diversify and strengthen our supply chains, by:

- ☐ developing a new set of clean trade and investment partnerships to secure the supply of raw materials, clean energy, sustainable transport fuels and clean technologies from around the world
- ☐ revising public procurement rules to allow for the introduction of a European preference in public procurement for critical sectors and technologies.

Five additional ways to increase competitiveness

To complement these three pillars, the Competitiveness Compass introduces five horizontal drivers for boosting competitiveness across all sectors:

1. Cutting red tape

The Omnibus proposals will simplify EU sustainability reporting obligations to create a favourable business environment in which European companies can thrive.

2. Removing barriers in the Single Market

The new horizontal Single Market Strategy will modernise Single Market rules, removing barriers and preventing the creation of new ones.

3. Facilitating more efficient financing

The Savings and Investment Union will create new savings and investment products, provide incentives for venture capital and ensure the uninterrupted flow of investment across the EU.

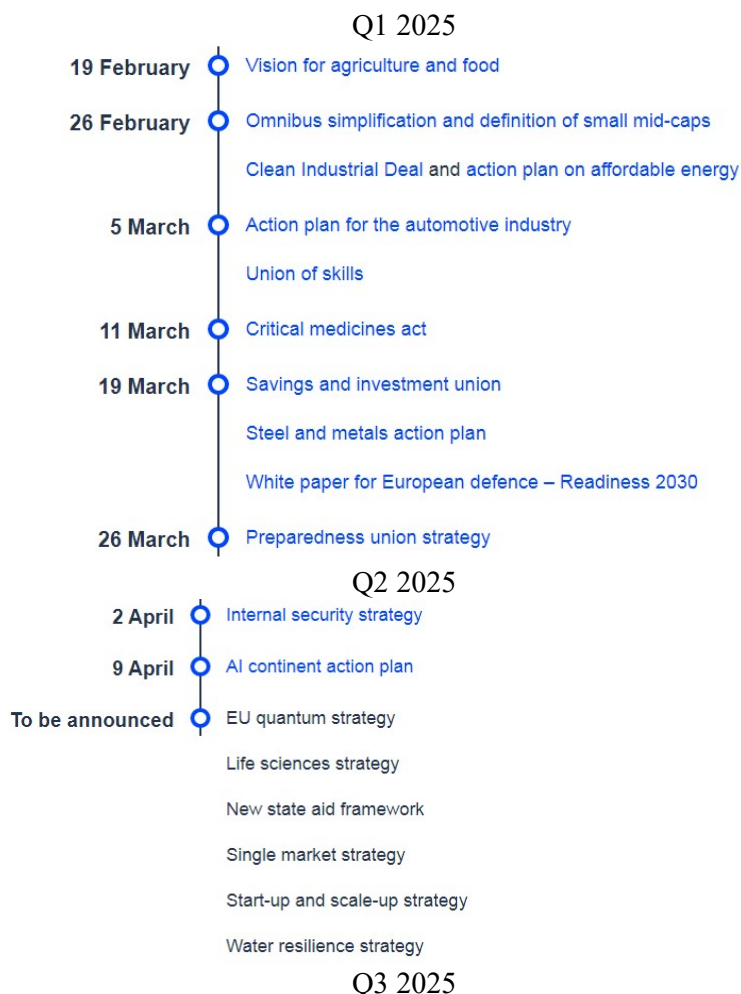
4. Promoting quality skills and jobs

The Skills Union will ensure high-quality education, training and lifelong learning to bridge skills and workforce gaps.

5. Ensuring better coordination

The Competitiveness Coordination Instrument will ensure the implementation at EU and national level of common EU policy objectives. It will be supported by the Competitiveness Fund, which replaces several existing EU financial instruments with similar objectives. (European Commission, 2025)

Figure 2 Competitiveness compass: timeline of actions



To be announced  Apply AI strategy

Data union strategy

European strategy for research and technology infrastructures

Joint purchasing platform for critical raw minerals

Space act

Sustainable transport investment plan

Q4 2025

To be announced  Chemicals industry package

Digital networks act

Electrification action plan

European biotech act and bioeconomy strategy

Industrial decarbonisation accelerator act

Quality jobs roadmap

Quantum act

To be announced  Clean trade and investment partnerships

European business wallet

European port strategy

High speed rail plan

MFF, including competitiveness fund and a competitiveness coordination tool

2026

To be announced  28th regime

Advanced materials act

European climate adaptation plan

European innovation act

European research area act

Revision of directives on public procurement

Revision of the standardisation regulation

Skills portability initiative

Circular economy act

Source: (European Commission, 2025)

2.3 Strategic directions regarding Romania's competitiveness provided for in the National Strategy for Romania's Competitiveness for the period 2021-2027

The National Competitiveness Strategy (NCS) 2021-2027 of Romania aims to redefine the national policy in the field of economic competitiveness through an inclusive approach, based on a synthesis of public documents and policies, especially in the economic, research and development, education, labor market, public institutions and regulation fields.

The concept of economic competitiveness to which the NCS 2021-2027 refers refers to the capacity of a nation to offer its citizens a constant and sustainable increase in the standard of living with jobs available to those willing to work, while providing a favorable climate for the development of economic activities that would strengthen the country's economic position on international markets through increased investment and innovation.

The development of strategic directions was limited to the identification of problematic elements followed by the selection of interventions that can bring about the expected change. The strategic priorities resulted from a correlation and backward-mapping approach, starting from effects to causes and were built on three levels also pursued in the diagnosis of the problem and which they address: the substantial component (macroeconomic), the strategic component (industry 4.0) and the institutional component, suitable for increased effectiveness of action.

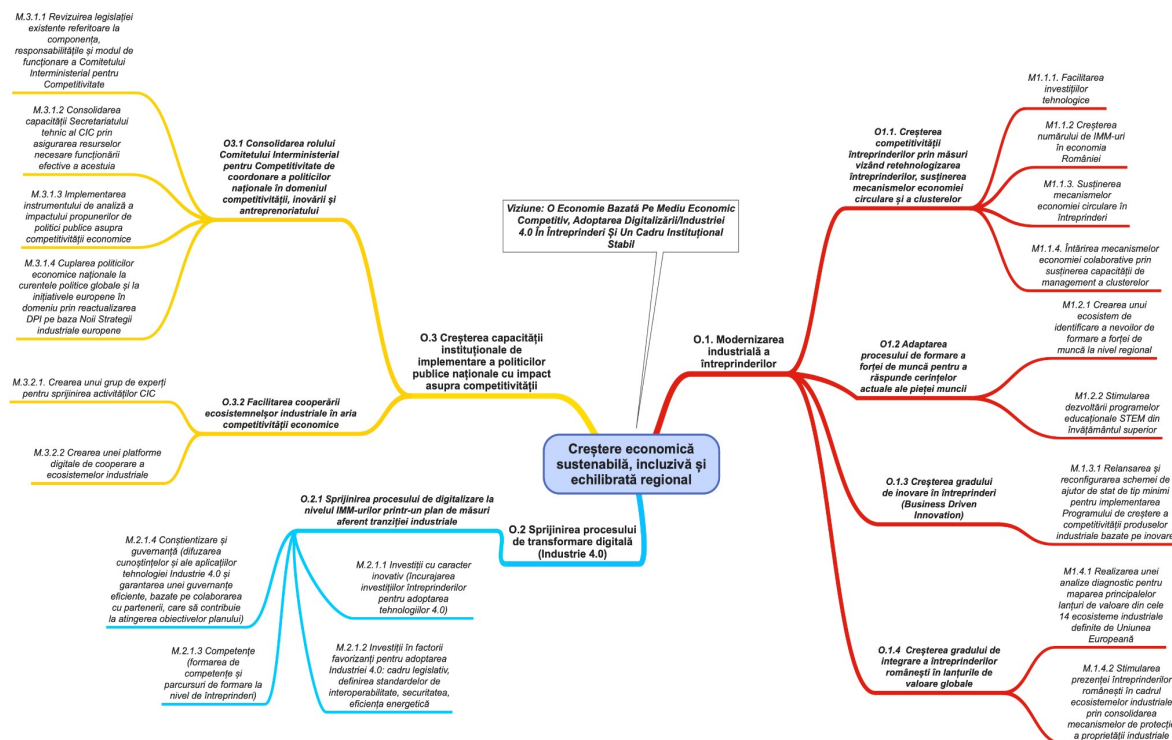
NCS Vision 2021-2027: Sustainable, inclusive and balanced economic growth from a regional point of view.

NCS Strategic Objective 2021-2027: An economy based on a competitive economic environment, the adoption of digitalization/Industry 4.0 in enterprises and a stable institutional framework.

General objectives of NCS 2021-2027:

- GO1. Industrial modernization of enterprises
- GO2. Supporting the digital transformation process (Industry 4.0) to increase the competitiveness of enterprises
- GO3. Increasing institutional capacity for the implementation of national public policies with an impact on competitiveness.

Figure 3 Logic diagram of the NCS 2021-2027



Source: (Ministry of Economy, Digitalization, Entrepreneurship and Tourism, 2022)

The main mission of competitiveness policies is to stimulate the process of structural change towards activities with higher productivity. The starting point for analyzing the level of competitiveness of the Romanian economy was the dynamics of structural change which may be relevant for establishing the evolutionary profile of the sectoral composition. (Ministry of Digitalization, Entrepreneurship and Tourism, 2022)

Mario Draghi's report has the merit of synthesizing the structural competitiveness problems of the European Union, and the solutions proposed by the former head of the ECB represent a mechanism for adapting the community economy to the changing geoeconomic realities. Regarding Romania, it must look, economically, in two directions, in order to be able to follow the trajectory outlined by the two reports:

1) Domestically:

Starting a program to troubleshoot the critical points signaled by the Draghi Report, even if only in the sense of the 6 presented in this analysis, in the most concrete way possible: with plans, precise objectives, deadlines, responsibilities and monitoring of implementation. The gap with the European Union states and even with those in the region also configures a huge development potential: in the medium term, meticulous troubleshooting of the critical points listed above could lead to spectacular results.

2) Externally:

Developing as direct relations as possible with the economic and commercial structures of the European Commission, in order to be an active part of the discussions on common plans and to be able to be part, as an economy, of the concrete joint projects that the Commission initiates to increase competitiveness.

Romania can put on the table for discussion a list of assets, a list of companies with great competitive potential, a list of proposals for simplifying European legislation from the perspective of experience and the particularities of the national economy.

At the same time, the development of an economic diplomacy oriented towards concrete objectives – a deeply deficient chapter in the approach to the economy and international trade. Both the diversification of markets and the expansion of relations with European economies depend on the performance of a team of diplomats who understand the context and who have the necessary competence. (Grosu, Pele, 2025)

3. Conclusions

The issue of competitiveness is being reconsidered at the level of European states, being approached less in terms of relative costs and, increasingly, in terms of the capacity to generate innovation by ensuring a combination of the most favorable factors for sustained, inclusive economic growth, based on intangible assets. At the same time, the approach to economic growth has shifted its focus from international trade, as the main engine of economic growth, to innovation systems viewed also from the perspective of social, institutional and cultural factors. Moreover, the growth of the knowledge-based economy implies new types of changes in production structures and in the nature of work, the role of knowledge in the economy being of crucial importance. The most recent trends are towards social competitiveness within a sustainable development, among the elements of which the human factor represents the most important determinant of economic growth and well-being, but also the element from the perspective of which the performances and economic policies of a state can be evaluated. National

competitiveness is influenced by institutional and microeconomic policies, by the framework in which firms can be created, merged, and closed or taken over, by a stable, secure, and predictable environment for businesses, with an effect on their prosperity.

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PROVIDING GUIDANCE AND ASSISTANCE TO TAXPAYERS BY THE TAX ADMINISTRATION

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Abstract: *The taxpayer guidance and assistance activity aims at one of the central objectives of the tax administration, namely the unitary and non-discriminatory application of tax legislation and tax procedures, it being absolutely necessary to have a "single channel of communication" to ensure guidance so as to ensure fair treatment for all taxpayers. The taxpayer assistance activity has as its object of activity the provision of timely answers to the problems arising in the application of tax legislation and administration procedures faced by taxpayers and tax authorities, ensuring access of all tax authorities to the tax solutions offered, guidance and coordination of taxpayer guidance and assistance structures within the territorial tax units. In order to ensure taxpayer guidance, press releases and information materials for taxpayers (leaflets, guides, etc.) are developed, in relation to tax regulations, their tax obligations, as well as in relation to any other information that may be of assistance to them. By providing clear, accessible and up-to-date information, the tax administration contributes to creating a predictable and transparent tax environment, facilitating the interaction between taxpayers and authorities. This activity involves various means of communication, such as explanatory guides, online services, telephone help desks and direct advice at tax administration counters. The main purpose of tax assistance is to help taxpayers understand and comply with tax regulations, reducing the risk of errors and penalties. An effective tax administration must adopt a proactive approach, providing quick and effective solutions to the problems faced by taxpayers. Through the appropriate application of taxpayer guidance and assistance, the aim is to adapt to the requirements of beneficiaries, so that tax obligations are fulfilled more easily and under optimal conditions, thus contributing to improving voluntary compliance and increasing the volume of budget revenues.*

Keywords: *guidance, assistance, taxpayers, tax, administration.*

JEL Classification: *H83.*

1. The objectives of the tax administration in terms of taxpayer assistance

The objectives of the tax administration in terms of taxpayer assistance are of particular importance for guaranteeing a functional, transparent and efficient tax system. These objectives are intended to support taxpayers in fulfilling their tax obligations correctly and on time, while ensuring compliance with tax legislation in a fair manner.

The main objectives of the tax administration in terms of taxpayer assistance are the following:

1. Promoting voluntary compliance of taxpayers by:
 - Encouraging taxpayers to fulfil their tax obligations on their own initiative, without the need for coercive measures.
 - Providing clear, accessible and easy-to-understand information on tax legislation, procedures and payment deadlines, as well as by ensuring constant support in the use of electronic platforms (e.g. Virtual Private Space (VPS)).
2. Reducing tax errors and misunderstandings by providing detailed guidance on the correct completion of tax forms and by clarifying tax procedures through various channels (telephone, email, SPV, counter).
3. Ensuring easy access to tax information by:
 - Guaranteeing taxpayers' quick and easy access to the information necessary to fulfill their tax obligations.
 - Developing and maintaining online platforms, providing technical support and distributing information materials (brochures, guides).

4. Reducing bureaucracy and interaction time with the tax administration by:
 - Simplifying administrative processes to reduce taxpayers' time and effort.
 - Digitizing tax services, so that taxpayers can file declarations, request information and obtain tax documents through online platforms, without having to go to the counter.
5. Supporting taxpayers in achieving correct tax compliance by:
 - Providing proactive assistance to taxpayers who are having difficulty meeting their tax obligations.
 - Providing help by phone, email, in person at tax administration counters or through SPV, to resolve any questions related to tax obligations or procedures.
6. Establishing a relationship of trust between the tax administration and taxpayers by:
 - Creating a climate of transparency, openness and fairness, so that taxpayers have confidence in the tax system.
 - Applying fair treatment to all taxpayers, respecting the principles of transparency and data confidentiality, as well as ensuring a prompt and professional service.
7. Training and educating taxpayers on tax obligations by:
 - Increasing the level of tax knowledge and awareness among taxpayers.
 - Organizing information campaigns, seminars and training sessions for taxpayers, to educate them on tax rights and obligations, the correct methods of completing tax returns and new tax regulations.
8. Encouraging the use of electronic platforms by:
 - Promoting the use of electronic means for filing tax returns and making payments, in order to increase the efficiency of the tax process.
 - Providing technical support for the use of the Virtual Private Space (VPS) platform, offering guides and tutorials and encouraging taxpayers to use online services, which are faster and more secure.
9. Continuous monitoring and evaluation of assistance services provided to taxpayers by:
 - Ensuring constant improvement of the quality of tax services provided.
 - By collecting feedback from taxpayers, analyzing it and implementing measures to improve services and internal processes within the tax administration.
10. Reducing the risks of tax evasion by:
 - Preventing and combating tax evasion by providing accurate and complete information to taxpayers.
 - Providing clear information on tax obligations and applicable penalties, through transparency in the tax collection process and by identifying and correcting errors and omissions in submitted tax returns.

These objectives are fundamental to creating an efficient and functional tax system that supports taxpayers and ensures a stable economic environment. By achieving these objectives, tax authorities can contribute to more accurate tax collection and increased voluntary compliance by taxpayers.

➤ *Basic principles of taxpayer assistance*

Adherence to the basic principles of taxpayer assistance contributes to ensuring a transparent, fair and efficient tax system that helps taxpayers meet their tax obligations. These principles are based on transparency, accessibility and fairness and are implemented by tax authorities in their relations with taxpayers. The main pillars of tax assistance:

1. *Transparency*

The tax administration must provide clear and accessible information about tax legislation, tax declaration and payment procedures, payment terms, taxpayers' rights and obligations.

All legislative and tax changes must be communicated effectively and in a timely manner to taxpayers, so that they can comply with legal deadlines and requirements.

2. Accessibility

Assistance must be easily accessible to all taxpayers, regardless of the way they choose to interact with the tax authorities (telephone, email, website, physical counter, Virtual Private Space, etc.).

All tax information must be available in a simple, clear form and in Romanian, and tax authorities must ensure its availability and accessibility for all categories of taxpayers.

3. Confidentiality and protection of personal data

Tax authorities must respect the right of taxpayers to confidentiality regarding their tax and personal data. All information communicated and stored must be protected in accordance with the legislation in force on the protection of personal data.

4. Fairness and impartiality

Tax assistance must be provided in an objective and impartial manner, without discrimination, and tax authorities must treat all taxpayers fairly.

Tax inspectors must provide precise answers in accordance with the legislation, avoiding subjective interpretations.

5. Professionalism

Tax administration employees must be well-trained, competent and constantly update their knowledge in the field of taxation in order to provide accurate and useful information.

6. Proactivity

Assistance must be provided not only in response to taxpayers' questions, but also proactively, by informing them about legislative changes and new tax obligations that may affect their activity.

For example, the tax administration can send notifications to taxpayers regarding payment deadlines, updating tax information or correcting errors in filling out declarations.

7. Simplification of procedures

The tax administration must ensure tax procedures that are as simple and clear as possible, in order to reduce administrative barriers and encourage voluntary compliance.

Tax authorities must also provide tools and solutions that facilitate the filing of declarations, making payments and correcting any errors.

8. Providing facilities and support

Taxpayers should have access to solutions such as installments, payment deferrals, refunds, to encourage tax compliance and to support people in financial difficulties.

9. Openness to dialogue

The tax administration must be open to dialogue with taxpayers, listen to their suggestions and complaints and respond promptly and efficiently to their requests.

10. Efficiency

Tax assistance must be fast and efficient, without undue delays, and the solutions offered must be immediately applicable, in order to support taxpayers in fulfilling their obligations in a simple and efficient manner.

These principles are fundamental for building an efficient and trust-based tax system, which supports taxpayers and guarantees compliance with the law in a fair and equitable manner.

2. Guidance and assistance provided to taxpayers

➤ *Guidance and assistance provided to taxpayers directly at the headquarters of the tax authority*

Guidance and assistance provided to taxpayers directly at the headquarters of the tax authority involves a series of essential activities to support them in fulfilling their tax obligations. This activity is carried out by inspectors with duties in guiding and assisting taxpayers by:

- Providing personalized information to taxpayers by explaining the tax legislation applicable to each taxpayer according to their specific situation.
- Assistance in completing tax forms by providing help in correctly completing tax returns, refund requests, appeals or other tax documents.
- Guidance in using online services by supporting taxpayers in creating an account in the Virtual Private Space (SPV), using the tax administration's digital platforms and submitting documents electronically.
- Clarifying tax obligations by explaining payment deadlines, declaration methods and the consequences of non-compliance with tax obligations.
- Issuing tax documents at the taxpayer's request, respectively issuing tax certificates, certificates or other documents necessary for various procedures.
- Managing requests and complaints by ensuring the registration and resolution of petitions, appeals and other requests addressed to the tax administration.
- Providing information on tax facilities, providing details on debt deferrals, tax amnesties or other forms of support for taxpayers.
- Organizing meetings with tax inspectors to clarify complex issues.

These services are very important for taxpayers, as they are supported in their relationship with the tax administration and also contribute to ensuring voluntary compliance with tax obligations.

➤ *Guidance and assistance provided to taxpayers in written format*

Guidance and assistance provided to taxpayers in written format (on paper) involves several activities carried out by the tax administration to support taxpayers in fulfilling their tax obligations. Taxpayers can address written requests to the tax administration to clarify tax issues, and the tax administration responds within the legally established deadline.

At the request of taxpayers, the tax authority can issue various official documents, such as tax attestation certificates, certificates or other necessary documents. Taxpayers may receive tax assessments, notices of outstanding tax obligations or other official communications in hard copy. The tax administration may provide guides, brochures, leaflets and other useful documents in hard copy to assist taxpayers in understanding their obligations. Taxpayers may submit written requests and receive physical responses at the tax office. If a taxpayer sends requests or declarations in hard copy, the tax administration may provide a registration number and an official confirmation.

➤ *Guidance and assistance to taxpayers by e-mail*

Guidance and assistance provided to taxpayers via e-mail is an important service provided by the tax administration to facilitate access to tax information. Taxpayers can send questions related to tax obligations, income declaration, payment deadlines, tax facilities, etc.

Inspectors can provide assistance in completing tax returns by providing clarifications on the correct way to complete tax forms and submit them. Taxpayers receive information on

tax registration, filing declarations, VAT refunds, requests for tax certificates, etc. The tax administration also provides information materials such as guides, brochures and other useful documents for taxpayers.

➤ *Procedure for contacting the tax administration via e-mail*

For requests related to their personal tax situation, taxpayers are encouraged to use the Virtual Private Space (VPS) to receive personalized answers.

Guidance and assistance provided to taxpayers through the Virtual Private Space (VPS) is an electronic service offered by the tax administration, which allows taxpayers to access tax information and communicate online with the tax administration.

Services offered through the VPS

1. Filing tax returns – taxpayers can file various tax returns online.
2. Obtaining tax information – access to their own tax situation, payment obligations, tax filing history.
3. Receiving and sending tax documents – taxpayers can electronically receive tax decisions, notifications, summonses, requests for clarification and can send responses.
4. Issuing tax certificates – obtaining the tax attestation certificate or other official documents.
5. Requesting and managing tax facilities – submitting applications for debt installments, compensations, tax refunds or taxes.
6. Personalized assistance and guidance – taxpayers can ask questions and receive answers from the tax administration directly in their SPV account.
7. Scheduling at tax administration counters – the ability to request an appointment for interactions at the tax administration headquarters.
8. Accessing the history of interactions with the tax administration – viewing declarations and documents submitted in the past.

This service reduces the time spent at the counter and offers taxpayers a simple and fast way to interact with the tax administration.

➤ *Guidance and assistance provided to taxpayers by phone*

Guidance and assistance provided to taxpayers by phone is a service provided by the tax administration to facilitate quick access to tax information.

Services offered through SPV

1. Filing tax returns – taxpayers can file various tax returns online.
2. Obtaining tax information – access to their own tax situation, payment obligations, tax filing history.
3. Receiving and sending tax documents – taxpayers can electronically receive tax decisions, notifications, summonses, requests for clarification and can send responses.
4. Issuing tax certificates – obtaining the tax attestation certificate or other official documents.
5. Requesting and managing tax facilities – submitting applications for debt installments, compensations, tax refunds or taxes.
6. Personalized assistance and guidance – taxpayers can ask questions and receive answers from the tax administration directly in their SPV account.
7. Scheduling at tax administration counters – the possibility of requesting an appointment for interactions at the tax administration headquarters.
8. Accessing the history of interactions with the tax administration – viewing declarations and documents submitted in the past.

This service reduces the time spent at the counter and offers taxpayers a simple and fast way to interact with the tax administration.

➤ *Guidance and assistance provided to taxpayers by telephone*

Guidance and assistance provided to taxpayers by telephone is a service provided by the tax administration to facilitate quick access to tax information.

Services provided by telephone

1. General information on tax legislation – explanation of tax obligations, payment deadlines, tax facilities, etc.
2. Assistance in completing tax returns – guidance on how to complete and submit returns.
3. Information on payments and tax debts – verification of tax obligations and payment methods.
4. Technical support for using tax administration platforms – help in accessing the Virtual Private Space (VPS) and other electronic services.
5. Guidance on filing documents – explanations on how to submit declarations and applications to the tax administration.
6. Informing taxpayers about tax facilities – explanations regarding debt installments, tax amnesties, etc.

The tax administration can also provide telephone assistance through regional centers, each county administration having its own contact number.

In the case of more complex requests, taxpayers can be guided to send written requests via SPV or e-mail.

Guidance and assistance provided to taxpayers is a proactive activity carried out by the tax administration, through which it provides taxpayers with information and support.

The tax administration plays an essential role in the functioning of an efficient and fair tax system, having the responsibility to collect taxes and duties, but also to support taxpayers in fulfilling their tax obligations. In this context, ensuring assistance and guidance to taxpayers becomes a fundamental element for increasing voluntary compliance and reducing tax evasion.

Providing assistance and guidance to taxpayers by the tax administration is essential for strengthening trust in the tax system and improving the degree of voluntary compliance, thus contributing to the development of a fair and sustainable tax system.

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ANALYZING THE SUSTAINABLE COMPETITIVENESS OF NATIONS IN THE PERIOD 2021-2024

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Abstract: *Since the beginning of the 1990s, competition among countries and among business organizations has become fierce at a global level. Characterized by numerous customer changes, deep technological disruptions, blurring falling industry boundaries, and deep pockets among competitors, the era of hypercompetition began at a rapid pace. Therefore, achieving high levels of competitiveness has become a major concern not only for businessmen and managers but also for policy makers and governments worldwide. On the other hand, the issue of sustainability has increasingly become important in the last decades in all domains of activities. In a globalized world and changing environment, sustainability and competitiveness represent main drivers of today's economies, vital for obtaining long-term economic, social and environmental performances. The aims of the paper are to briefly define the concept of sustainable competitiveness and analyze its evolution at a national level in the period 2021-2024. From this standpoint, the scientific methodology was based on a qualitative research method. Sweden obtained by far the most sustainable competitiveness in the world in the period 2021-2024. Also, the results reveal that the Northern European countries dominated the top of sustainable competitiveness in the above-mentioned period.*

Keywords: sustainable competitiveness, sustainability, competitiveness, Global Sustainable Competitiveness Index, Sweden.

JEL Classification: O57, Q01.

1. Introduction

After the fall of the Berlin Wall and the disintegration of the communist regimes from Eastern and Central Europe, the world entered the phase of rapid globalization. Since the beginning of the 1990s, competition among countries and among business organizations has become fierce at a global level. Characterized by numerous customer changes, deep technological disruptions, blurring falling industry boundaries, and deep pockets among competitors, the era of hypercompetition began at a rapid pace (D'Aveni, 1994). The battle to attain a superior position has been carried on in four specific "arenas of competition: the price-quality arena, the know-how/timing arena, the stronghold creation/invasion arena, and the deep pockets arena" (D'Aveni, 1998, p.186). Therefore, achieving high levels of competitiveness has become a major concern not only for businessmen and managers but also for policy makers and governments worldwide.

On the other hand, the issue of sustainability has increasingly become important in the last decades in all domains of activities (Cornescu et al., 2004; Marinescu and Toma, 2015a). At the end of the 1980s, the famous Brundtland Report emphasized the existence of multiple critical global environmental challenges and proposed specific strategies for attaining sustainable development (World Commission on Environment and Development, 1987). Governments, international organizations, non-governmental organizations and companies have been involved in applying and promoting key concepts such as sustainable growth, sustainable development, corporate social responsibility and accountability (Toma et al., 2011a; Toma and Grădinaru, 2017; Toma, 2019).

In a globalized world (Toma, 2005; Toma and Săseanu, 2007) and changing environment (Toma and Marinescu, 2015), sustainability and competitiveness represent main drivers of today's economies, vital for obtaining long-term economic, social and environmental performances. The aims of the paper are to briefly define the concept of

sustainable competitiveness and analyze its evolution at a national level in the period 2021-2024. These objectives were achieved through a qualitative research method. This paper is structured as follows: the next chapter exhibits the literature review. The research methodology is displayed in the third chapter of the study. The results are discussed in the fourth chapter. The last chapter presents the conclusions of the research.

2. Literature review

As a multidimensional, complex and multifaceted concept, competitiveness has always represented a topic of discussion for researchers and practitioners coming from various domains (e.g., economics, management, history, politics). It is analysed at macro (country/nation)-, meso (industry)- and micro (company/firm)-level (Toma et al., 2016a). The country/national competitiveness is defined as:

- „the ability of a country's producers to compete successfully in world markets and with imports in its own domestic market” (His Majesty's Treasury, 1983, p.1).
- „a country's ability to create, produce, distribute and/or service products in international trade while earning rising returns on its resources” (Scott and Lodge, 1985, p.3).
- „the degree to which a nation can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real incomes of its citizens” (Commission of Industrial Competitiveness, 1985, p.5)
- „a country's capacity to sustain and expand its share of international markets and at the same time to improve its people's standard of living” (Fajnzylber, 1988, p.12).
- „the ability of a country to realise central economic policy goals, especially growth in income and employment, without running into balance-of-payments difficulties” (Fagerberg, 1988, p.355).
- „the capability of firms engaged in value added activities in a specific industry in a particular country to sustain this value added over long periods of time in spite of international competition” (Moon et al., 1998, p.109).
- „the extent to which a national environment is conducive or detrimental to business” (Banwet et al., 2002, p.106).
- „the ability to achieve sustained high rates of growth in GDP per capita” (Banwet et al., 2002, p.107).
- „a capability of a national economy to operate ensuring an increasing welfare of its citizens at its factor productivity sustainably growing. This capability is realized through maintaining an environment for its companies and other institutions to create, utilize and sell goods and services meeting the requirements of global competition and changing social norms” ([Chikán](#), 2008, p.25).
- „the ability of a nation to provide conducive environment to its firms, and hence industries, to prosper” (Bhawsar and Chattopadhyay, 2015, p.667).

- a „set of institutions, policies, and factors that determine the level of productivity of an economy” (Sala-I-Martin et al., 2015, p.4).

These above-mentioned definitions allow the identification of some important characteristics of national competitiveness, as follows:

- ❖ There is no universal definition of this concept.
- ❖ It is related to the ability of a country to compete successfully in the global arena.
- ❖ National competitiveness aims to improve the standard of living of citizens.
- ❖ It is connected with the concept of national productivity without being synonyms (Moon and Peery, 1995). It is stated that “a rising standard of living depends on the capacity of a nation’s firms to achieve high levels of productivity and to increase productivity over time” (Porter, 1990, p.6). Productivity represents a trigger of achieving economic success (Hope and Hope, 1997).
- ❖ National competitiveness involves the capacity to attain high and sustained economic growth rates.

On its turn, the concept of sustainability has increasingly become popular in the last decades. It refers to „the ability to maintain or support a process continuously over time” and tries to „prevent the depletion of natural or physical resources, so that they will remain available for the long term” (Mollenkamp, 2023, p.1). Sustainability is analysed through its three dimensions- economic (profit), social (people) and environmental (planet)- which must be in a harmonious relationship (Kuhlman and Farrington, 2010). Thus, the reconciliation between the economic side and the socio-environmental side is fundamental.

Consequently, the mixture between competitiveness and sustainability led to the emergence of a new concept, entitled sustainable competitiveness. Sustainable competitiveness is defined as „the ability to generate and sustain inclusive wealth without diminishing the future capability of sustaining or increasing current wealth levels” (SolAbility, 2021, p.5). It is yearly measured through the Global Sustainable Competitiveness Index which is based on the following six pillars (SolAbility, 2024):

- natural capital,
- resource efficiency,
- social capital,
- intellectual capital,
- economic capital,
- governance.

The index incorporates 216 quantitative indicators such as innovation, healthcare availability, income equality, press freedom, legal framework, growth, educational budget and ease of doing business (SolAbility, 2024).

Without any doubt, ensuring sustainable competitiveness at a country level imposes strategic planning and thinking (Toma, 2013; Toma et al., 2016b), strategy design and implementation (Toma and Grădinaru, 2016). At a micro level, it also implies strategic thinking (Toma and Marinescu, 2013; Toma et al., 2016c) combined with effective and wise leadership (Marinescu and Toma, 2015b; Grădinaru et al., 2020; Toma et al., 2020; Toma, 2024), entrepreneurial mindset (Marinescu et al., 2017; Grădinaru et al., 2018; Catană et al., 2020), innovative business models (Tohănean and Toma, 2018; Toma and Tohănean, 2018; Toma and Tohănean, 2019), corporate social responsibility (Toma, 2006; Toma et al., 2011b;

Toma and Hudea, 2012), lean and agile management (Naruo and Toma, 2007; Marinescu and Toma, 2008; Toma, 2023), marketing mix (Grădinaru and Toma, 2017; Catană and Toma, 2021a; Catană and Toma, 2021b), teleworking (Catană et al., 2021), training and organizational learning (Toma, 2012; Marinescu and Toma, 2013), Six Sigma (Toma, 2008) and balanced scorecard (Toma et al., 2010).

During the last decades, many researchers have published several articles and books related to the sustainable competitiveness of nations (Thore and Tarverdyan, 2016; Mazarr, 2022). The analysis of the evolution of the Global Sustainable Competitiveness Index (GSCI) in the period 2021-2024 is illustrated in chapter 4.

3. Research methodology

In order to achieve the purposes of the study, the author employed a qualitative scientific research method. In the beginning, he gathered the information through desk research. The author identified numerous secondary data sources such as articles, reports and books. Then, he analysed and synthesized them, and elaborated the research.

4. Results and discussion

This chapter of the paper deals with the analysis of the evolution of the GSCI in the period 2021-2024. This index translates the performance obtained by a country into a specific sustainable competitiveness score, the maximum being 100.

In the period 2021-2022, Sweden dominated the top of the first ten countries of the world according to the GSCI (Table no. 1). The first six countries preserved their positions in the hierarchy. In 2021, the top comprised only European countries whereas in 2022, 90% were European countries and one country was from Asia. In each year, the Northern European countries (Sweden, Finland, Denmark, Norway, Iceland, Ireland) obtained high scores of GSCI.

Table no. 1. The first ten countries of the world according to the GSCI in 2021 and 2022

2021			2022		
Rank	Country	Score	Rank	Country	Score
1.	Sweden	61.2	1.	Sweden	60.7
2.	Finland	60.7	2.	Finland	59.3
3.	Switzerland	60.4	3.	Switzerland	58.3
4.	Denmark	60.2	4.	Denmark	58.1
5.	Norway	59.8	5.	Norway	57.6
6.	Iceland	59.8	6.	Iceland	57.1
7.	Ireland	57.6	7.	United Kingdom	56.4
8.	France	56.8	8.	France	56.3
9.	Austria	56.6	9.	Slovenia	56.3
10.	Germany	56.6	10.	Japan	56.2

Source: SolAbility, 2021; SolAbility, 2022

In the period 2022-2023, Sweden remained the leader of the top (Table no. 2). Only the first two countries kept their positions in the hierarchy. In 2023, the top comprised only European countries whereas in 2024, 90% were European countries and one country was from

Asia. In each year, as in the period 2021-2022, the majority of the Northern European countries repeated their previous high performance.

Table no. 2. The first ten countries of the world according to the GSCI in 2023 and 2024

2023			2024		
Rank	Country	Score	Rank	Country	Score
1.	Sweden	59.6	1.	Sweden	61.22
2.	Finland	59.4	2.	Finland	59.87
3.	Iceland	59.2	3.	Denmark	59.10
4.	Switzerland	59.1	4.	Switzerland	58.68
5.	Norway	57.7	5.	Norway	58.06
6.	Denmark	57.6	6.	Austria	57.96
7.	Estonia	56.7	7.	France	57.32
8.	Austria	56.2	8.	Estonia	57.14
9.	Latvia	56.1	9.	Germany	56.88
10.	Slovenia	55.7	10.	Japan	56.69

Source: SolAbility, 2023; SolAbility, 2024

In essence, the above outcomes emphasized the clear domination of the Scandinavian countries. Sweden was the incontestable leader of the top in the period 2021-2024.

5. Conclusions

Since the beginning of the 1990s, the rapid expansion of the globalization process has exacerbated the competition not only among business organizations but also among countries all over the world. This is why ensuring a high sustainable competitiveness at a country level has become a key objective for any government.

The results of the paper show that Sweden obtained by far the most sustainable competitiveness in the world in the period 2021-2024. Also, the research reveals that the Northern European countries dominated the top in the above-mentioned period.

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PERSONNEL AS A SOURCE OF ORGANIZATIONAL RISK: AN ANALYSIS OF INTERNAL VULNERABILITIES GENERATED BY EMPLOYEES' BEHAVIORS AND ATTITUDES

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Abstract. *The article highlights that personnel simultaneously represent a key factor of organizational success and a potential source of internal risk. Based on an empirical survey conducted in nine companies in Romania, the study analyzes vulnerabilities generated by employees' behaviors and attitudes, as perceived by respondents. The primary risks identified encompass demotivation, resistance to change, inadequate staffing for critical roles (with the identification and description of specific warning signals), staff turnover, non-compliance with procedures, and unethical behaviour. The research examined the influence of human resource policies on the level of organisational risk, paying special attention to issues of morality and ethics. This included participants' opinions regarding strategies for preventing and mitigating risks arising from unethical conduct. The study is grounded in a review of the specialised literature and empirical analysis, and it provides an integrated perspective on the mechanisms through which human risk manifests and can be anticipated. The findings emphasise the necessity of proactive human resource management strategies focused on the prevention of risk behaviours, the strengthening of organisational culture, and the monitoring of the internal climate.*

Keywords: *employee behaviors, demotivation, organizational ethics, ethical infrastructure, human resource management, risk.*

JEL Classification: *M12, M14.*

1. Introduction

The success of an organisation is determined by a variety of interdependent factors that contribute to maintaining and strengthening its position in an economic environment characterised by intense competition. Despite the challenges in establishing a definitive hierarchy among these factors, it can be posited that the most salient include: the implementation of contemporary management techniques and tools directed towards continuous performance enhancement, the comprehensive fulfilment of customer requirements within the context of economic efficiency, the calibre of human resources, and the capacity for innovation.

Among these factors, human resources hold a central position, representing a decisive element in shaping the dynamics and progress of organizational activities. The effective management of the workforce is not only an operational necessity but also a strategic imperative. Overlooking the human dimension can undermine even the most carefully designed and efficiently managed projects, as employee behavior—characterized by variability and unpredictability—may give rise to significant organizational dysfunctions.

In the current labor market context, organizations face fierce competition in attracting and retaining well-qualified specialists. This situation is further exacerbated by a series of negative trends, such as the chronic imbalance in the labor market and the projected decline in the active population, both of which contribute to a reduced supply of available labor.

Furthermore, the relationship between organisations and their employees engenders a set of mutual risks, particularly due to the inherent uncertainty of human behaviour. The human factor has the potential to engender considerable risks, with direct ramifications for organisational stability, performance, and culture. It is imperative that personnel-related risk management be integrated into the organisation's overarching risk management framework. This approach facilitates the effective identification, assessment, and control of vulnerabilities stemming from human factors, thereby enhancing the resilience and long-term sustainability of the organisation.

The purpose of this study is to identify and analyze organizational vulnerabilities generated by employees' behaviors and attitudes, based on their own perceptions, with the aim of substantiating proactive strategies for the prevention and mitigation of behavioral and ethical risks within organizations.

2. Research methods

In order to achieve the study's objectives, a dual approach was employed, encompassing both a review of the extant literature and empirical research. This methodological combination facilitated the acquisition of an integrated perspective on the mechanisms through which human risk manifests and can be anticipated. As a quantitative method, a survey was conducted using a structured questionnaire designed to collect relevant data on perceptions of organisational risk associated with personnel. The field research was conducted within nine organisations in Romania, selected to provide a sample sufficiently representative of the objectives of the study.

3. Results and discussions

Human resource risk management represents an essential component of the overall business risk mitigation strategy and refers to the identification and addressing of potential threats associated with employee activities. These threats are linked both to employee behavior and to processes of recruitment, retention, and management (Choudhary, 2025).

Nowadays, human resource risk management is emerging as one of the most critical challenges for managers worldwide, with organizations striving to define effective strategies for addressing these risks (Dianti & Zare Zidi, 2017). Personnel risks are associated with insider threats to organizations. They arise when human behaviors deviate from established policies, whether due to malicious intent or simple disregard for security protocols. The types of offenses and abuses linked to insider threats are considerable, with the most severe including espionage, sabotage, terrorism, embezzlement, extortion, bribery, and corruption. Malicious activities may also encompass a broader range of exploitations, such as copyright infringement, negligent handling of classified data, fraud, unauthorized access to sensitive information, and illicit communications with unauthorized recipients. (Greitzer, 2010)

This approach requires the anticipation and planning of potential human resource risks, enabling the organization to implement appropriate preventive and mitigation measures. In doing so, the likelihood of major dysfunctions is reduced, while a stable framework is ensured for the sustainable development of the business. (Fisher, 2025).

3.1. Sample Characteristics

In order to achieve the stated objective, an empirical study was conducted in nine companies in Romania, using the survey method. A total of 715 respondents completed the questionnaire, constituting 38.3% of the total number of employees in the surveyed companies. The respondents' composition reveals certain dominant characteristics that may influence the perception and interpretation of the research topic.

The predominant age category is 41–60 years, with 80% of respondents falling within this group. This finding suggests that the respondents who completed the questionnaire are mature individuals who are currently engaged in their professional careers. A further 9% of respondents belong to the 31–40 age group, representing a younger cohort that is open to learning new things, has time to work and advance professionally, while already possessing a certain level of experience. Meanwhile, 11% of respondents are over 60 years of age. These individuals possess extensive professional experience and can assume the role of mentors for their junior colleagues. It is posited that this configuration of respondents engenders a balanced and consolidated perspective on the research topic, as it encompasses individuals who embody a high degree of professional and personal stability. Furthermore, the elevated age demographic may also be indicative of a more profound experiential knowledge and a more profound comprehension of the issues under investigation.

The majority of respondents (73.3%) are male, a distribution that can be explained by the stronger representation of men in the surveyed enterprises, which operate in fields such as steam and air conditioning supply; plumbing, heating, and air-conditioning installation works; road freight transport; water collection, treatment, and distribution; as well as fire prevention and firefighting activities, among others. This gender distribution may influence, in particular, the attitudes expressed and the experiences reported, depending on the gendered perspective on the subject under analysis.

In relation to professional experience, the data demonstrate that the overwhelming majority of respondents (98%) have accumulated over 10 years of activity in the field. This aspect is of paramount importance for the quality and relevance of the responses obtained, as it provides a solid basis for formulating well-informed opinions grounded in extensive professional practice. Respondents with long-standing experience are generally more familiar with the trends, challenges, and transformations in their field, which adds interpretive value to the analysis.

The vast majority of respondents belong to the category of executive staff (non-managerial employees) — 96.9%, while only 3.1% are managers. This distribution by organisational position is considered appropriate and relevant to the objectives of the research, as the study primarily targets the perceptions, experiences, and attitudes of executive employees, who are directly involved in operational processes or in the implementation of managerial decisions. It is evident that executives possess a comprehensive understanding of organisational practices and are intimately acquainted with both prevailing and potential organisational dysfunctions, a consequence of their direct engagement with the quotidian realities of the workplace. Moreover, the distribution is indicative of an organisational reality, with managerial functions naturally being in fewer number than executive positions. This aspect naturally lends the sample structure a proportional representativeness. Consequently, the emphasis on executive staff is not only methodologically substantiated but also serves to enhance the validity and relevance of the research findings.

3.2. Analysis of Respondents' Perceptions Regarding the Main Risks Generated by Personnel

As previously stated, human resources represent both the most important asset and the most significant source of risk within any organisation. Employee-related risks are diverse and may manifest in a variety of forms, including the risk of losing key staff, insufficient or inappropriate motivation among managerial personnel, inadequate recruitment and selection practices, non-compliant organisational behaviours, deficiencies in employee management, or

shortcomings in retention policies. It is imperative for companies to comprehend the various categories of employee risks in order to implement appropriate prevention strategies. Conversely, another perspective asserts that, in the context of employee risks, a behavioural risk analysis should be conducted prior to the evaluation of organisational measures that may facilitate – or even reinforce – risk-related behaviours among employees.. (Nadri & Mehrabi, 2018).

When asked to identify the top three types of risks generated by human resources in their organizations, the majority of responses (608) referred to the risk labeled as “demotivation” (Figure 1)).

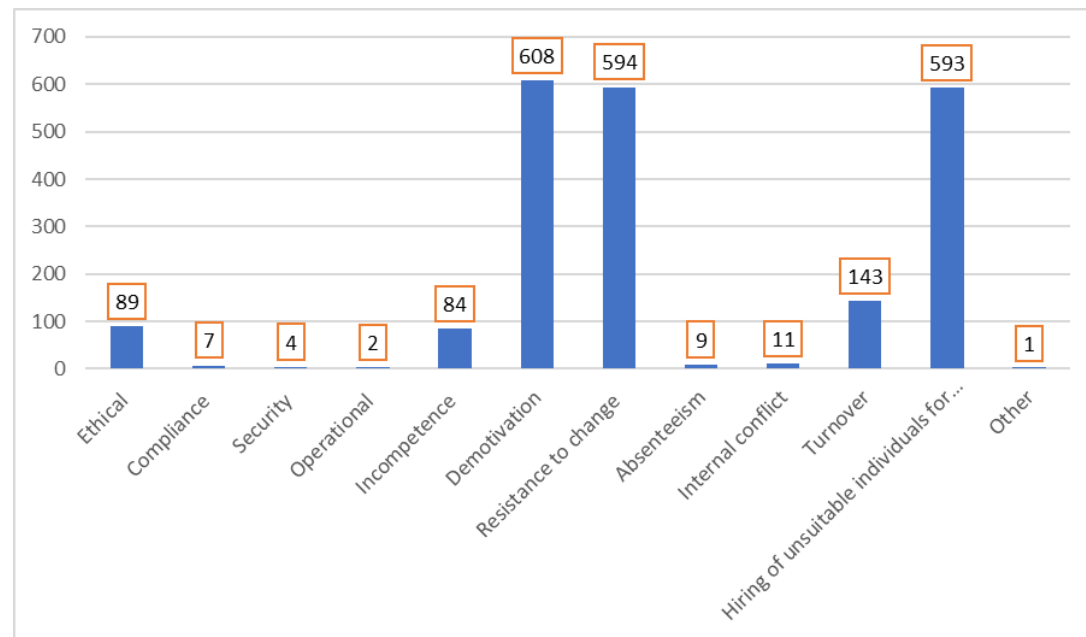


Figure 1. Main types of risks generated by human resources in the organizations where respondents are employed (respondents were asked to select three relevant options)

Source: compiled by the authors from the research findings

Employee demotivation is considered by 85% of respondents to be a significant risk for companies, negatively affecting productivity, work quality, and the overall organizational climate. At the same time, the issue becomes rather complex when attempting to clarify what demotivation actually represents and what the concept itself signifies. A comprehensive review of extant academic literature, encompassing the research contributions of numerous scholars, has substantiated the conceptual intricacy of demotivation. It is undoubtedly a negatively connoted concept, regardless of the specific definition it receives in different contexts (Sandiford & Divers, 2011). The cited authors examined multiple approaches to the concept and concluded that, in organizational settings, demotivation may sometimes be viewed by management as a simplistic pretext to avoid assuming responsibility for employees’ poor performance. Thus, the causes of weak professional engagement are often attributed to presumed intrinsic deficiencies of employees—such as lack of willpower or negative attitudes—while overlooking the fact that professional motivation is influenced by a much broader range of factors than the job itself. This suggests that it may be more useful to

ask: why is the employee motivated to adopt alternative behaviors, such as avoiding responsibilities, opposing management, or even sabotaging organizational activities?

An important role in addressing the issues outlined above lies with human resource management within the organization. As seen, poor human resource management can lead to employee demotivation, which in turn contributes to high turnover and low morale. This has a negative impact on the company's workforce productivity. Conversely, effective human resource management fosters a motivated and engaged workforce, thereby enhancing productivity and contributing to long-term success. It is therefore crucial for enterprises to invest in effective HR practices to mitigate the risk of low productivity—a challenge that affects all organizations, regardless of sector, including both manufacturing and service-oriented enterprises.

Another significant risk perceived by respondents is the risk of resistance to change, mentioned by 83.1% of those surveyed. This high score is understandable given that the contemporary organizational environment is characterized by frequent and often unpredictable changes driven by economic, technological, social, or political factors. Such an unstable climate demands from employees a high level of flexibility, rapid adaptability, and openness to continuous learning. However, the accelerated pace of organizational transformation may, in certain situations, exceed individual adaptive capacities, generating stress, uncertainty, and a sense of professional insecurity. In this context, employees may become resistant to change, demotivated, and less productive.

Another important risk, mentioned by 82.9% of respondents, concerns the hiring of unsuitable individuals for critical roles within the organization. The findings suggest that a significant share of human resource problems originates in the recruitment of individuals who are ill-suited for the positions they occupy. Such employees may be insufficiently prepared to fulfill the tasks and responsibilities specified in the job description, may lack interest or affinity for the field of activity, or may simply be guided by personal values and interests incompatible with the professional requirements of the role. An unsuitable employee can damage team morale, undermine trust, and reduce productivity due to inefficiency or frequent errors. Moreover, negative interactions with clients may harm the company's reputation, resulting in the loss of business opportunities. Early recognition of the signs of a poor hiring decision is therefore crucial, as it can save a company considerable time, resources, and potential losses.

Human resource specialists highlight several common indicators suggesting that a hiring error may have occurred and which should alert management (Table 1):

Table 1. Indicators of an Unsuitable Hiring Decision.

Indicators	Description
<i>Insufficient competencies</i>	The employee encounters difficulties in performing tasks that should be compatible with their level of training. This discrepancy is reflected either in an excessive need for additional instruction or in the consistent delivery of performance below expected standards.
<i>Lack of initiative</i>	The unsuitable employee tends to display passivity, waiting for instructions rather than acting proactively to improve their work or to contribute effectively to the team's objectives.
<i>Cultural misfit</i>	The individual does not align with the organization's values, norms, or working style, which creates a sense of isolation and difficulties in integrating into the team

<i>Chronic tardiness</i>	It is manifested through repeated failure to meet deadlines. This may indicate a potential mismatch with the job requirements and can negatively affect team dynamics and organizational efficiency.
<i>Negative attitude</i>	A constant decline in performance and work quality may serve as a clear signal that the employee does not meet the requirements of the position held.
<i>Recurrent conflicts</i>	An increase in complaints from colleagues or evident difficulties in collaboration suggest an integration problem and may serve as an indicator of poor fit within the team.
<i>Need for excessive supervision</i>	If an employee continues to require constant assistance or struggles to work independently after the adjustment period, this may reflect a lack of adequacy to the job requirements.
<i>Decline in team productivity</i>	A noticeable decline in a team's performance or output shortly after the arrival of a new member may suggest that the employee is not contributing effectively.
<i>Integrity issues</i>	The discovery of falsifications in a CV or the observation of unethical behavior in the workplace indicates serious deficiencies in honesty and professionalism, which can directly undermine trust and cohesion within the organization.
<i>Frequent absenteeism</i>	Frequent lateness and extended breaks may suggest a low level of commitment to professional responsibilities.
<i>Resistance to feedback</i>	An inability to accept constructive criticism or a lack of willingness to adapt can represent a barrier to personal growth and team development.
<i>Lack of enthusiasm</i>	An apparent lack of interest in the job or the company may suggest that the employee does not intend to remain in the long term.

Source: compiled by the authors from the research findings

Addressing these warning signs in a timely manner—whether through additional training, mentoring, or, if necessary, termination—can prevent long-term consequences for the organization. It is also essential to periodically review the hiring process in order to identify and correct any systemic issues that may lead to such unsuitable appointments.

One-fifth of respondents consider that the risk of turnover represents a threat to the organization in which they are employed. Staff turnover reflects the average period during which employees choose to remain in a company. Although this phenomenon is inevitable—since employees will always leave in search of better opportunities, to pursue studies, on their own initiative, through dismissals, or upon retirement—a high turnover rate can negatively affect organizational structure. Turnover may be voluntary, when the employee decides to leave the workplace, or involuntary, when the employer terminates the employment relationship for reasons such as poor performance, inappropriate behavior, or restructuring. While employees subject to involuntary turnover do not differ significantly from those who remain in the company, voluntary turnover can be anticipated and managed by taking into account employees' intentions. For this reason, the latter is considered the most important issue on which organizations should focus and take action. (Shandilya et al., 2022).

Employees who voluntarily or involuntarily depart from a company may also pose certain risks, including the potential for diminished team performance, the risk of information

transfer, loss of business opportunities, replacement and training costs, loss of talent, and decline in customer satisfaction (Lee-Kelley et al., 2007).

At the same time, this risk is closely connected to those analyzed earlier: a demotivated employee is unlikely to remain in the company for long; an inability to adapt to organizational change will not encourage continued engagement; and poor job fit may contribute to involuntary turnover.

Another risk factor identified by respondents refers to employee incompetence (11.7%). Incompetent employees can generate numerous problems within the team. Other members often experience frustration when they are forced to take over the tasks of weaker colleagues, and this negatively affects both overall performance and the team's image. Inevitably, the negative impact on the team as a whole is also reflected at the individual level..

Another share of respondents (12.4%) consider risks related to employee ethics—or more precisely, lack of ethics—to be important for the organization in which they are employed. Adherence to ethical standards in the workplace is a fundamental responsibility. It is important to clarify from the outset what is meant by unethical behavior. This includes any action that violates moral principles, professional standards, or organizational policies, thereby generating harm or creating unjust advantages (Anderson, 2025). Such behaviors may undermine the efficiency, reputation, values, or objectives of an organization for illegitimate reasons.

At the same time, it should be acknowledged that unethical behavior is not always intentional. Given that each employee acts according to their own system of beliefs and perceptions of morality, it is possible for someone to engage in unethical conduct while believing they are acting correctly. This is one of the reasons why it is essential for companies to establish clear ethical guidelines within the organization in order to reduce ambiguities and misinterpretations..

In order to address unethical behavior within organizations, it is important to understand its underlying causes. These may include unclear policies, pressure (particularly when results are strongly tied to rewards—employees under significant stress to meet objectives or key performance indicators may feel compelled to comply or to violate ethical standards), or a toxic organizational culture, among others. Research on ethical behavior and related concepts highlights the importance of organizational factors in promoting ethical conduct and preventing unethical practices (Porto et al., 2024). To explain how organizational factors shape individual behavior, social exchange theory is frequently applied (Mo et al., 2023). However, there remains a gap in understanding the role of trust in this relationship, which is why recent studies have begun to focus on the concept of ethical infrastructure (Porto et al., 2024)..

The concept of ethical infrastructure encompasses the organizational climate, along with the informal and formal systems (communication, monitoring, and sanctioning) that are relevant to ethics within an organization (Tenbrunsel et al., 2008). Another variable closely related to ethical infrastructure is ethical culture. Research has demonstrated that both ethical climate and ethical culture predict ethical behavior. Organizational culture has also been correlated with multiple outcomes, such as performance, organizational practices and behavior, employees' ethical decision-making processes, their ethical intentions, and their overall well-being..

3.3. Personnel Risk Management

The analysis of respondents' perceptions regarding the main risks generated by personnel revealed a series of significant negative effects on organizations, such as declining performance, increased staff turnover, deterioration of the organisational climate, and damage to institutional reputation. The findings of this study underscore the significance of implementing effective human resource management strategies that incorporate rigorous policies for recruitment, evaluation, training, and employee motivation. Only through careful and proactive management of the human factor can internal risks be prevented and the long-term sustainability of the organization ensured.

Any risk management framework begins with the identification of risks. Once identified, organizations must develop policies and procedures that address the specific threats they face. These policies should be clear, concise, and effectively communicated to employees at all levels.

To capture respondents' perceptions on this matter, the following question was asked: What impact do human resource policies (recruitment, evaluation, compensation) have on the level of organizational risk? The results are presented in Figure 2.

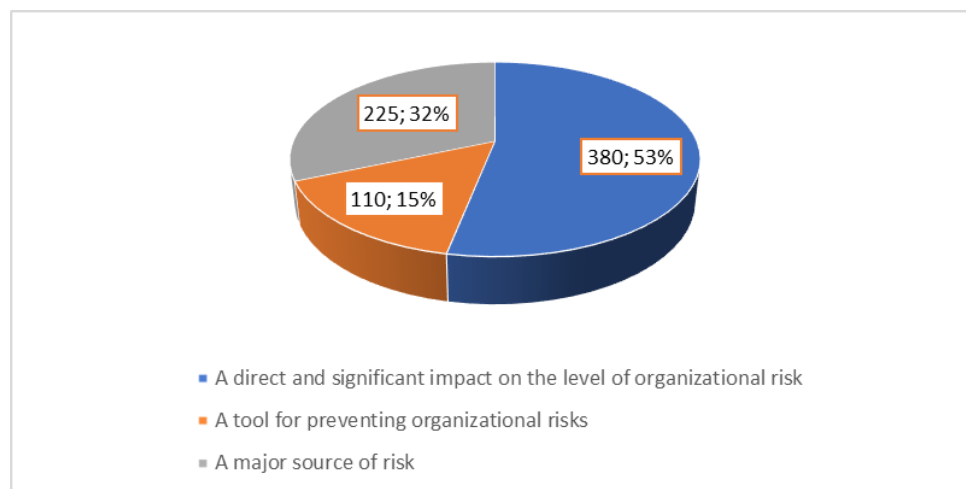


Figure 2. Distribution of respondents' answers to the question regarding the impact of human resource policies (recruitment, evaluation, compensation) on the level of organizational risk.

Source: compiled by the authors from the research findings

More than half of the respondents (53%) recognize the necessity of effective human resource policies, considering their impact on the level of organizational risk to be direct and significant. Fifteen percent believe that such policies are important and serve as an instrument for preventing the occurrence of organizational risks. Thirty-two percent, however, view them as a major source of risk, noting that inefficient company policies in the field of human resources constitute an important source of various risks. The same point is emphasized by Parker (1995) with regard to human resource risk, who argues that this risk refers to company personnel policies such as recruitment, training, motivation, and employee retention.

Respondents referred to:

- the hiring of unsuitable individuals (through inefficient recruitment policies) who are unable to meet job requirements, make mistakes, or negatively affect team morale;

- the incorrect evaluation of performance, which may contribute to the promotion of unsuitable individuals, leading to reduced efficiency and internal conflicts;
- the application of a demotivating or unfair reward system, which may contribute to employee demotivation and, consequently, their departure from the company or a decline in their performance, thereby negatively impacting the overall results of the organization.

3.4. Analysis of Employees' Perceptions of Morality and Ethics Issues and Their Mitigation

Issues related to morality and ethics have gained increasing importance within organizations and the business environment. Corporate failures in the sphere of ethics have highlighted a critical challenge for companies: the need to better understand why ethical standards are often violated and easily tolerated. In daily professional activity, employees frequently face difficult decisions, many involving moral aspects, which can lead to conflicts of interest. In such situations, decision-makers must weigh the significance of universally recognized ethical principles—such as providing safe and high-quality products—against the pressures of a competitive, profit-driven market (De Cremer, 2016). Clear evidence shows that employees are increasingly concerned about unethical, illegal, or fraudulent behavior in the workplace (Mahan et al., 2024). It is essential to prevent or reduce the risks associated with unethical or non-compliant conduct among employees in order to ensure a healthy and effective work environment. If unethical behavior becomes normalized within an organization or certain departments, individuals may be more likely to engage in similar practices. Ignoring such misconduct can have severe consequences, including financial losses, legal sanctions, reputational damage, and the erosion of organizational culture. Conversely, fostering a culture based on ethics and compliance helps build stakeholder trust, enhances employee motivation, and improves the overall performance of the company.

The following question addressed how risks caused by unethical or non-compliant employee behavior can be prevented or mitigated. Respondents' perceptions are presented in Figure 3.

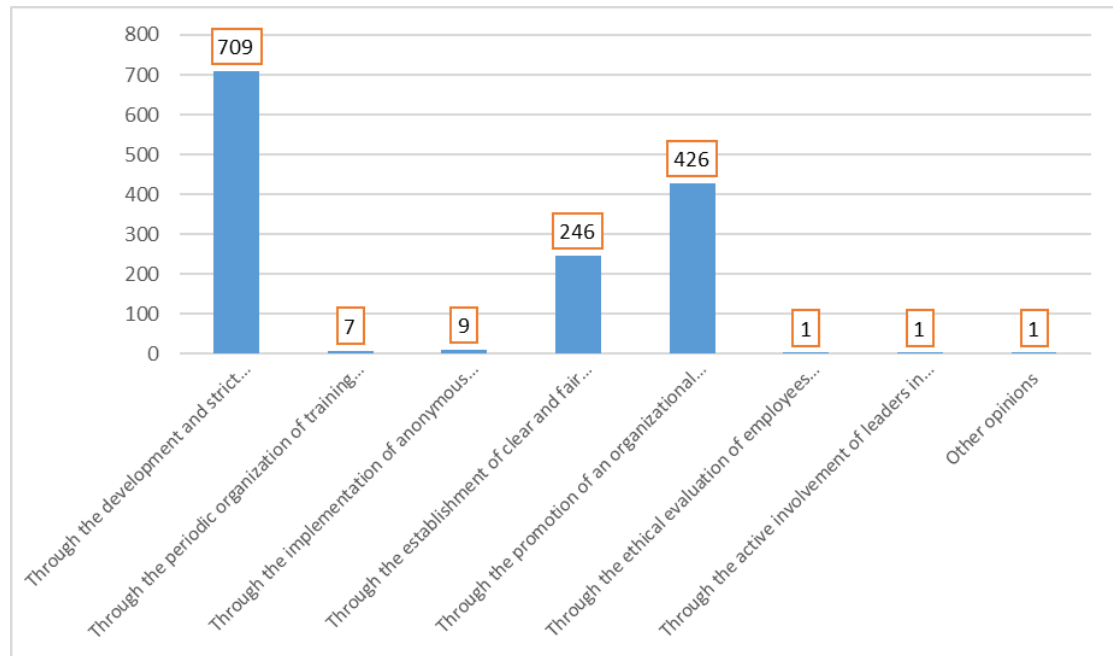


Figure 3. Distribution of respondents' answers to the question: "In what ways can the risks caused by unethical or non-compliant employee behavior be prevented or mitigated?"

Source: compiled by the authors from the research findings

The unanimity of the responses was striking. Respondents were allowed to select one or two answers. A total of 709 respondents—representing more than 50% of all answers provided to this question—believe that the development and strict enforcement of an internal Code of Ethics could prevent or mitigate risks related to unethical behavior. This finding stands in contrast to recent analyses (Lašáková et al., 2022), which highlight the saturation of certain areas of study, such as codes of ethics, compliance programs, internal reporting, whistleblowing, ethics training, and ethical climate. Nevertheless, within the surveyed organizations, this direction appears to remain insufficiently exploited, judging by the respondents' answers.

Another important measure, according to respondents, concerns the promotion of an organizational culture grounded in integrity, transparency, and respect (30.4% of responses). An analysis of research on ethics programs indicates that many studies focus on human behavior, highlighting links between several key factors such as ethical conduct, the organizational environment and culture, ethical leadership, decision-making processes, trust, and unethical behaviors. Interestingly, trust and unethical behavior appear at the margins of the conceptual network analyzed, which may suggest that these two aspects have not yet been sufficiently explored in the scholarly literature. (Lašáková et al., 2022)

The third direction highlighted by respondents refers to the implementation of anonymous mechanisms for reporting misconduct (e.g., ethics hotlines, suggestion or confidentiality boxes). This opinion was expressed in 17.6% of the responses. Organizations

can encourage ethical behavior in the workplace by introducing reactive systems that allow employees to report unethical conduct.

However, the most effective way to foster ethical behavior lies in adopting a proactive approach, which should include tools designed to amplify employees' voices, such as opinion surveys and exit interviews. These instruments provide opportunities for employees to express their views and concerns in a structured and consistent manner.

4. Conclusions:

The study highlights the crucial role of human resources within organizations, both as an indispensable element for carrying out activities and achieving corporate objectives, and as a potential source of threats to their fulfillment. The analysis of risks associated with human resources underscores the dual role they assume: on the one hand, as a factor of organizational risk, and on the other, as a key agent responsible for managing and mitigating these risks.

Surveying employees from nine companies in Romania provided valuable insights into their perceptions regarding the central issue of risks generated by human resources within organizations and the measures companies should adopt to minimize these risks. Several risks were identified, though they by no means represent the full spectrum of potential threats. A deeper focus was placed on ethical risks, specifically those stemming from employees' lack of ethical conduct. At the same time, it must be emphasized that merely identifying risks is insufficient. Companies need to develop systematic strategies to effectively manage and mitigate them. This process begins with a thorough understanding of the specific risks associated with employees, followed by tailored actions to address them. Achieving success in this regard requires identifying high-risk areas, formulating well-founded policies, fostering a culture of awareness, and leveraging technology to support these efforts.

On the other hand, it is important to emphasize the crucial role of human resources in risk management, which involves identifying potential employee-related risks to the business in order to minimize issues before they arise. Ensuring that all employees are satisfied in the workplace serves as a protective factor for the organization against potential problems. Failure to mitigate employee-related risks can negatively affect revenues, reputation, profitability, and other key aspects of the business.

Therefore, human resource risk management must be directly involved in the rigorous application of specific principles and techniques for the identification, analysis, evaluation, and, above all, the implementation of risk management strategies, as a response to the challenges of the organizational environment, which is inherently characterized by uncertainty and risk.

It is imperative that organisations foster an environment of open communication, implement regular employee training programmes, and institute clear accountability measures. By doing so, they can ensure that risks are identified and addressed in a timely manner. Furthermore, these aspects underscore the necessity of continuous monitoring and evaluation. It is insufficient for an organization to merely have a risk management framework in place; it is important that policies, technologies, and procedures are constantly assessed and updated in order to stay ahead of emerging threats. Regular risk assessments and audits are critical for identifying new vulnerabilities and for ensuring that the employee risk management framework remains robust and effective.

Another critical aspect is compliance, which has become an increasing concern for organizations, particularly as new data protection regulations are being introduced worldwide.

Ensuring that employees adhere to industry regulations and internal policies is essential to avoid legal sanctions, financial penalties, and reputational damage.

At the same time, it is important to recognize that even with the most effective preventive measures in place, no organization is completely immune to employee-related risks. Therefore, it is essential to establish appropriate incident response solutions and capabilities, enabling companies to react swiftly and effectively to potential suspicious activities.

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ENGLISH TERMINOLOGY IN ACCOUNTING

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Abstract: *Accounting is a specialized field of activity that relies on precise terminology to communicate financial information accurately. English terminology in accounting plays a crucial role in ensuring consistency and clarity across financial reporting, auditing, and taxation. Key terms such as assets, liabilities, equity, revenue, expenses, and depreciation form the foundation of financial statements, including the balance sheet, income statement, and cash flow statement. Additionally, accounting principles like GAAP (Generally Accepted Accounting Principles) and IFRS (International Financial Reporting Standards) guide financial reporting practices globally. The terminology extends beyond financial statements to auditing and taxation. Terms such as accruals, amortization, goodwill, retained earnings, and contingent liabilities are essential for understanding financial health. Furthermore, concepts like double-entry bookkeeping, cost accounting, managerial accounting, and financial ratios help businesses assess performance and make strategic decisions. The globalization of business has increased the importance of standardized accounting terminology, facilitating international trade and financial reporting. Misinterpretation of terms can lead to errors in financial decision-making, affecting stakeholders, investors, and regulators. Therefore, a clear understanding of English accounting terminology is essential for professionals working in finance, accounting, and business management. The present paper explores fundamental accounting terms, their meanings, and their applications, offering insights into the importance of precise language in financial communication. By mastering accounting terminology, professionals can enhance accuracy in financial reporting, ensure compliance with regulatory standards, and improve decision-making in a dynamic economic environment.*

Key words: *accounting terminology, financial communication, globalization.*

JEL Classification: *M40, A22.*

1. Introduction

Accounting is often described as the “language of business,” a metaphor that underscores its fundamental role in communicating financial information. This communication depends heavily on the accurate and consistent use of terminology. In a world where economic activities are increasingly interconnected, English has emerged as the dominant language of international business and finance. As a result, English terminology in accounting has become essential for professionals, organizations, and regulatory bodies seeking to ensure transparency, comparability, and reliability in financial reporting.

Accounting terminology serves as a structured vocabulary that conveys complex financial concepts in a concise and standardized manner. Core terms such as assets, liabilities, equity, revenue, and expenses form the foundation of financial statements, while specialized terms like accruals, amortization, goodwill, and contingent liabilities provide deeper insights into an entity’s financial position and performance. These terms are not merely labels; they represent universally understood concepts governed by formal standards such as the Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS).

The precision of terminology becomes even more critical in areas such as auditing and taxation, where misinterpretation can result in legal disputes, financial penalties, or reputational damage. Moreover, the globalization of markets has amplified the need for a shared accounting language. Multinational corporations, international investors, and regulatory authorities depend on standardized terms to analyze financial statements and make informed decisions across jurisdictions.

For students, practitioners, and researchers, mastering English accounting terminology is therefore not only a linguistic requirement but also a professional necessity. It enables them to interpret financial documents accurately, communicate findings effectively, and maintain compliance with international regulations. This paper explores the most important English accounting terms, their definitions, and their practical applications. It also highlights the importance of standardization in a globalized economy and demonstrates how the correct use of terminology contributes to clarity, accuracy, and credibility in financial communication.

2. The use of English terminology in accounting – methodology of research

This study adopts a qualitative and descriptive research approach aimed at analyzing and synthesizing the use of English terminology in the field of accounting. The research relies primarily on documentary analysis, drawing information from textbooks, academic journal articles, accounting standards, and professional guidelines published by recognized organizations such as the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB). Relevant terminology was identified from authoritative sources, including the International Financial Reporting Standards (IFRS) and the Generally Accepted Accounting Principles (GAAP) frameworks, as well as from specialized accounting glossaries and professional literature.

The data were analyzed through content analysis, focusing on the meaning, usage, and context of key accounting terms. This method allowed the researcher to classify and interpret terminology systematically, highlighting both fundamental and specialized concepts. The qualitative nature of this methodology is appropriate because the study emphasizes conceptual understanding rather than numerical measurement, and it seeks to provide an in-depth exploration of how precise terminology supports clarity, consistency, and comparability in financial communication.

3. Fundamental Accounting Terminology

3.1 Basic Financial Terms

At the core of accounting lie several foundational concepts that appear in all financial statements:

- **Assets:** Resources owned by an entity that are expected to provide future economic benefits. Examples include cash, inventory, buildings, and machinery.
- **Liabilities:** Present obligations of the entity arising from past transactions, which will result in outflows of resources. Examples include loans, accounts payable, and accrued expenses.
- **Equity:** The residual interest in the assets of the entity after deducting liabilities. Equity represents ownership interest and includes items such as common stock and retained earnings.
- **Revenue:** Income earned from normal business operations, such as sales of goods or services.
- **Expenses:** Outflows or consumption of resources incurred to generate revenue, including salaries, rent, and utilities.
- **Depreciation:** The systematic allocation of the cost of a tangible asset over its useful life, reflecting wear and tear or obsolescence.

These terms provide the basis for preparing the **balance sheet** (which reports assets, liabilities, and equity), the **income statement** (which reports revenue and expenses to

determine net profit or loss), and the **cash flow statement** (which tracks cash inflows and outflows).

3.2 Key Accounting Principles and Standards

Financial reporting is guided by sets of rules and frameworks to ensure uniformity. The two most recognized are:

- **GAAP:** Generally Accepted Accounting Principles are a collection of rules and standards used primarily in the United States. They govern how companies record and report financial data.
- **IFRS:** International Financial Reporting Standards are used in many countries around the world. They aim to create a common global language for business affairs so that company accounts are understandable and comparable internationally.

These frameworks dictate how transactions are recognized, measured, and presented, ensuring consistency and transparency for investors and regulators.

4. Specialized Terminology in Auditing and Taxation

Accounting terminology also encompasses a range of specialized concepts used in auditing and taxation:

- **Accruals:** Revenues and expenses that have been incurred but not yet received or paid. This concept is central to the **accrual basis accounting** method, which records financial events when they occur rather than when cash is exchanged.
- **Amortization:** Similar to depreciation but used for intangible assets such as patents or trademarks, allocating their cost over their useful life.
- **Goodwill:** An intangible asset that arises when one company acquires another for more than the fair value of its net assets. It represents brand reputation, customer relationships, and intellectual property.
- **Retained Earnings:** The portion of net income not distributed as dividends but reinvested in the company.
- **Contingent Liabilities:** Potential obligations that may occur depending on the outcome of uncertain future events, such as lawsuits or warranty claims.

Auditing processes frequently rely on these terms to assess the fairness and accuracy of a company's financial statements, while taxation uses them to determine taxable income and liabilities. Accurate interpretation is vital to prevent legal disputes or financial penalties.

5. Broader Accounting Concepts

5.1 Double-Entry Bookkeeping

The foundation of modern accounting is the **double-entry bookkeeping** system, in which every financial transaction affects at least two accounts: one debit and one credit. This ensures that the accounting equation ($\text{Assets} = \text{Liabilities} + \text{Equity}$) remains balanced at all times. This method improves accuracy and makes it easier to detect errors.

5.2 Cost and Managerial Accounting

Cost accounting involves tracking, recording, and analyzing costs associated with the production of goods or services. It helps organizations understand the cost structure and improve efficiency.

Managerial accounting (or management accounting) focuses on providing internal managers with financial data to aid decision-making. Unlike financial accounting, which serves external stakeholders, managerial accounting emphasizes budgeting, forecasting, and performance evaluation.

5.3 Financial Ratios and Analysis

Financial ratios are analytical tools derived from financial statements. Ratios such as **liquidity ratios, profitability ratios, and solvency ratios** help assess a company's performance, stability, and operational efficiency. Understanding the terminology behind these ratios is essential for interpreting financial health and guiding strategic decisions.

6. The Role of Terminology in a Globalized Economy

As globalization intensifies, companies increasingly operate across national borders, and investors analyze opportunities worldwide. Standardized English terminology allows stakeholders from diverse linguistic backgrounds to interpret financial statements consistently. Misinterpretation of terms can lead to flawed analyses, misallocation of resources, or even corporate scandals.

Moreover, global organizations such as the **International Accounting Standards Board (IASB)** and the **Financial Accounting Standards Board (FASB)** work to harmonize accounting standards, promoting uniform terminology and reducing discrepancies. Mastery of this terminology is therefore indispensable for accountants, auditors, financial analysts, and business leaders who operate in international contexts.

7. Results and Discussion

The analysis of specialized literature, accounting standards, and professional guidelines revealed several **core categories of English terminology essential for understanding and applying accounting principles**. These categories include **fundamental financial terms, specialized technical terms, and analytical concepts** used in financial reporting, auditing, and taxation. Their correct usage is crucial for maintaining accuracy, transparency, and comparability across financial documents.

7.1 Fundamental Financial Terms

The research confirmed that terms such as assets, liabilities, equity, revenue, and expenses form the basic vocabulary of accounting. These elements are central to the structure of the balance sheet, income statement, and cash flow statement, which together represent the financial position and performance of an entity.

Understanding these fundamental terms is essential because they provide the building blocks for all subsequent financial analysis. Misinterpretation can lead to errors in calculating profitability, solvency, or liquidity, which directly affects decision-making by investors, managers, and regulators.

7.2 Specialized Technical Terms

Beyond the foundational vocabulary, accounting practice requires familiarity with more complex terms such as accruals, amortization, goodwill, retained earnings, and contingent liabilities. These concepts are especially relevant in areas like accrual basis accounting, auditing, and financial consolidation. For example, accruals ensure that revenues and expenses are recorded in the period they occur, providing a more accurate picture of

financial performance. Goodwill represents intangible value arising from acquisitions and must be tested annually for impairment. Such terminology enables accountants to present nuanced and accurate financial statements in line with International Financial Reporting Standards (IFRS) and Generally Accepted Accounting Principles (GAAP) requirements.

7.3 Analytical and Managerial Concepts

The study also highlighted the importance of terminology associated with analytical practices, including cost accounting, managerial accounting, and double-entry bookkeeping. Terms like financial ratios, budget variances, and break-even point are crucial for internal decision-making and performance evaluation.

These concepts go beyond external reporting and support strategic planning within organizations. Managers rely on accurate terminology to interpret reports, allocate resources efficiently, and justify strategic choices to stakeholders.

7.4 The Impact of Globalization on Terminology

A major finding of this research is the increasing influence of globalization on accounting language. The standardization of terminology through international frameworks such as IFRS has facilitated greater comparability of financial statements across countries. This benefits multinational corporations, global investors, and regulatory agencies by reducing ambiguity and enhancing transparency.

However, the research also found that differences in local interpretation can still cause confusion, especially when translating or adapting financial statements. This reinforces the need for continuous education and professional development to ensure that accounting practitioners worldwide apply terminology consistently and correctly.

7.5 Implications for Practice and Education

The findings emphasize that mastery of English accounting terminology is a professional competence that impacts the accuracy and reliability of financial communication. Universities, professional accounting bodies, and companies should integrate terminology-focused training into their curricula and professional development programs. A strong command of terminology helps prevent miscommunication, ensures compliance with international standards, and enhances collaboration in global business environments.

8. Conclusion

English accounting terminology is not merely a collection of words but a structured system that underpins financial communication worldwide. From basic elements like assets and liabilities to complex concepts like goodwill and contingent liabilities, these terms enable professionals to record, analyze, and report financial information consistently. The frameworks of GAAP and IFRS provide the rules that ensure this communication remains accurate and comparable across borders.

In a globalized economy, the ability to understand and use precise accounting terminology is essential. It enhances the quality of financial reporting, reduces the risk of misinterpretation, and supports informed decision-making by stakeholders. As such, education and training in accounting should emphasize mastery of this terminology, enabling future professionals to navigate the increasingly interconnected world of business and finance with confidence and accuracy.

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ENHANCING REGIONAL DEVELOPMENT THROUGH HUMAN CAPITAL: STRATEGIC PATHWAYS FOR OPTIMAL DEPLOYMENT

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Abstract. *This article examines how human capital functions as a pivotal element for driving regional development that is both inclusive and sustainable while also building resilience. The paper shows through theoretical perspectives and real-world policy cases that targeted investments in education sectors along with training programs and innovative practices as well as inclusive social measures contribute to sustainable regional adaptability and lasting economic competitiveness. The study investigates educational access disparities and opportunity gaps that limit regional development and suggests specific strategic solutions including customized vocational training programs, entrepreneurial assistance initiatives, and collaborations between public institutions, private enterprises and academic organizations. Through analysis of the EU Cohesion Policy and ESF+ along with national policies from Central and Eastern European countries the article demonstrates the necessity of development strategies that focus on specific places and engage local communities. The report presents practical advice for policymakers and stakeholders who want to build prosperous regions through a dual approach that views human capital both as an economic resource and as a dynamic force for transformation.*

Key words: *Human capital, Regional development, Inclusive growth, Vocational education, Lifelong learning, Territorial cohesion, Social inclusion, Innovation ecosystems.*

JEL Classification: *R58, J24.*

1. Introduction

Today's global economic system requires regions to constantly work towards remaining competitive while also being inclusive and resilient. Regions must leverage high-quality human capital strategically to adapt successfully as technology progresses and population demographics transform. Human capital represents more than just an economic resource because it contains the collective knowledge and creative abilities of people which propel innovation and sustainable advancement while reinforcing social unity.

The existing inequalities between regions may become more severe as disparities in educational access and employment opportunities continue to grow alongside restricted lifelong learning availability. The solution to these disparities requires both financial resources and structured strategies that emphasize community empowerment and people-centric approaches. Human capital serves as an essential mechanism for regional transformation from potential to performance while creating growth that benefits everyone and looks ahead.

Regional progress accelerates when education and training programs effectively match labor market demands. The systems produce workforce dynamism while encouraging entrepreneurial ecosystems and knowledge sharing across different sectors beyond personal advantages. The success of these outcomes relies on how institutions respond to local needs and proactively manage upcoming issues like technological disruption and migration patterns.

This article examines the connection between human capital and regional development by investigating how strategic collaborations and focused initiatives can achieve lasting advancement. Human capital functions as a dynamic resource which requires ongoing development through strategic implementation in region-specific development frameworks that address local contexts and goals.

2. Conceptualizing Human Capital

The initial step to understanding human capital's function in regional development requires defining its meaning and exploring its broader impacts. The initial understanding of human capital as the economic value of individual skills and knowledge has expanded to account for social and institutional factors which affect the formation, distribution and application of these resources. This definition includes formal education together with informal learning processes along with personal experiences and health status as well as individual motivation which together improve people's ability to make productive contributions to society.

Human capital functions as both a catalyst for development and a measure of progress within regional settings. Regions that boast powerful educational institutions along with strong training systems and supportive social settings succeed in attracting skilled workers who then help generate ongoing growth through innovation. Areas that fail to provide adequate investment in their people typically suffer from economic stagnation while experiencing brain drain and enduring socioeconomic difficulties.

Becker's Human Capital Theory focuses on individual contributions to economic productivity but current models show that human capital development depends on policy and systemic factors like culture and labor market conditions. Endogenous growth theory suggests that developing human potential enables continuous economic development especially when supported by innovation and strong institutional frameworks(Becker,1993).

Social equity remains intrinsically linked to human capital development. Regions that emphasize inclusive education and training practices provide wider access to opportunities which encourages participation from marginalized communities and helps decrease enduring inequalities. Within this framework human capital functions as both a resource and a result of successful regional development planning.

Understanding human capital as a dynamic resource tied to specific locations reveals new opportunities for policy interventions and strategic planning beyond immediate timeframes. The development of human capital relies on both personal decisions and structural conditions that enable people to learn and grow while contributing to their communities.

3. Human Capital and Regional Development

Human capital plays a multifaceted role in regional development and both elements benefit each other through this relationship. The advancement of economic performance and social cohesion in regions relies on strategically developing and deploying human capital as

key transformational tools. Putting resources into human development boosts both productivity and innovation while building a strong societal structure which supports sustainable development that includes everyone.

Regions that boast higher educational attainment and skill levels display stronger economic performances through enhanced crisis resilience and swifter recovery. Dynamic labor markets, knowledge-driven industries and robust institutional capabilities define these regions. Skilled human capital establishes a supportive environment that drives entrepreneurship and technological adoption which together ensure competitiveness within the global marketplace.

The effects of human capital reach further than economic boundaries. Human capital plays a crucial role in shaping health outcomes while boosting civic participation and community capacity to manage demographic and technological changes. Regions that successfully merge educational and training systems with social and economic policies allow human capital to connect economic opportunities with social advancement.

The consistent challenge of human capital disparities persists both between different regions and within individual regions. The unequal distribution of quality education resources together with digital infrastructure and professional development opportunities serves to intensify existing territorial divisions. Rural areas and disadvantaged regions face depopulation together with skills shortages as urban regions tend to attract talent and resources. The existing disparities constrain economic growth while endangering future regional unity.

Regional development strategies need to embrace inclusive and comprehensive human capital approaches to mitigate these trends. Regional development strategies should identify local needs while promoting sectoral collaboration and creating policies tailored to the distinct features of each region. We aim to convert human capital into a collective resource which drives development and builds resilience while minimizing regional disparities.

4. Effective Strategies for Human Capital Deployment

Regional development through human capital requires strategic coordination across education, labor markets, innovation systems and governance beyond mere passive investments. Strategies that unlock personal capabilities while matching skill growth to local economic goals achieve sustainable adaptability and advancement.

Ensuring widespread access to quality education stands as a fundamental component. Inclusive educational systems from early childhood to lifelong learning create skilled and resilient populations. Regions with uneven educational access require specific interventions like digital infrastructure development and teacher training programs together with scholarships to eliminate disparities and create equal learning opportunities.

Vocational education and training (VET) programs must match the needs of the job market to be effective. A network of dynamic partnerships between employers educational institutions and local authorities develops curricula organizes work-based learning opportunities and updates qualifications to meet the needs of emerging industries. Training pathways that offer flexibility alongside skills certification frameworks promote workforce adaptability and career movement particularly in areas that deal with technological changes and declining sectors.

The development of human capital benefits from both innovation and knowledge-sharing activities. The creation of open environments for idea exchange through regional

innovation hubs, university-business partnerships, and public research funding enables faster application of skills to achieve productive and creative results. Through these interactions individuals develop their skills while local economies benefit from collective improvements.

Mechanisms that support entrepreneurship improve human capital outcomes through transforming ideas into business ventures which create jobs and produce value. Access to funding along with mentoring initiatives incubators and simplified administrative processes enables people to develop local solutions for regional problems especially in underserved areas.

Lastly, institutional cooperation is critical. When governments work alongside academic institutions and businesses and civil society organizations the resulting policies become coherent and sustainable while remaining responsive. Regional strategies become more effective at meeting actual needs and utilizing human potential when diverse stakeholders are integrated into decision-making processes (Barca, McCann, & Rodríguez-Pose, 2012).

5. Practical Cases and Policy Instruments

The translation of human capital strategies into quantifiable regional results necessitates both effective policy instruments and the tailored application of best practices to fit local circumstances. The European Union's Cohesion Policy and European Social Fund Plus (ESF+) implementation across Europe demonstrates successful examples of how targeted human investments lead to regional resilience and development that includes all members of society (European Union, 2020).

The Cohesion Policy targets regional disparities through its support of projects that enhance employability and educational systems as well as promote social inclusion. ESF+-funded programs deliver skills training matched to local labor market requirements which enables youth from high unemployment areas to transition more effectively into employment. These initiatives are designed to incorporate vulnerable groups including migrants and low-skilled workers which leads to improved social cohesion and economic participation (European Commission, 2021).

National strategies throughout Central and Eastern Europe have started focusing more on human capital development as a means to attract foreign investment and drive innovation growth. The "Smart Specialisation" initiative combines educational and research efforts with economic goals to allow regions to focus their resources in sectors with significant growth opportunities. This model works well in South Moravia (Czech Republic) and Podlaskie (Poland) because strong partnerships between universities and industries have formed innovation clusters that lead to job growth in knowledge-intensive fields.

Effective multilevel governance remains a critical factor for the success of these policies. Regions that maintain strong coordination between local, national and EU authorities benefit from efficient fund absorption and program implementation along with strategic adjustments derived from real-time feedback. Effective monitoring and evaluation systems enable regions to pinpoint successful methods and either expand proven initiatives or make necessary adjustments.

The study of different regional approaches reveals that successful models need to be tailored to specific circumstances. Policy frameworks need to maintain their ability to adapt to different socio-economic conditions and institutional structures across geographic locations.

Successful examples demonstrate a strong dedication to development focused on people alongside coordinated efforts and a long-term strategic approach (Camagni & Capello, 2015).

6. Social and Territorial Dimensions

Addressing social and territorial inequalities is essential for achieving complete regional development. The development of human capital which drives economic progress needs to support inclusive growth and enhance spatial unity. Development will become fragmented and exclusive unless deliberate actions are taken to guarantee equitable benefits for all communities irrespective of their geographic location or socioeconomic background.

Urban-rural disparities remain a central challenge. Although urban areas attract skilled workers and financial investment and become hubs of innovation rural areas and remote locations experience population decline as well as limited educational and healthcare access with fewer employment possibilities. The ongoing disparities generate a persistent disadvantage cycle that diminishes regional resilience. Territorial equity requires policy measures that improve access to quality education and digital infrastructure as well as public services specifically in disadvantaged areas (Rodríguez-Pose, 2018).

Inclusion also extends to marginalized social groups. People who migrate to new areas alongside ethnic minorities and disabled persons suffer from extra educational and occupational obstacles especially when they belong to families with limited financial resources. Targeted support mechanisms through regional strategies like tailored training programs, mentoring and inclusive hiring practices boost participation rates and help reveal hidden potentials within these groups.

Spatial integration stands as a fundamental requirement to fully exploit the potential of human capital. Improved mobility and knowledge exchange along with reduced isolation can be achieved through better transport communication infrastructure and the development of networks between urban and rural actors while encouraging inter-regional cooperation. Through integrated territorial development frameworks like community-led local development (CLLD), local actors gain the ability to design solutions that address their unique challenges and opportunities.

The social dimension of human capital requires the cultivation of civic engagement and belonging among people. Areas that develop inclusive communities which make people feel valued and involved manage to keep talent better while building stronger social trust networks. Human capital extends beyond personal skills to include building spaces where all individuals can reach their full potential.

7. Regional Resilience and Adaptation

Regions need to build adaptive capabilities to succeed amidst technological advancements and demographic shifts while facing environmental unpredictability. Human capital serves as an essential foundation for regional resilience by allowing regions to foresee challenges and manage disruptions while capturing new growth opportunities.

Regions that maintain resilience make regular investments into education programs alongside development of skills and lifelong learning opportunities. Regions that nurture adaptability and continuous improvement demonstrate stronger capabilities to handle structural transitions like declining industries and automation or demographic shifts. Employees who have transferable abilities and available retraining programs tend to maintain their positions and stay productive throughout transitional phases (OECD, 2021).

Maintaining skilled talent proves vital for regional adaptability. People tend to stay in regions that provide job opportunities and life quality advantages where they contribute and develop innovative solutions. Supportive ecosystems with cultural institutions, accessible public services, affordable housing and career development opportunities strengthen retention.

Regions attract external investment through their human capital enhancement. Businesses choose locations that provide access to a workforce with stability and innovation skills alongside strong technical abilities. Locations that focus on human capital development demonstrate sustainable growth potential which attracts investments from domestic and international sources. The virtuous cycle in which talent draws investment and investment creates new opportunities results in the establishment of sustainable economies powered by knowledge.

Furthermore, human capital contributes to innovation resilience. Regions that enable collaboration between universities research centers and businesses will stay ahead in progress when technology transforms industries and occupations. Programs that develop digital abilities, STEM training and entrepreneurial skills empower societies to proactively influence future developments instead of just responding to them.

Human capital serves as both a developmental input and a dynamic transformational force. Regions which integrate human capital into their long-term strategic plans develop flexible and future-oriented systems that can endure disruptions and gain strength through change.

The development of balanced, inclusive, and sustainable regions depends significantly on human capital as their fundamental element.

8. Conclusions and Recommendations

The foundation of achieving balanced and sustainable regional development depends on human capital which must be inclusive. The article demonstrates that regions which make strategic investments in their population's skills and knowledge achieve significant benefits through enhanced innovation and both social and economic resilience. It is essential that these investments expand past traditional educational frameworks to include holistic methods that bring together social inclusion practices with territorial equity and continuous learning opportunities.

The analysis reveals that there is no universal model which ensures success. Adaptable place-based strategies that focus on collaboration and responsiveness serve as essential elements for optimizing human capital value. The successful regions demonstrate consistent patterns of connecting educational systems with labor market demands while providing broad access to quality training and building strong cross-sector partnerships.

Policy frameworks should both identify and tackle spatial inequality issues. Targeted support for rural and disadvantaged regions will help reduce internal disparities while fostering a more unified development framework. Long-term economic viability depends on equity in human capital development beyond its social necessity.

Recommendations for policymakers and regional stakeholders include:

Make inclusive education and training accessible to marginalized groups and underrepresented communities at each educational level.

Develop stronger collaborations between educational institutions and businesses alongside public authorities to ensure skill development matches economic trends.

Support local talent empowerment by providing funding opportunities, mentorship programs, and adaptable regulatory environments which drive innovation and entrepreneurship.

Building infrastructure and connectivity solutions will bridge the divide between urban and rural areas and allow people and knowledge to move freely and access new opportunities

Create resilient communities that can handle future challenges by fostering a culture focused on lifelong learning and adaptability along with active civic participation.

Regional development built upon human capital ensures that people remain central to progress. The approach redefines growth by expanding its focus to include multiple dimensions and sustainability alongside inclusivity. Regions that prioritize human potential investment can create strategic plans leading to sustained prosperity and collective well-being.

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THE LINK BETWEEN SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY

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Abstract: *This article investigates the nexus between sustainability and corporate social responsibility (CSR), seeking to elucidate the intricate interrelationships between these concepts and their resultant impacts on contemporary business practices. Amidst growing societal concerns regarding pressing environmental and social challenges, sustainability has emerged as a central consideration within strategic business decision-making, while CSR has concurrently evolved into a critical mechanism for organizations to effectively address their multifaceted responsibilities towards both society and the environment. Through a comprehensive review of the extant literature, this study examines the diverse ways in which sustainability and CSR have been integrated into corporate strategic frameworks, assessing their consequential implications for various dimensions of business performance. Furthermore, this article investigates how strategically designed CSR initiatives can contribute directly to the long-term sustainability of business enterprises, paying particular attention to the instrumental roles of proactive stakeholder engagement, robust environmental stewardship, and consistently ethical business practices. The findings underscore the essential and mutually reinforcing link between sustainability and CSR, suggesting that their effective and synergistic integration contributes to the development of sustainable competitive advantage and the enhancement of overall corporate reputation. The study concludes by offering concrete recommendations for organizations seeking to strategically align their CSR activities with overarching sustainability goals, thereby enabling them to achieve broader and more impactful positive societal and environmental outcomes.*

Key words: sustainability, corporate social responsibility, competitive advantage, environmental stewardship, ethical practices, corporate governance.

JEL Classification: M10, M30, L19.

1. Introduction

In recent years, the concepts of sustainability and corporate social responsibility (CSR) have ascended to prominence in both academic discourse and business practice. Sustainability, defined as the capacity of organizations to meet the needs of the present without compromising the ability of future generations to meet their own needs, centers on the interconnected environmental, social, and economic dimensions of organizational activity (Brundtland, 1987). CSR, conversely, represents a broader framework encompassing the ethical and societal obligations incumbent upon businesses, extending beyond mere adherence to legal and financial stipulations to encompass a commitment to responsible conduct towards stakeholders and the environment (Carroll, 1999). As these two constructs have matured, a growing recognition has emerged regarding their inherent interconnectedness, with social responsibility initiatives increasingly serving as strategic mechanisms (Marinescu et al., 2010) through which organizations can effectively pursue and achieve their overarching sustainability goals (Toma et al., 2011a; Catană and Toma, 2021a). This paper seeks to critically examine the multifaceted link between sustainability and CSR, with a particular focus on delineating how organizations can effectively integrate both constructs into their strategic frameworks to simultaneously enhance long-term viability and generate demonstrable social value.

The impetus for this research stems from the growing recognition that the dynamic interplay between sustainability and CSR exerts profound implications for corporate governance structures, the nature and quality of stakeholder engagement practices, and ultimately, overall business performance outcomes (Toma, 2013; Marinescu and Toma, 2015). Contemporary organizations are increasingly being held accountable not only for their traditional financial metrics, but also for the broader environmental and social consequences arising from their operational activities (Toma, 2006; Toma et al., 2011b; Toma and Hudea, 2012). Within this evolving context, the strategic integration of sustainability principles into core CSR practices is no longer simply a matter of ethical or moral obligation; rather, it represents a strategic imperative for businesses that seek to maintain a competitive edge and thrive within the complexities of the modern marketplace (Elkington, 1997). The intensifying emphasis on addressing pressing environmental concerns, upholding rigorous ethical business practices, and promoting meaningful social equity has collectively fostered an environment wherein CSR and sustainability are no longer viewed as optional add-ons to corporate strategy but as integral components that are fundamental to organizational success and long-term value creation in the age of globalization (Cornescu et al., 2004; Toma, 2005), characterized by innovation (Tohănean and Toma, 2018), digitalization (Toma and Tohănean, 2018), and uncessant change (Toma and Marinescu, 2015; Catană et al., 2021).

This article enriches the existing scholarly literature with a nuanced and rigorous analysis of the intertwined relationship between sustainability and corporate social responsibility (CSR). It critically examines the ways in which established sustainability principles can effectively guide the strategic design and facilitate the successful operationalization of impactful CSR initiatives within organizations. Furthermore, it investigates how specific CSR activities can contribute tangibly to the attainment of organizations' overarching sustainability objectives in contemporary business practice. Through a comprehensive synthesis of current industry practices, prevailing theoretical models, and proven practical implementation models, this study provides actionable insights into both the challenges and strategic opportunities associated with the synergistic integration of these increasingly vital concepts.

2. Literature Review

The literature pertaining to sustainability and CSR has expanded significantly in recent decades, reflecting the escalating importance of these issues within the global business environment. The relationship between sustainability and CSR is multifaceted and complex, with diverse scholars offering varying perspectives on the precise nature of their interconnectedness.

One of the seminal frameworks for understanding CSR is Carroll's (1991) pyramid of CSR, which posits that businesses operate under a hierarchy of four distinct levels of responsibility: economic, legal, ethical, and philanthropic. While Carroll's model underscores the importance of adhering to both legal mandates and ethical considerations, it does not explicitly address the critical environmental and social dimensions that constitute the core of sustainability. In contrast, other scholars, such as Elkington (1997), have advanced alternative frameworks that directly link CSR with sustainability, emphasizing the necessity for businesses to achieve a strategic equilibrium between economic imperatives, environmental stewardship, and social considerations within their operational activities. Elkington's Triple Bottom Line (TBL) concept has proven particularly influential in bridging the conceptual

divide between CSR and sustainability, as it stresses the importance of evaluating corporate performance not solely on the basis of financial outcomes but also through a comprehensive assessment of both social and environmental impacts. CSR is not only part of the corporate strategy (Toma and Marinescu, 2013; Toma and Grădinaru, 2016; Toma et al., 2016) and business model of a business organization (Toma and Marinescu, 2012; Toma and Tohănean, 2019) but also strongly connected with other concepts, such as marketing mix (Catană and Toma, 2021b), Six Sigma (Toma, 2008), lean management (Naruo and Toma, 2007; Marinescu and Toma, 2008), balanced scorecard (Toma et al., 2010), creativity (Toma et al., 2013) and entrepreneurship (Catană et al., 2020).

Sustainability has progressively transitioned from a peripheral concern to a central and integral aspect of both economic development (Toma, 2019) and strategic business planning. Scholars such as Freeman (1984) and Porter and Kramer (2011) have contended that organizations can effectively create shared value by proactively addressing salient social and environmental issues through their core business activities, integrating societal well-being with economic profitability. In this nuanced perspective, CSR and sustainability are viewed not as discrete entities but as intrinsically complementary components of a broader, integrated business strategy that aims to generate value for both shareholders and a wider array of stakeholders. Porter and Kramer (2011) specifically elaborate on the concept of “strategic CSR,” wherein companies align their CSR initiatives with their core business objectives, thereby creating mutually beneficial outcomes for both the organization and the broader societal context in which it operates. This strategic alignment, they argue persuasively, can yield a sustainable competitive advantage and contribute significantly to the long-term success and resilience of the organization.

A significant body of literature also centers on stakeholder theory, which asserts that businesses must consider and strategically manage the diverse interests of all relevant stakeholders, encompassing employees, customers, suppliers, and the broader community, in their core decision-making processes (Freeman, 1984). Within this framework, sustainability and CSR are viewed as critical instruments for engaging with and effectively responding to stakeholder concerns, with the overarching goal of cultivating and maintaining positive, mutually beneficial relationships and ensuring the long-term organizational success and resilience of the enterprise. Consequently, sustainability is construed not merely as a matter of mitigating environmental or addressing societal impacts, but as a fundamental component of ensuring the organization’s ability to thrive and prosper over the long term through the proactive fulfillment of stakeholder needs and the diligent management of their evolving expectations.

In recent years, the concept of corporate governance has become inextricably linked to the domains of sustainability and CSR, representing a critical area of convergence. Effective and robust governance structures are essential for ensuring that CSR activities are strategically aligned with broader sustainability goals and are implemented in a manner that generates demonstrable value for both the organization itself and the wider society in which it operates. Empirical studies have consistently demonstrated that companies with well-defined and effectively enforced governance frameworks are significantly more likely to adopt sustainable business practices and engage in CSR initiatives that yield a positive and measurable impact on both the environment and society (Bhagat and Bolton, 2008).

Finally, the crucial role of transparent reporting mechanisms in linking sustainability and CSR initiatives has garnered considerable scholarly attention. Scholars contend that

organizations must disclose their sustainability efforts and CSR activities in a transparent, accessible, and verifiable manner, thereby enabling stakeholders to effectively hold them accountable for their actions and commitments (Gray et al., 1995). Standardized reporting frameworks, such as the Global Reporting Initiative (GRI), have become instrumental in guiding businesses in their sustainability and CSR reporting practices, facilitating a more standardized and comparable approach to measuring, evaluating, and communicating corporate social and environmental performance to a diverse range of stakeholders (Kolk, 2003).

3. Methodology

This study adopts a qualitative research methodology to investigate the nuanced interrelationship between sustainability and corporate social responsibility (CSR). The research design is predicated on a comprehensive and systematic review of the extant literature, focusing primarily on peer-reviewed journal articles, scholarly books, and authoritative reports emanating from reputable sources within the domains of business ethics, sustainability studies, and CSR research. The selection of relevant literature was guided by its direct pertinence to the central research question and its demonstrable contribution to a deeper understanding of the intersection between sustainability and CSR practices.

The systematic review process entailed a critical synthesis of existing theoretical frameworks and established models that address the complex relationship between sustainability and CSR. This was complemented by an in-depth examination of meticulously documented case studies and rigorous empirical research pertaining to organizations that have successfully integrated sustainability considerations into their overarching CSR strategies. This multi-faceted approach facilitated a more profound understanding of the practical implications arising from the strategic alignment of CSR initiatives with broader organizational sustainability goals across a diverse range of organizational contexts.

The research also incorporated a comparative analysis of CSR initiatives implemented across various industry sectors, with a particular emphasis on organizations that have received industry recognition for their demonstrated leadership in the area of sustainability. This comparative analytical framework served to identify both best practices and common challenges encountered by organizations in their endeavors to align CSR activities with clearly defined sustainability objectives. The findings derived from the comprehensive literature review were subsequently subjected to rigorous analysis to formulate well-supported conclusions regarding the impact of CSR on long-term organizational sustainability and to identify the key factors that contribute to the successful and effective integration of these two critical concepts.

4. Findings

The findings of this investigation indicate that the strategic integration of sustainability principles into CSR initiatives exerts a significant and positive influence on an organization's long-term viability and its capacity to achieve a sustainable competitive advantage. Organizations that successfully align their CSR activities with clearly defined sustainability objectives tend to experience a confluence of benefits, including an enhanced corporate reputation, elevated levels of stakeholder trust, and improved financial performance, suggesting a strong correlation between responsible business practices and positive economic outcomes.

A salient finding underscores the critical role of proactive stakeholder engagement in facilitating the effective integration of sustainability into CSR frameworks. Organizations that actively and strategically engage with a diverse range of stakeholders—such as customers, employees, suppliers, and the communities in which they operate—demonstrate a greater capacity to identify the most pertinent social and environmental issues facing these groups and to incorporate these considerations into their core business strategies. This stakeholder-centric approach not only serves to address the diverse concerns and expectations of key constituent groups but also cultivates a sense of shared value creation, where the organization's long-term success is intrinsically linked to the well-being and prosperity of the broader societal context.

Furthermore, the research highlights the importance of robust environmental stewardship in driving impactful and effective CSR initiatives. Organizations that proactively adopt and implement sustainable practices—such as reducing carbon emissions throughout their value chains, actively minimizing waste generation through circular economy principles, and responsibly conserving natural resources through efficient utilization strategies—are better positioned to gain a competitive advantage by appealing to the growing segment of environmentally conscious consumers and socially responsible investors. These organizations also demonstrate a clear commitment to responsible resource management, which can, in turn, lead to significant cost savings through increased operational efficiency and the adoption of innovative resource utilization strategies.

The investigation also illuminates the crucial role of consistently ethical business practices in forging a strong and sustainable link between CSR and overarching sustainability objectives. Organizations that prioritize ethical decision-making, maintain a high degree of transparency in their operations and communications, and uphold unwavering integrity in their interactions with stakeholders are more likely to cultivate and maintain a strong foundation of trust with their key constituent groups, while simultaneously mitigating potential reputational risks associated with ethical lapses or perceived inconsistencies in their CSR messaging.

Finally, the findings provide compelling evidence that effective reporting mechanisms and transparent communication practices are key determinants in building credibility and fostering accountability in the implementation and evaluation of CSR activities. Organizations that proactively and consistently disclose their sustainability efforts and relevant CSR activities in a transparent, easily accessible, and readily verifiable manner are better positioned to demonstrate their genuine commitment to social and environmental responsibility, which subsequently strengthens stakeholder trust and enhances their overall corporate reputation within the marketplace.

5. Conclusions

The nexus between sustainability and CSR is demonstrably clear and multifaceted in its significance. Sustainability provides a comprehensive and forward-looking framework within which organizations can strategically consider the long-term environmental, social, and economic consequences of their operations, while CSR serves as a crucial mechanism through which businesses can effectively address their inherent ethical responsibilities and, by extension, contribute to the enhancement of overall societal well-being. The synergistic and integrated application of CSR and sustainability principles yields demonstrably positive outcomes, including enhanced corporate reputation, the cultivation of stronger and more

meaningful stakeholder engagement, and the ultimate facilitation of long-term business success and organizational resilience.

The principal findings of this investigation suggest that organizations which strategically align their CSR activities with clearly defined and measurable sustainability objectives are demonstrably better positioned to create shared value for both the enterprise itself and the wider societal context in which it operates. Companies that accord a high degree of priority to environmental stewardship, the unwavering adherence to ethical business practices, and robust, proactive stakeholder engagement are significantly more likely to cultivate heightened levels of stakeholder trust, improve operational efficiencies across diverse business functions, and ultimately, to gain a sustainable competitive advantage within the increasingly dynamic and competitive marketplace.

Subsequent research endeavors should focus on comprehensively exploring the specific mechanisms through which sustainability and CSR are strategically integrated into the overarching business strategies of contemporary organizations, as well as conducting detailed investigations into the primary factors that demonstrably influence the ultimate success or, conversely, the potential failure, of such integrated initiatives. Furthermore, additional studies could meaningfully examine the critically important role of effective corporate governance structures in ensuring that CSR activities are strategically aligned with clearly articulated sustainability goals and, moreover, contribute directly to the generation and sustained creation of long-term organizational value.

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POPULATION AGING AND SOCIAL EXCLUSION: A CRITICAL ANALYSIS OF THE THEORETICAL AND LEGISLATIVE FRAMEWORK

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Abstract: *This paper examines the process of demographic aging and its impact on social cohesion, focusing on the theoretical and legislative framework related to preventing exclusion among older adults. It discusses the main challenges, such as social security reform, employment policy adaptations, and the development of specialized services, alongside the opportunities that active aging and community engagement can create. The analysis of international documents and strategies, in conjunction with national legislation, underscores the mechanisms for protecting and including older people. The conclusions highlight that improving public policies, developing more robust support mechanisms, and promoting an inclusive approach toward older individuals significantly contribute to mitigating social exclusion and strengthening intergenerational cohesion.*

Keywords: *elderly people, social exclusion, social policies, legislative framework, active ageing.*

JEL Classification: *I38, J14, H55.*

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1. Introduction

The aging of the population represents one of the most significant demographic transformations of the 21st century, with complex implications for social protection systems, the labor market, intergenerational solidarity, and social inclusion. Both globally and in the Republic of Moldova, this trend is accompanied by structural challenges related to the adaptation of the normative and institutional framework to new demographic realities, as well as by opportunities to harness the social and economic potential of elderly people.

In the context of demographic pressures and international commitments, it becomes essential to critically analyze the conceptual and legislative framework concerning the social protection of elderly individuals, with the aim of identifying strengths and gaps that may lead to social exclusion.

The purpose of this paper is to examine, from a critical perspective, how public policies and national legislation in the Republic of Moldova respond to the phenomenon of population aging and contribute to the prevention of social exclusion among elderly people, in relation to international standards and European best practices.

The methodology applied consists of a documentary analysis of the international and national normative framework, complemented by the interpretation of statistical data and relevant literature in the fields of social gerontology, social economy, and human rights.

2. Conceptual Framework

Old age is usually divided into stages, such as: early old age (60–75 years), senile age (75–90 years), and longevity (90 years and above). However, this categorization is not always objective, as it does not take into account the individual physiological and psychological characteristics of each person. In addition to the progressive weakening of physical strength and general health, old age is marked by psychological changes: a person's inner world and understanding of life come to the forefront, while the intellectual and emotional spheres of social life move to a secondary position or even lose their relevance. The population aging process requires the improvement of various types of support in specific areas of life, namely medical, communal, socio-cultural, and other services. Accordingly, it is important to emphasize that elderly people, like any other individuals, have basic needs. These basic needs include physical health and autonomy. Health in this context can be interpreted in various ways: 1) the absence of specific diseases; 2) health as viewed through the lens of survival.

Intermediate needs include adequate nutrition, proper housing, appropriate medical care, physical and economic security, and so on. All these needs aim to maintain the individual's health and autonomy. As a result, a person can afford to participate in social life. All these basic needs should be guaranteed and implemented by the state through the social infrastructure and the legislation it adopts. However, even under such circumstances, the individual is not exempt from responsibility. Individuals themselves should strive to strengthen social ties, and moral norms will inevitably play a central role in such a context.

In the *Compendium of Geriatrics*, aging is described as “a complex process characterized by the deterioration of physiological functions, an intrinsic process of loss of viability and increased vulnerability” (OMS, 2025, p. 19).

In the Anglo-Saxon literature, the terms aging and senescence differentiate between the normal changes associated with age and degenerative processes.

“Elderly people are those who are in the third or even fourth stage of life, a period in which losses and decline at the physiological, psychological, economic, and social levels are most severe. These losses are not always due to biological evolution, but are also simultaneously influenced by social, economic, and cultural factors” (Gagauz, Buciuceanu-Vrabie, 2015).

From a social perspective, old age is equivalent to disengagement from active social roles, retirement from the workforce, and the adoption of other roles, some of which are passive and dependent in nature, while others are active and “compensatory.” In the context of data concerning the complex investigation of the aging process, the concept of the individual's social aging can be invoked, understood as a member of organized social groups through their social functions and roles. A reduction in social roles, whether in number, in the intensity of their expression, or when the individual is no longer able to fulfill them, can be seen as a form of imbalance or as the onset of social aging (OMS, 2025).

“Social aging, expressed through social age, may reflect the degree of an individual’s integration and is regarded as a measurable phenomenon through social indicators of a person’s position within the work environment or group activities, interpersonal relationships, and the ability to fulfill social roles within the overall social structure” (OMS, 2025, pp. 339-340).

These concepts are essential for a multidimensional understanding of the aging process. As Alan Walker (2005) argues, social exclusion in old age must be analyzed in interaction with structural factors such as income, health status, and access to services (Barnes, 2006). Martha Nussbaum (2011), within the framework of the capabilities approach, emphasizes that aging does not automatically imply the loss of dignity or civic contribution. Rather, society must ensure the conditions for an active and dignified life at any age (Negară, Blaja-Lisnic, 2014).

Moreover, the World Health Organization (WHO, 2020) emphasizes the concept of “healthy aging” as the process of maintaining functional abilities that enable well-being in older age (rogramul privind îmbătrânirea activă și sănătoasă, 2023-2027).

These conceptual dimensions shape the framework for understanding the social risks to which elderly people are exposed in the Republic of Moldova, providing an essential basis for the analysis of the upcoming demographic and socioeconomic context.

3. Contextual Analysis

The Republic of Moldova is facing an accelerated demographic aging process, driven by the continuous decline in birth rates, increased external migration, and the massive emigration of the young active population. These trends create significant imbalances in the age structure of the population, increasing the pressure on the pension and social assistance systems. At the same time, the risk of marginalization of elderly people is growing, both due to the weakening of family support networks and the reduction of economic resources available for their protection. Analyzing this context is essential for understanding the socioeconomic vulnerabilities of the elderly population and for developing appropriate public policies.

In the current conditions of the Republic of Moldova, a youth-centered culture is rapidly developing, one in which “the elderly person finds less and less space; thus, modern society generates old age but tends to reject and isolate it” (Gagauz, Tabac, 2017, p. 6). In this context, emphasis is placed on the objective of “developing entrepreneurial and employment opportunities among young people, especially those with fewer opportunities” (United Nations, 2002). However, demographic forecasts, similar to those in other countries, are not reassuring and indicate a rapid increase in the number of elderly people as a share of the total population. Consequently, governments in many countries are promoting the raising of the retirement age as the most effective measure to combat the labor shortage caused by population aging (Heghea, 2017, p. 259).

The retirement age across different countries varies significantly. Moreover, in some countries, discussions go beyond simply increasing the retirement age to also addressing the equalization of this indicator for men and women. However, the population is generally unprepared to abruptly postpone its legal rest period. Therefore, in nearly all countries, the retirement age has begun to rise slowly but steadily, in a gradual manner designed to minimize adverse impacts on the population (Hotărârea Guvernului Republicii Moldova cu

privire la aprobarea Programului pentru integrarea problemelor îmbătrânirii în politici: nr. 406 din 02 iunie 2014).

The Republic of Moldova has not been an exception and has increased the standard retirement age. According to Article 41(1) of Law no. 156-XIV (Legea privind sistemul public de pensii: nr. 156-XIV din 14 octombrie 1998), the standard retirement age of 63 years was set starting from July 1, 2019, for men and from July 1, 2028, for women. This age is reached gradually, beginning on July 1, 2017, through annual increases: by 4 months for men, from 62 years and 4 months, and by 6 months for women, from 57 years and 6 months. It is worth noting that in 2020 an attempt was made to freeze the increase in the retirement age and to set it again at the previous level of 57/62 years. Nevertheless, in early December 2021, the Parliament of the Republic of Moldova adopted a law reinstating the gradual increase in the retirement age for both men and women, up to 63 years. However, at the beginning of 2022, a facilitated pension category was introduced, namely, the early retirement pension for a long career, granted to individuals who “have completed a working activity exceeding the required contribution period provided for standard old-age pensions.” Thus, men may retire early if they have 39 years of contributory service, and women if they have 35 years and 6 months [5].

Table 1. Increase in the Retirement Age in the Republic of Moldova (years, months)

	Retirement Age (years, months)	
	Men	Women
January 1, 2022	63	59.6
July 1, 2022	63	60
July 1, 2023	63	60.6
July 1, 2024	63	61
July 1, 2025	63	61.6
July 1, 2026	63	62
July 1, 2027	63	62.6
July 1, 2028	63	63

Elaborated based on Article 41 (1) of Law no. 156-XIV [15].

Raising the retirement age (to 63 years for both women and men) contributes to the extension of the demographic dividend period (i.e., the economic growth potential arising from a higher share of working-age population relative to dependents). However, it is essential to achieve an actual increase in the duration of labor market participation by raising the employment rate across all age groups, including those in pre-retirement ages. “The demographic dividend represents a potential for economic growth that can occur as a result of changes in the age structure of the population, especially when the share of the working. The urgency of the issues caused by population aging is evident. At the same time, Scenarios that emphasize only the challenges of demographic change may overlook associated opportunities. These opportunities include an increase in overall life expectancy and healthy life expectancy. The growth of these two parameters forms the basis of the so-called “second demographic dividend” (Nussbaum, Levmore, 2017). Its essence lies in the possibility of increasing the economic potential of an aging society by involving older workers in production. However, the practical realization of the second demographic dividend requires the implementation of well-designed and balanced public policies in the areas of employment, education, healthcare, social services, and overall well-being. Overcoming the challenges and capitalizing on the

opportunities of demographic change form the foundation for adapting to an aging society – adaptation, not confrontation.

Population aging and the decline in the number of people of working age underscore the need to fully capitalize on the intellectual potential of elderly individuals, which represents a valuable and productive resource. Achieving this requires the modernization of existing state support programs and a shift in current labor market practices, which are predominantly oriented toward the younger generation.

In recent decades, there has been increased attention given to population aging and, in particular, to elderly individuals as a distinct social and age group. The initiators of discussions about the place that elderly people should occupy in society and the role they should play in modern social reality have primarily been Western societies with relatively high levels of well-being. Over these decades, perspectives on the social status and position of elderly people in society have changed significantly.

4. Legislative Framework and Public Policies

Population aging became a central topic on the international agenda with the adoption of the Vienna International Plan of Action on Aging (1982), the first UN document to recognize the right of elderly people to pension, rest, and social protection. This plan emphasized a biological and welfare-based approach to aging.

Subsequently, in 1991, the UN Principles for Older Persons were adopted, enshrining the rights to independence, participation, care, self-fulfillment, and dignity.

A major conceptual shift occurred in 2002 with the Madrid International Plan of Action on Ageing, which promoted the idea of active aging. This new framework rejected the perception of older people as a social burden and encouraged their participation in economic, social, and civic life even after retirement.

Compared to the Vienna Plan, the Madrid Plan: a) emphasizes the integration of older persons into development policies; b) promotes the right to work at older ages; and c) approaches aging as a societal resource, not merely as a risk.

Madrid thus becomes a turning point, shaping the concept of a “society for all ages” and highlighting the need to combat social exclusion through policies based on inclusion, active participation, and intergenerational solidarity.

An analysis of the problems and opportunities of an aging society, as well as the formulation of possible solutions, constituted the main content of the Madrid Plan of Action (United Nations, 2002). The central concept of the Madrid Plan is the concept of a society for all ages. This concept was first proposed during the preparations for the International Year of Older Persons (1999) and later became the main theme of that UN observance.

By adopting the Madrid International Plan of Action on Ageing in 2002, representatives of UN member states committed to eliminating all forms of discrimination in society, including age-based discrimination; to making aging an integral part of social and economic policies; to ensuring protection and assistance for older persons during armed conflicts and foreign occupation; and to providing universal and equal access for older people to healthcare and social services. According to the Madrid International Plan of Action on Ageing, both at national and international levels, three priority areas should be implemented (see Table 3): I. Older persons and development; II. Advancing health and well-being into old age; III. Enabling and supportive environments.

In the *Political Declaration and Madrid International Plan of Action on Ageing* particular attention is given to employment and the aging of the workforce. It is emphasized that older persons should be given the opportunity to continue working for as long as they wish to do so and are able to work productively. The measures titled “Employment opportunities for all older persons who want to work,” proposed in this document, refer to the aspiration of continuing work activity and encouraging this desire at the level of macroeconomic policy, for example, “through labor market policies aimed at increasing productivity and employment among persons of all ages.” Special attention should be focused on measures to increase the employment rate among older people and to reduce the risk of social exclusion or even dependency in old age.

Table 3. Structure of the Madrid International Plan of Action on Ageing: Priorities and Issues

Priority Areas	Issues
I. Participation of older persons in development (of society)	1. Active participation in society and in the development process. 2. Work activity and an aging labor force. 3. Development, migration, and urbanization (of rural areas). 4. Access to knowledge, education, and vocational training. 5. Solidarity between different generations. 6. Eradication of poverty. 7. Income security, social protection/security, and poverty prevention. 8. Emergency situations.
II. Ensuring health and well-being in old age	1. Promoting health and well-being throughout life. 2. Universal and equal access to healthcare. 3. Older persons and HIV/AIDS. 4. Training for caregivers and health professionals. 5. Mental health needs of older persons. 6. Older persons and disabilities.
III. Creating enabling conditions	1. Housing and living conditions. 2. Care and support for caregivers. 3. Neglect, abuse, and violence. 4. The image of older persons.

Source: Elaborated based on [25].

Thanks to the Madrid International Plan of Action on Ageing and the Political Declaration adopted in April 2002, essential changes have taken place in how older people are regarded as part of the labor force and in their situation on both the labor market and in the social sphere. There has also been growing awareness of the need to eliminate age-related barriers that hinder access to the labor market by encouraging the employment of older individuals and by taking early action to counter the factors that lead to discrimination against older workers.

For the Republic of Moldova, a priority remains the social protection and assistance of older persons, by increasing their inclusion in social assistance programs and improving their access to social services.

In implementing the International Plan of Action, the Republic of Moldova has focused its attention on the goals, objectives, and actions across five priority areas (*Figure 1*):

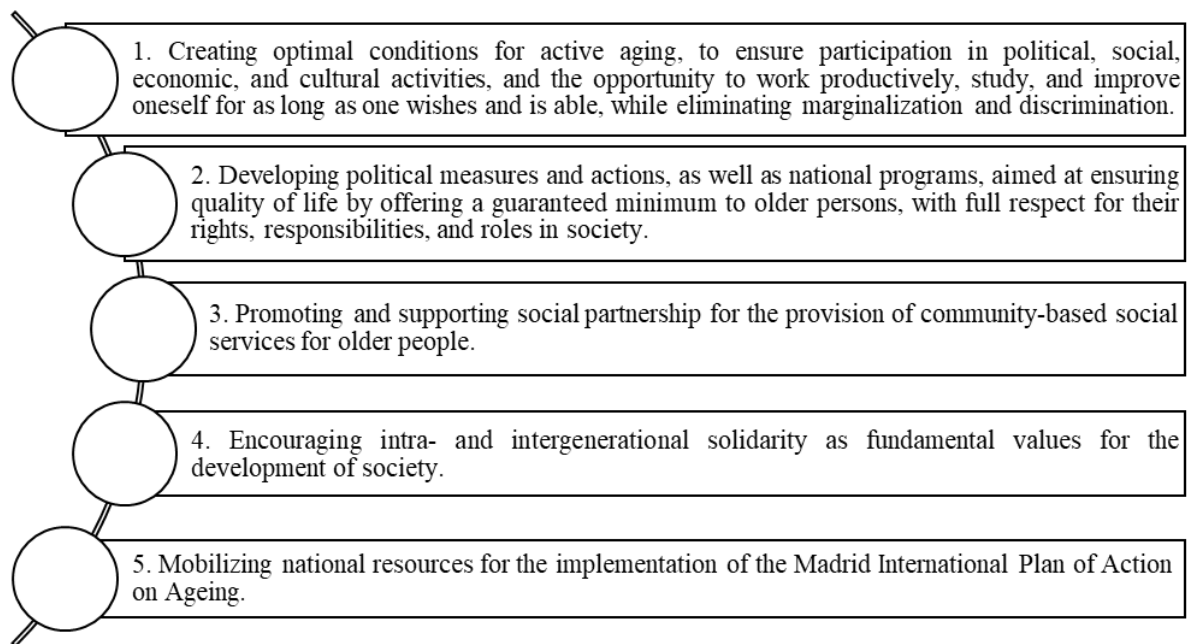


Figure 1. Priority Directions of the Madrid International Plan of Action on Ageing for the Republic of Moldova

Source: Compiled based on [21].

The economic and social consequences of the population aging process have an immediate impact on the labor market, with the situation of older people on the labor market being affected by rapid changes in employment. As a result, taking into account the economic and demographic situation of the country, the “National Strategy on Employment Policies in the Republic of Moldova for the period 2006–2020” was adopted on April 11, 2007. This strategy includes measures aimed at addressing the challenges related to population aging in the Republic of Moldova. It outlines both medium-term actions (2006–2010) and long-term actions (2011–2020).

The National Strategy was designed to align with the objectives set by the European Union, and its implementation aimed to create opportunities for active older persons to extend their participation in the labor force for as long as possible, thereby reducing the risk of social exclusion.

The social and legal aspects of raising the retirement age for citizens of the Republic of Moldova and of the pension system reform as a whole are reflected not only in the social sphere but also in the political domain.

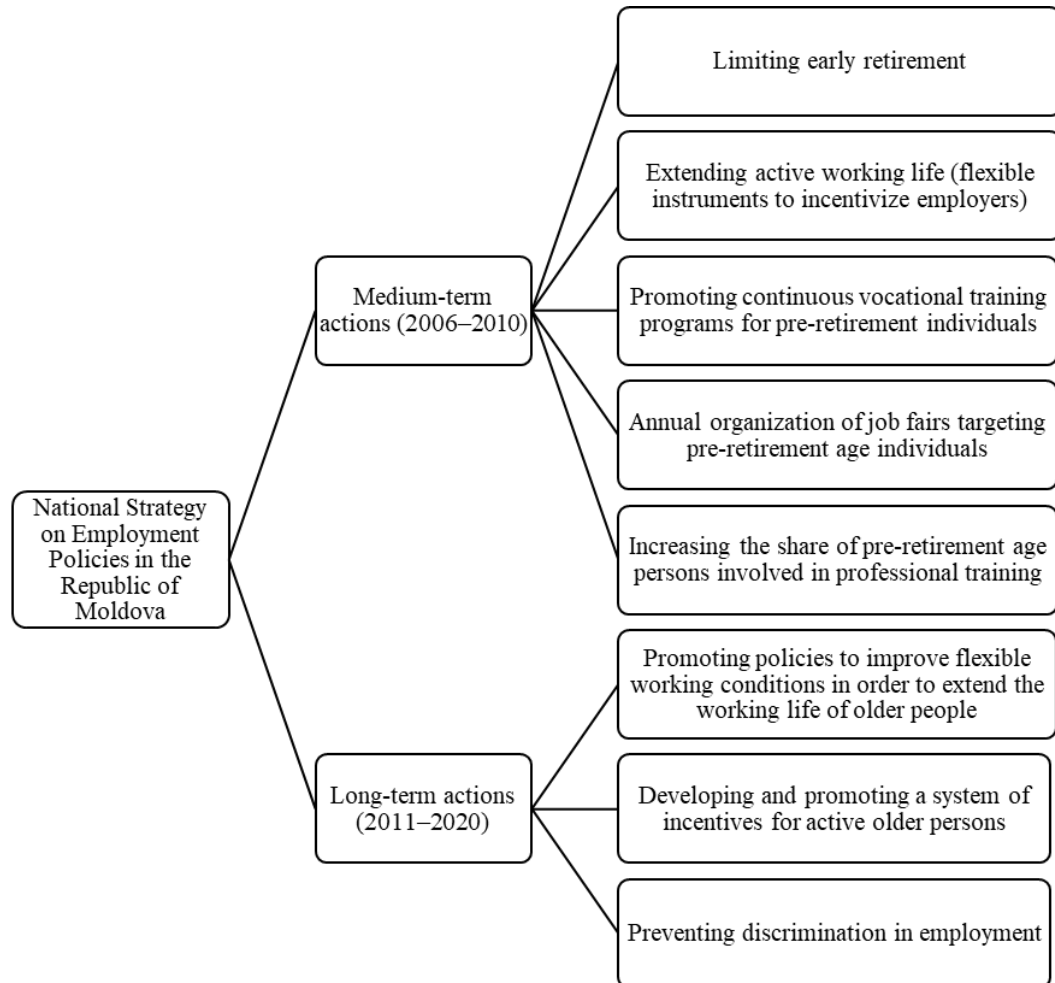


Figure 2. Medium- and Long-Term Actions of the National Strategy on Employment Policies in the Republic of Moldova for the Period 2006-2020

Source: Compiled based on [21].

In the context of population aging, the Republic of Moldova has implemented the Active Ageing Index, which is “an important tool for assessing and monitoring the implementation of the MIPAA/RIS, as well as an indicator for comparing the active aging process among European countries and for identifying a country’s strengths and weaknesses in this area” (Strategia Națională de Dezvoltare a Sectorului de Tineret pentru anii 2014-2020, p. 384). The approach to elderly people not only through the lens of exclusion and vulnerability, but also through the recognition of their role as active agents in the development of society, who, through their experience, knowledge, and skills, make essential contributions is highlighted in the study *Active Ageing Index in the Republic of Moldova, 2020*. The Active Ageing Index is calculated for the population aged 55 and over. It is based on a panel of multidimensional indicators that are aggregated into composite measures, capturing the current situation across four domains of active and healthy aging: labor market participation, social participation, independent, healthy and secure living, and capacity and enabling environment for active aging (Buciuceanu-Vrabie, 2021, p. 7).

At the same time, active aging does not mean that a person must work until the age of 100. If an older individual receives a decent pension, has the minimum means necessary for living, benefits from family support, and can afford a normal life without continuing to work after retirement, that person should not be considered socially excluded. In many cases, the issue relates to access to the labor market. That is, if an older person wants to work but is unable to continue employment, then we may speak of social exclusion. Otherwise, the situation does not fall under the definition of social exclusion.

Understanding the interconnections between the living conditions of older persons, their socioeconomic status, health, and well-being is particularly relevant in light of the commitment outlined in the 2030 Agenda for Sustainable Development, that “no one will be left behind.” In practice, this commitment means that the Sustainable Development Goals (SDGs) must be achieved for all segments of society and at all ages, with special focus on vulnerable groups, including older persons. Several contextual indicators of active aging are particularly relevant for eight of the 17 nationalized SDGs. For instance, how and with whom older persons live relates to targets on eradicating poverty in all its forms and contexts and reducing inequalities (SDG 1; SDG 10), ensuring healthy lives and promoting well-being for all at all ages (SDG 3), promoting lifelong learning opportunities (SDG 4) and strengthening digital skills (SDG 17), achieving gender equality and empowering all women and girls (SDG 5), achieving full and productive employment and decent work for all (SDG 8), and promoting peaceful and inclusive societies and developing safe communities for all (SDG 11; SDG 16) (Buciuceanu-Vrabie, 2021, p. 4).

Since 2002, the Republic of Moldova has aligned itself with the Madrid International Plan of Action on Ageing (MIPAA) and the Regional Implementation Strategy (RIS). In this context, the *Program for the Integration of Ageing Issues into Policies* was developed (tăreăa Guvernului Republicii Moldova cu privire la completarea Programului pentru integrarea problemelor îmbătrânirii în politici: nr. 1147 din 20 decembrie 2017). This program has been periodically supplemented and phased in over the years (2007–2011; 2012–2016; 2018–2021) through an Action Plan in the field (egee asistenței sociale: nr. 547-XV din 23 decembrie 2003. In: Monitorul Oficial al Republicii Moldova. 2004, nr. 42-44 art. 249). Meanwhile, the perspective of ageing has been integrated into intersectoral areas such as: the *National Health Strategy 2030*; the *National Action Plan for the Implementation of the National Employment Strategy 2017–2021*; the *Action Plan for the Implementation of the National Strategy for the Development of the Youth Sector 2020*; the *Draft Law for the Approval of the National Development Strategy “Moldova 2030”*; the *National Program in the Fields of Research and Innovation for 2020–2023* and its Action Plan, which includes the strategic direction *Migration, Diaspora, and Sociodemographic Changes*, including research on ageing (Buciuceanu-Vrabie, 2021, pp. 12-13).

The promotion of active aging in the Republic of Moldova has required the adoption and development of a relevant normative framework. An analysis of public policies in the context of the implementation of the *Action Plan on the Implementation of the Principle of Active Ageing 2018–2021*, along with an assessment of the progress made in the country following the adoption of the *Madrid International Plan of Action on Ageing (MIPAA/RIS)* in the Republic of Moldova, is presented in the report *Evaluation of the Action Plan on the Implementation of the Principle of Active Ageing* (Buciuceanu-Vrabie, Gagauz, Savelieva, 2021). Despite the allocation of internal government resources for the implementation of the action plan, insufficient financial resources, an unstable socioeconomic context, and “weak

implementation mechanisms have somewhat undermined the MIPAA/RIS 2018–2021 implementation process” (Buciuceanu-Vrabie, Gagauz, Savelieva, 2021).

One of the key legislative documents in the Republic of Moldova addressing social exclusion is the Law on Social Assistance, no. 547-XV of December 23, 2003. According to Chapter I, Article 1, the concept of social assistance is defined as a “component of the national social protection system, through which the state and civil society commit to prevent, limit, or eliminate the temporary or permanent effects of events considered social risks, which may lead to the marginalization or social exclusion of individuals and families in difficulty.” This law also identifies the main vulnerable groups exposed to social exclusion, including older persons (Chapter II, Article 7, point h)) (legea privind sistemul public de asigurări sociale: nr. 489-XIV din 08 iulie 1999. In: Monitorul Oficial al Republicii Moldova. 2000, nr. 1-4, art. 2.).

The main legislative acts in the Republic of Moldova that contribute to reducing the social exclusion of older persons are the laws that guarantee their right to pension insurance, considering that the pension is often the only source of income for this category of the population. Among these legislative acts, the following can be mentioned: the *Pension Insurance Reform Strategy* and the *Law on State Social Insurance Pensions*, no. 156-XIV of October 14, 1998 (Legea privind sistemul public de pensii: nr. 156-XIV din 14 octombrie 1998). These acts have been supplemented by the *Law on the Public Social Insurance System*, no. 489-XIV of July 8, 1999 (Legea privind sistemul public de pensii: nr. 156-XIV din 14 octombrie 1998). This legislative package regulating pension insurance is updated annually by the *Law on the State Social Insurance Budget*, which governs both the mechanism for calculating and paying mandatory state social insurance contributions, and specific aspects related to revenues and expenditures.

Among the most recent developments is the draft Government Decision on the approval of the *Program on Active and Healthy Ageing (2023–2027)*, which is described as “a medium-term public policy document that outlines the objectives and actions needed to integrate and implement the principle of active ageing, with the intended impact of increasing the chances for the population of the Republic of Moldova to age actively and healthily” (Raport privind Strategia Regională pentru Implementarea (SRI) Planului Internațional de Acțiuni de la Madrid privind Îmbătrânirea, 2007).

Population aging trends highlight the need to increase the efficiency of state social policy in the interest of older persons, and to mobilize substantial financial, material, and labor resources to improve their standard of living and quality of life. This can be achieved through adequate socioeconomic security, the creation of conditions for effective professional engagement, social activity, and self-realization, as well as through access to medical and social assistance.

5. Conclusions

Population aging is not only a demographic challenge, but also a major test for the social and economic sustainability of the Republic of Moldova. The analysis reveals that, although significant progress has been made in aligning the national legislative framework with international standards, there are still gaps in the effective implementation of policies aimed at older people.

The adaptation of the regulatory framework must be accompanied by proactive public policies that go beyond passive social protection and stimulate the active participation of

older people in economic, social, and community life. Combating social exclusion requires not only the recognition of vulnerabilities but also the valorization of the social, professional, and civic potential of this population group.

In addition to supporting economic participation, it is essential to optimize social and healthcare services, develop care infrastructure, especially in rural areas, and support alternative forms of engagement (such as volunteering, mentoring, and intergenerational education). At the same time, strengthening intergenerational solidarity and combating age-based discrimination should become central directions of social policy.

Only through an integrated and inclusive approach, combining equity, intergenerational solidarity, access to resources, as well as active participation, can social cohesion be strengthened and a society prepared for the demographic realities of the future be built.

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MODERN WAYS OF FINANCING TOURISM ACTIVITIES IN ROMANIA

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Abstract: *In recent years, modern ways of financing have been at the basis of business development in Romanian tourism. European and governmental funds, crowdfunding, specialized investment funds, tokenization and blockchain financing, the "Pay-as-you-go" model are some of the ways identified by tourism entrepreneurs to develop their businesses. All the mentioned models are starting to be increasingly used in Romanian tourism, offering modern and attractive solutions for both tourists and industry operators, therefore the integration of these models with digital technology can contribute to the development of a more accessible and personalized tourism in Romania.*

Keywords: *tourism, funding, projects, development.*

JEL Classification: *L83.*

1. Introduction

Tourism financing has evolved significantly in recent years, and tourism entrepreneurs have modern ways to develop their businesses. Among the most relevant are: financing through European and governmental funds, non-reimbursable funds through programs such as NRRP (National Recovery and Resilience Plan), ROP (Regional Operational Program) or ARIF (Agency for Rural Investment Financing), government subsidies - grants from the Ministry of Tourism or other institutions for the development of tourism infrastructure, crowdfunding, raising funds from people interested in innovative tourism projects through Kickstarter, Indiegogo or GoFundMe platforms, innovative tourism startups, tokenization and blockchain financing, bank loan and leasing financing, SME loans with preferential interest rates for tourism businesses, funding through collaborations with tourism brands, the "Pay-as-you-go" model, etc.

These financing methods offer varied opportunities for tourism entrepreneurs, allowing them to innovate and attract financial resources tailored to their specific needs.

2. European and government funding

Financing tourism in Romania through European funds represents a major opportunity for developing infrastructure, modernizing services and promoting tourist destinations. There are several funding programs that support tourism businesses, be it hostels, hotels, travel agencies or eco-tourism projects.

The Regional Operational Programme (ROP) is one of the most important programmes for the development of tourism in Romania, providing funding for the construction and modernization of accommodation and leisure facilities, the development of

local and regional tourism infrastructure, digitalization and innovation in tourism and the preservation and promotion of cultural and natural heritage.

The National Recovery and Resilience Plan (NRRP) is a program that supports tourism projects focused on sustainability and digitalization, includes funding for upgrading infrastructure and promoting green tourism, and offers grants for digitalization of travel agencies and hotels.

The Rural Investment Financing Agency helps support rural tourism and agritourism. The main investments are aimed at the creation and development of non-agricultural activities, providing funds for the construction and modernization of rural guesthouses, traditional restaurants and agreement activities. The amount of funding is up to €200,000, with 10-30% co-financing.

The Invest EU program and Modernization Fund is aimed at investments in green tourism infrastructure and energy efficiency and can be accessed to finance large ecotourism and sustainability projects.

The Horizon Europe program offers grants for innovative tourism projects such as digital solutions and sustainable tourism experiences.

The beneficiaries of European funds are tourism SMEs (hotels, hostels, travel agencies), local authorities, NGOs and associations promoting cultural tourism and ecotourism, start-ups with innovative solutions for the tourism industry.

The European funds offer a significant opportunity for the modernization of tourism in Romania, contributing to the improvement of the quality of services and to the increase of tourist circulation.

The Romanian Government offers various subsidies and support programs to stimulate the development of the tourism sector. These include the "Incoming" program to support travel agencies that bring foreign tourists to Romania. Agencies can receive a subsidy of €40 for each foreign tourist who has purchased and paid for a package of tourist services in Romania. To benefit from this support, agencies must apply using the form available on the ministry's website.

Another program is represented by the De minimis scheme for seaside and spa resorts which aims to stimulate economic operators in seaside and spa resorts to modernize and develop tourist facilities, thus contributing to increasing the attractiveness of these destinations.

In addition to European funds, there are also national programs financed from the state budget that support various national policies and priorities, including tourism. The implementation and management of these projects take place exclusively in Romania, aiming to develop and promote tourism at national level.

In order to benefit from these grants and support programs, tourism operators must meet the eligibility criteria specific to each program and submit applications for funding according to the instructions provided by the competent authorities.

3. Crowdfunding

Crowdfunding is a modern method of financing that allows entrepreneurs to raise financial resources directly from the public through online platforms. This method is used to develop innovative tourism projects, eco-tourism, modernize hostels or promote unique tourism experiences

Several types of crowdfunding are used in tourism. Rewards-based crowdfunding, which offers benefits to supporters, such as vouchers for stays, guided tours or other experiences. A good example is crowdfunding an eco-resort where donors receive discounts or free nights.

Donation crowdfunding is used for community and heritage conservation projects, such as the restoration of a castle or a traditional Romanian village.

Equity crowdfunding, where backers become investors and receive a stake in the business, an example being tourism startups funding their development.

Crowdfunding based on peer-to-peer lending can offer the possibility to obtain funding from individuals or groups in exchange for repayment with interest.

The most widely used platforms in Romania are Kickstarter - used for innovative tourism projects, Indiegogo - suitable for tourism startups, GoFundMe - used mainly for social initiatives and heritage preservation, SeedBlink - equity crowdfunding for tourism and hospitality businesses, Creștem Idei - Romanian crowdfunding platform.

In Romania, this method of financing has been used to restore castles that have been transformed into accommodation, to build sustainable huts and ecological trails, to organize thematic guided tours, cultural festivals, etc.

This method of financing offers several advantages such as: it allows to test market interest before implementing a project, it offers visibility and free promotion through the supporters involved.

There are also some limitations to this method: it requires a good marketing strategy to attract investors, success depends on the ability to build a community of supporters, in some cases the funds raised may be insufficient to fully implement the project.

Crowdfunding is a viable solution for Romanian tourism entrepreneurs who want to innovate without bank loans or traditional investments

4. Business Angels and Venture Capital Funds

Business Angels and Venture Capital Funds are a modern way of financing startups and innovative businesses in the hospitality industry. These sources of capital are especially accessible for projects with high growth potential that can bring innovations in tourism, digitalization or personalized experiences for tourists. Business Angels are private investors who provide funding to tourism startups in exchange for a stake in the company by coming with management expertise and business connections.

The main networks of Business Angels in Romania are TechAngels Romania which supports startups in various fields, including digital tourism, Business Angels Romania - network active in financing innovative projects, GapMinder Venture Partners - fund oriented towards technology and digitalization.

This funding can be used to design online personalized booking platforms, digital tourist guide apps and interactive experiences and startups in sustainable tourism and ecotourism.

Venture Capital (VC) funds offer capital in exchange for equity. The most well-known VC Funds active in Romania through which tourism businesses can be financed are: Early Game Ventures - which invests in Romanian startups in the field of technology and digital tourism experiences, Morphosis Capital - a fund specialized in SMEs with expansion potential, including in tourism, GapMinder VC - supports innovative companies, including in

the hospitality industry and ROCA X, which is a €12 million fully privately funded venture capital fund investing in disruptive early stage technology startups.

The types of tourism projects that can attract venture capital are digital tourism platforms (smart booking, virtual tours, immersive experiences), innovative hospitality services (smart hotels, automation solutions), sustainable and green tourism (eco-resorts, responsible tourism apps).

These methods of financing offer a few advantages: they provide capital without requiring immediate repayment, unlike bank loans, and offer access to valuable expertise and networks of contacts. There are also limitations: investors usually require a significant share of the business, there is high pressure to achieve profitability quickly, and it involves a complex process of selecting and negotiating funding.

In Romania, Business Angels and Venture Capital Funds are still in their infancy in the tourism sector, but they are starting to support innovative projects. Entrepreneurs who come up with disruptive and sustainable ideas stand a good chance of attracting such funding.

5. Tokenization and blockchain financing in Romanian tourism

In recent years, blockchain technology and tokenization have also started to be used in tourism, offering innovative solutions for financing, booking, loyalty and transparency in this sector. Although Romania is still in its infancy in adopting these technologies in tourism, there are examples and initiatives that could transform the hospitality industry.

Tokenization in tourism involves the conversion of a real asset (e.g. a tourist property or travel services) into a digital token on the blockchain, which can be traded or used to access specific services.

In Romania, tokenized investments in hotels and tourism properties can be an alternative to traditional financing methods, allowing investors to buy parts of a hotel or resort in the form of tokens. Or instead of classic loyalty points, tourists can receive tokens on the blockchain that can be used for discounts or upgrades at hotels, travel agencies, etc.

Blockchain can be used to finance tourism projects through ICO (Initial Coin Offering) which involves offering tokens to investors who finance a tourism project (e.g. hotels, eco resorts, digital tourism platforms) or through STO (Security Token Offering) - like ICO, but compliant with financial regulations and offering digital assets backed by real assets

For example, a developer of eco-tourism hostels in Romania can launch an STO, allowing investors to buy tokens that represent a share of the future profit of the business.

The advantages of tokenization and blockchain financing cover easy access to funding for startups and tourism businesses, eliminating intermediaries and reducing fees, increasing transparency and security in transactions, and the possibility to attract international investors.

As disadvantages can be considered: the lack of clear regulations for tokenization in Romania, the low level of blockchain implementation in the tourism sector and the need to educate the market and entrepreneurs about the benefits of the technology.

Financing through tokenization and blockchain can become a huge opportunity for Romanian tourism, allowing the development of innovative projects without depending on bank loans or traditional funds.

Ways of financing through bank loans and leasing in Romanian tourism.

In Romania, tourism entrepreneurs can access bank loans and leasing to finance business development, infrastructure modernization and equipment acquisition. These

financing methods are frequently used by hotels, hostels, travel agencies and other hospitality businesses.

6. Bank loans for tourism

Romanian banks offer a wide range of loans for the tourism sector, tailored to the needs of entrepreneurs. The main types of loans used in tourism are: investment loans - for the construction, extension or modernization of hotels, guesthouses and restaurants, working capital loans - to cover current expenses (salaries, utilities, supplies), digitalization and modernization loans - for the implementation of IT solutions in tourism (e.g. booking platforms, automation solutions), revolving credit lines - offering flexibility for unforeseeable expenses and loans co-financed with European funds which help beneficiaries to cover the necessary co-financing share in European projects.

The most popular banks offering financing for tourism are Banca Transilvania - offering loans for hotels, hostels and restaurants, CEC Bank - supporting tourism entrepreneurs with investment loans, Raiffeisen Bank - special loans for hospitality businesses, BCR - financing tourism projects, including with guarantees from the National SME Guarantee Fund (FNGCIMM).

7. Leasing finance in tourism

Leasing is a secure alternative to bank credit, used for the purchase of equipment, vehicles and infrastructure needed in tourism. The most used types of leasing used in tourism are financial leasing - allows the purchase of equipment and infrastructure with payment in monthly installments and operational leasing - suitable for long-term leasing of assets without becoming the owner.

In the tourism sector tourism leasing can be accessed for: hotels and hostels for the purchase of furniture, kitchen equipment, air-conditioning systems, travel agencies for car leasing for tourist transportation fleets and adventure tourism for the purchase of equipment for extreme sports, boats, and ATVs. The most active leasing companies in Romania are BT Leasing, Raiffeisen Leasing, Unicredit Leasing and BRD Sogelease.

Lease financing has both advantages and disadvantages. Advantages include quick access to capital for business development, flexible solutions for modernizing and expanding the business, and the possibility of low guarantee financing through government schemes. Disadvantages include the need for a solid financial track record for loan approval; interest rates can be higher for small or new businesses and operating leasing does not provide ownership of assets.

For example, a 4-star hotel in Brasov has acquired kitchen equipment, air conditioning systems and premium furniture through financial leasing and many hostels in the Maramureş and Bucovine area have used leasing to modernize rooms with luxury furniture and smart-home systems.

Some travel agencies in Cluj-Napoca have acquired a fleet of minibuses through financial leasing to organize guided tours in Transylvania. Airport transfer companies (e.g. those operating between Otopeni and Brasov or Constanta) use operational leasing to rent modern vehicles without high upfront costs.

An agreement center for extreme sports in the Prahova Valley has acquired ATVs and snowmobiles through financial leasing. A restaurant in Sibiu used leasing to buy kitchen

equipment, industrial fridges and professional espresso machines, some cafes in tourist areas used leasing to furnish their terraces with premium furniture.

8. Pay-as-you-go model and subscription funding

Pay-as-you-go (PAYG) and subscriptions are becoming increasingly popular in the tourism industry as they offer flexibility to tourists and financial stability to tour operators by being used for accommodation, transportation, tourist experiences and tourist assistance services.

Pay-as-you-go is a consumption-based payment model, where the tourist pays only for the services used, without being obliged to purchase standardized packages. Examples of the use of this model include: transportation services: Bolt, Uber and BlaBlaCar - pay per ride, no monthly passes, Danube Ferry-boat - tourists pay only for the crossings used; tourist experiences and guiding: on-demand guided tours in tourist cities (e.g: Cluj, Sibiu, Brasov), where tourists only pay for the tour taken, access to museums and attractions through mobile apps that charge according to time spent (e.g. Visit Bucharest); flexible accommodation: pay by the hour in hotels and hostels - some establishments in Bucharest and Cluj allow pay by the hour for rest rooms, coworking and relaxation spaces - tourist hubs (e.g. Commons Bucharest offers pay-by-the-hour access only for time spent).

Subscription financing involves the tourist paying a monthly/annual fee for access to exclusive services or benefits, thus ensuring recurring revenue for tourism service providers.

The best examples are transport passes: STB and Metrorex (Bucharest) - passes for tourists with access to all means of transport, Tarom and Wizz Air - offer loyalty pass programs with discounts on tickets; accommodation passes: Selina Nomad Pass (Oradea) - pass for digital nomads, offering accommodation in several locations in Romania, Airbnb offers "Airbnb for Work" - pass for frequent travelers; tourist attraction passes: Visit Bucharest Pass - unlimited access to museums and sights for a fixed price; spa and wellness center passes - hotels in spa resorts (e.g. Baile Felix) offer premium access through monthly passes; tourist experience passes: City Pass in big cities (Cluj, Brasov) - access to guided tours, public transportation and restaurant discounts, NomadX Romania - all-inclusive travel packages for digital nomads.

As with the other forms of tourism financing, the PAYG and Subscription models have advantages but also limitations. The most significant advantages are flexibility for tourists - they only pay for what they use; recurring revenue for the business - the subscription model provides financial stability; accessibility - more tourists can benefit from services without high upfront costs.

Limitations of these models include: the need for digital infrastructure (online payments, mobile apps), convincing tourists of the benefits of long-term subscriptions, strong competition from traditional package tour models.

9. Conclusions

These financing models are starting to gain more and more ground in Romanian tourism, offering modern and attractive solutions for both tourists and entrepreneurs in the hospitality industry. For this reason, the integration of these models, based on digital technology, in tourism can contribute to the development of this sector.

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