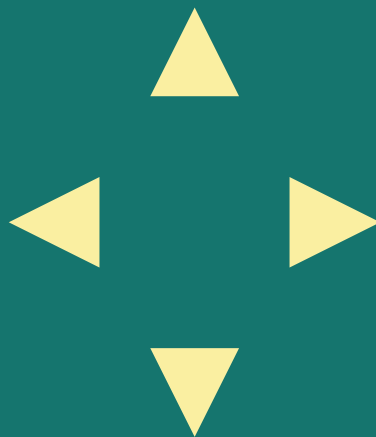


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IMPLEMENTING SUSTAINABLE MANAGEMENT IN SMALL AND MEDIUM- SIZED ENTERPRISES

ABSTRACT

In today's dynamic business environment, the sustainability of enterprises and the impact of their activities on the environment are increasingly being analyzed. This is a consequence of the introduction of sustainable management, focusing on creating a balance between economic efficiency, social responsibility and environmental protection. On the other hand, it can be said that sustainability extends beyond the idea of environmental protection and climate change. This could be defined as a comprehensive strategy that envisages business as a durable market, standing the test of time through a combination of ethical business practices and a commitment to the well-being of society and the environment. For small and medium-sized enterprises, which are the backbone of any economy, sustainable management provides an opportunity for long-term competitiveness and adaptation to modern challenges related to climate change, resource efficiency and social commitment. The main objective of the article is to separate sustainable management from traditional management, as well as to determine the essential characteristics and advantages of implementing sustainable management in small and medium-sized enterprises. The main research methods - are content analysis, analysis and synthesis method, intuitive and systematic approach.

KEYWORDS: sustainable management, enterprises, governance, social responsibility, environment

JEL: M1, 032, Q01

INTRODUCTION

Until recently, topics related to climate change and the scale of global warming were considered and analysed as a subject of theoretical discussions. Information about environmental degradation is obtained mainly from academic articles, school textbooks, non-governmental organizations, international

scientific events in different countries, etc. However, a turning point was the emergence of Covid-19, which restructured the understanding of human health and work. Against the background of financial and health crises, managers around the world faced an inevitable change - the need to think about human life and the impact on the environment. The paradigmatic change was in the new way of perceiving the climate and the environment as a "gift" that should be bequeathed in good condition to future generations, and not as an "abstract object" that is subject to constant attack. The growing concern of the world community about the state of the environment is due to these facts. 30 years ago, the leading role was played by

the actions of industrialized countries, but today, global commitment is necessary due to the expanded geographical distribution and difficulty in identifying environmental threats (Patarchanov, 2004). According to some scientists, sustainable development has various economic, environmental, and social aspects that are the basis of prosperity on a global scale, namely the development of enterprises and the social situation of consumers. Speaking of sustainable entrepreneurship, it is important to start with the sustainable individual actions of managers. (Filipova, et. al, 2023, p. 628)

The industrial and corporate sectors are the main source of carbon and greenhouse gas emissions. Almost every installed equipment, machine, electrical system, and other tool runs on fossil fuels as its primary source of energy, increasing the carbon footprint of the organization. Sustainable management is vital to minimize environmental impact, reduce operating costs, and meet regulatory requirements. This ensures long-term resource efficiency and responsible management.

Sustainability is a constantly developing field that began in the 1990s and gained prominence in the mainstream of the community and social consciousness, which is why it is gaining popularity, both in business and in the policies of different countries. The effective organization and management of the processes of sustainable development of the national space (Patarchanov, 2006) are a natural necessity and a distinctive feature of the modern stage of society and business. Issues of sustainable development are changing the corporate landscape and are emerging as key characteristics for the success of enterprises. In addition to the largest enterprises that are undertaking sustainability strategies, small and medium-sized enterprises are also beginning to introduce sustainable practices and improve their management with an ecological and long-term future perspective. Patarchanova shares that small and medium-sized enterprises are essential for modern economies. International experience shows that they play a key role in building competitive and stably developing economies. They support structural reforms and contribute to economic diversification. (Patarchanova, 2007). Small and medium-sized enterprises have a significant role in the management and use of limited global social and environmental resources. The skills of SME managers focus on how to increase employment, improve production, build market stability, create sustainability and innovation, improve the quality of life, and economic development of the regions in which they are integrated. The processes of economic and technological transition from the end of the last and the beginning of the new century pose challenges to society and the scientific community. Post-industrial development and the established information society create new problems with specific spatial and temporal dimensions, requiring adequate management solutions (Patarchanov, 2017).

1. LITERATURE REVIEW

Let's start with the fact that sustainability or sustainable development includes three aspects: economic, social and environmental, which forms part of sustainable management. (Todorov et al., 2023, p. 17). The concept of "sustainable management" refers to the management of organizations, resources or projects with an emphasis on sustainability in social, economic and environmental terms. This approach integrates the principles of sustainable development into decision-making and management processes. According to Kovachev and Kamenov, sustainable management relies on the philosophy of economic restructuring, whereby businesses adapt to their environments without aggressively exploiting natural, demographic, and cultural-historical resources when carrying out relevant business activities (Kovachev & Kamenov, 1999, p. 157). Sustainable management is defined as a model of social behavior that includes operational and strategic goals, tied to corporate values, norms and standards, the implementation of which contributes to harmony between different social groups involved in the implementation of a specific business. (Müller-Christ, 2010). In addition to this, Gorcheva

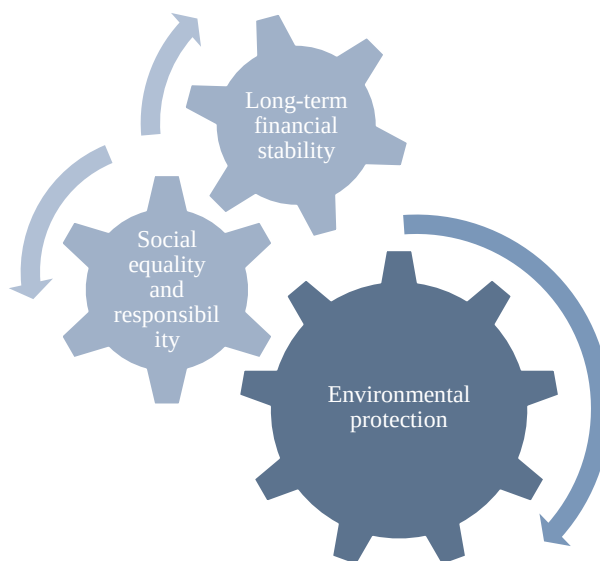
describes that the core of this model is associated with the processes of regulation and generation of sustainable growth, perceived as a challenge combining economic with social progress, encoded in corporate social responsibility. The model is considered in two main varieties, namely: (Gorcheva, 2014, p. 42)

- ✚ the voluntary decision of businesses to build and follow a model of behaviour that contributes to the good of society and the protection of the environment;
- ✚ Its transformation into a standard for the functioning of entrepreneurship, compliance with which increases the reliability of management, and thereby contributes to higher competitiveness, since maximizing profit and sharing it with different circles of society contributes to increasing investor confidence.

Sustainable management has three basic principles aimed at environmental sustainability, social responsibility, and economic viability:

- ❖ Reducing environmental impact through the use of renewable resources, energy efficiency, and waste management. Sustainable transport and urban systems must provide convenient and safe mobility for all citizens while minimizing their environmental impact (Tsvetkov, 2016).
- ❖ Improving working conditions, promoting equality, and engaging with local communities.
- ❖ Ensuring long-term financial stability without compromising the ability of future generations to meet their needs.

Figure 1. Principles of sustainable management



Source: systematization of the authors

In the main figure 1, it can be seen that sustainable management is built on three basic principles, which can also be called a "ladder" - environmental protection, social justice and economic financial growth. Sustainable management is present when a trend of economic growth is observed, combined with social responsibility, justice and a responsible attitude towards the environment. Accordingly, for an enterprise to be called a "sustainable organization", practices must be ethical and carried out in such a way that they can continue in the long term, without harmful impacts on society, the environment and the dynamic global market.

The integration of the concept of sustainable development into different spheres of economy and public life has engaged professionals in recent decades (Ivanova, P., 2024, p.213). Changes in the macroeconomic environment and the problems of large enterprises lead to a reassessment of the importance of small and medium-sized enterprises (Patarchanova, 2007). For small and medium-sized enterprises, the implementation of sustainable management is of great importance, as it improves competitive positions and competitiveness. From another perspective, customers increasingly prefer products and services that meet sustainable standards. The implementation of sustainable practices helps small and medium-sized enterprises to position themselves as reliable and responsible partners, and this unlocks access to new markets, including green public procurement and other sustainable European projects. According to Filipova and Yuleva, all changes made with an environmental focus create new business and opportunities focused him/her earning more finance and being turned towards nature. (Filipova & Yuleva, 2024, p.137) One of the main management problems is related to solutions that lead to cost reduction. Through "green" management, measures are introduced for the efficient use of resources such as water, electricity and materials, the creation of photovoltaic parks, solar panels for hot water, recyclable and environmentally friendly materials for production, electric cars, etc. Of utmost importance is the implementation of the circular economy in order to minimize waste from enterprises. The circular economy is an economic model that seeks to replace the traditional linear economy ("take-produce-dispose"). It is built on the principles to minimize waste and its harmful environmental impact. The goal of the circular economy is to create a sustainable model that benefits both business and society, while preserving the environment for future generations. Key to the goals of sustainable development is the circular (green) economy, related to this the recycling and reuse of products, which reduces damage this ecosystems, biodiversity, environmental pollution, and greenhouse gas emissions. (Kalaydzhieva, 2023, p. 669) Increasingly stringent environmental and social regulations require businesses to integrate sustainable practices into their operations. Entrepreneurs can avoid sanctions and build a reputation as responsible managers. The European Union has set up a waste recycling action plan. These waste management actions promote recycling, which reduces the amount of waste going to landfills and leads to greater resource efficiency. Although municipal waste represents less than 10% by weight of total waste generated in the EU, it is highly visible and closely linked to consumption patterns. Sustainable management of this waste stream reduces the adverse environmental impact of cities and communities, which is why the EU has set a target of recycling or preparing for reuse at least 60% of its waste by 2030 (Sustainable EC, 2024).

Sustainable management has several key characteristics, such as:

- Integration - inclusion of environmental, social and economic aspects in all management processes and decisions.
- Responsibility - organizations commit to minimizing their negative impact on society and nature.
- Long-term focus - striving for sustainable development that provides resources and opportunities for future generations.
- Innovation and adaptability - using new technologies and practices for waste reduction, energy efficiency and social impact.

Sustainable management finds applications in a wide range of industries and sectors, with its focus on achieving a balance between economic growth, social well-being and environmental protection, by introducing practices and strategies aimed at achieving long-term sustainability. Here are some main areas and examples:

➤ Corporate social responsibility.

Companies integrate sustainable principles into their business operations, ensuring transparency, ethics and responsibility towards the environment and society. For example, companies that publish corporate social responsibility (CSR) or sustainability reports. Investing in sustainable development and promoting long-term strategies instead of short-term profits, such as using ESG criteria (environmental, social, risk management) to evaluate projects. Nikolova and Patarchanova share that the accumulation of social capital increases efficiency, productivity, and innovation, significantly contributing to economic growth at the micro and macro levels (Nikolova, Patarchanova, 2017). Sustainable management is gaining increasing popularity due to global challenges such as climate change, social inequalities, and resource scarcity. Cooperation with local communities and investments in social initiatives and improving the local environment can contribute to improving the entrepreneurial culture on a global scale. According to Filipova, the goals and objectives of a corporate culture focused on social responsibility are to create a sense of "compassion" in the staff and solidarity towards the mission and strategy of the enterprise, as a result of which motivation will improve and the business will be successful. (Filipova, 2021, p.129)

➤ Supply chain management.

Optimizing processes to reduce carbon emissions and waste by creating "green supply chains." Examples include deploying electric delivery vehicles or choosing local suppliers to reduce transportation costs and emissions. As well as using blockchain to track the origin of raw materials.

➤ Energy and environment.

Energy efficiency, by applying technologies and methods to reduce energy consumption. For example, introducing LED lighting, energy-saving machines, and insulation materials. Using solar, wind, water and geothermal energy in the production process.

➤ Education and training.

Integrating sustainability into education means that universities and business schools should teach the principles of sustainable management, train future leaders with an ecological mindset. As well as encouraging employees to take the "Lifelong Learning" initiative to acquire knowledge about sustainable practices (for example, courses on implementing green technologies in the workplace). Economic, social, and political realities require solving the problems that have arisen. An active policy to promote sustainable education and stimulate green entrepreneurship (such as introducing it into academic disciplines) can lead to efficient and competitive production in the future. (Patarchanova, 2003).

➤ Construction and infrastructure.

Design and construction of energy-efficient and environmentally sustainable buildings. For example, buildings with certificates such as LEED (Leadership in Energy and Environmental Design) in Energy and Environmental Design). Use of sustainable materials, application of recycled or environmentally friendly building materials.

Sustainable management has a wide application and plays an important role in transforming the economy, society and business. It provides ways to combine growth with environmental protection, social responsibility and long-term sustainability.

For the purposes of the study, it is necessary to highlight the Deloitte 2024 report that climate change remains the top three concerns for global C-suite business leaders (CxOs), surpassing political uncertainty, competition for skilled personnel and a changing regulatory environment, among many others. A key indicator of the remaining power of climate on the leaders' agenda

is that 85% of CxOs say they have increased their investments in sustainability over the past year, 2024 – up from 75% in 2023 – and half have started implementing technology solutions to help achieve climate goals. The large-scale survey of 2,100 entrepreneurs from 27 countries about their views and strategies related to sustainability and climate change. (Deloitte CxO Sustainability Report, 2024)

Figure 2. Key findings on “enterprise resilience” according to Deloitte 2024 CxO



Source: Deloitte CxO Sustainability Report. (2024). *Signs of a shift in business climate action*, available at: <https://www.deloitte.com/global/en/issues/climate/cxo-sustainability-report.html>

As a summary of Figure 2, it can be said that 92% of participants believe that their company can grow while reducing greenhouse gas emissions. 85% believe that they have increased investments in sustainability. 70% expect climate change to significantly affect strategies and operations in the next three years. 50% are implementing technological solutions for environmental purposes, and another 42% plan to do so within two years. 45% are transforming their business model and strategy to address climate change. All activities related to sustainability and measures to improve the environment depend entirely on the decisions of managers, which in turn distinguishes good practices from the implementation of sustainable management in the activities of organizations.

2. METHODOLOGY

The main research methods used in the development are content analysis, analysis and synthesis method, intuitive and systematic approach. In the first part of the study, attention is paid to the analysis of the literature related to the meaning and main characteristics of sustainable management. Attention is paid to defining the three principles of sustainable management. On this basis, the second part is developed, which covers the difference between traditional management and sustainable management. Then, a model is proposed (Figure 3) to identify the stages in the process of sustainable management.

3. RESULTS

The difference between conventional management and sustainable management lies mainly in the approach, goals and principles that guide decision-making and the management of resources, people and processes. Table 1 provides a detailed distinction between the two management models - classical and sustainable management.

Table 1. Difference between classic and sustainable management

	Classical management	Sustainable management
<i>General concept</i>	It strives to achieve short-term economic goals, such as increasing profits, improving efficiency, and reducing costs. The main focus is on business growth and financial results.	Strives to achieve a balance between economic, social and environmental goals (the so-called "triple bottom line": people, planet, profit). A long - term vision that includes responsible use of resources and care for future generations. Example: Implementing renewable energy sources for production, even if this comes at a higher initial cost.
<i>Approach to resources</i>	Ordinary management focuses on maximizing the use of resources to achieve business goals, often without considering depletion or environmental impact. Example: Using non-renewable energy sources or materials, as long as it is economically viable.	It accepts resources as limited and approaches their management responsibly. It aims to minimize waste, use renewable sources, and recycle. Example: Zero waste production (zero waste production).
<i>Influence on stakeholders</i>	Ordinary management is primarily focused on shareholders and investors – the goal is to increase their returns. A more limited view of the impact on the community and ecosystems. For example, profit is a priority, even if it leads to pollution or social discontent.	It takes into account the interests of all stakeholders – employees, customers, society, the environment, and shareholders. An example could be creating jobs in communities affected by the company's operations or investing in environmental projects.
<i>Time perspective</i>	Short-term orientation – decisions are made to achieve immediate results. Example: Increasing production, even if it means spending more resources.	Long-term orientation – seeks solutions that will have a positive effect on the future. Example: Investing in technologies that reduce the carbon footprint for years.
<i>Innovation and adaptability</i>	Innovations are primarily aimed at achieving lower costs or higher productivity. For example, automation of production to increase capacity.	Innovations are aimed at creating products and processes that minimize harmful impacts on the environment and society. Example - development of biodegradable packaging.

Source: systematization of the authors

While conventional management focuses primarily on short-term growth and profit, sustainable management encompasses a broader vision that integrates economic, social, and environmental responsibility. It is suitable for organizations that want to remain competitive and adapt to the needs of modern society and the future. According this Kalaydzhieva (2024) the modern management should be considered as a function of possessed qualities in the following key areas – economy, digitalization, social and corporate responsibility. The principles underlying the ESG concept concern precisely these spheres, and competitiveness and good financial

indicators depend on their efficiency, balance and harmony. It is an international, established, modern and applied standard of management effectiveness (p.87).

In addition to the above-mentioned components of the two types of management, they also differ in the overall process. The process of managing an organization consists of several key stages that help achieve its goals through planning, organizing, leading, and controlling. These stages are considered part of the classical approach to management and are interconnected:

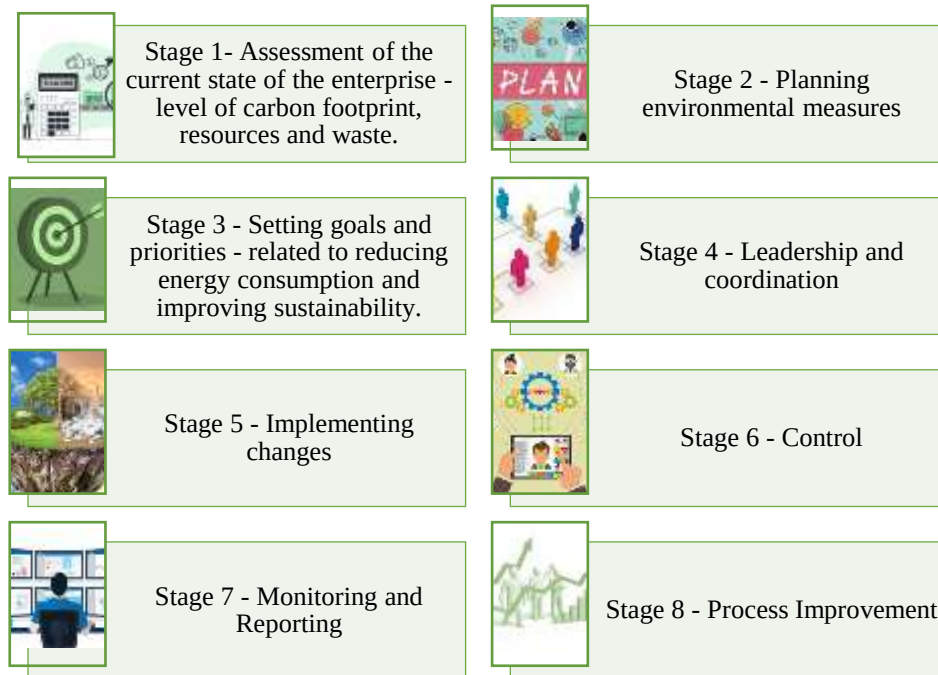
- Planning;
- Organizing;
- Leadership;
- Control;
- Coordination;
- Evaluation and improvement.

While the management process in sustainable management is also built up of the following several stages:

- ❖ Assessment of the current state:
 - Analysis of carbon footprint, resource consumption, and waste.
 - Identifying areas for improvement.
- ❖ Setting goals and priorities:
 - Establish measurable goals, such as reducing energy consumption by 20% in 3 years.
 - Prioritizing actions with the greatest impact on sustainability.
- ❖ Making changes:
 - Investing in appropriate technology and staff training.
 - Incorporating sustainable practices into the company's strategy.
- ❖ Monitoring and reporting:
 - Regularly track progress through key performance indicators (KPIs).
 - Preparing sustainable transparency reports for stakeholders.

Thus, sustainable management looks like this:

Figure 3. Stages in the sustainable management process



Source: systematization of the authors

Integrating sustainable management into the activities of small and medium-sized enterprises is of great importance, as it will improve the competitive positions and competitiveness of a large part of them, provide the opportunity for sustainable production, and reduce social and environmental risks. Without small and medium-sized enterprises, it is impossible to achieve a net-zero emissions economy. They make up 99.8% of all enterprises and must be motivated and supported to implement a holistic approach to sustainable and responsible business in their operations. Green technologies offer a unique opportunity for small and medium-sized enterprises to expand their activities, improve efficiency and contribute to sustainable development in all countries. From the modernization of the energy sector to sustainable production practices, this approach combines economic success with environmental responsibility. Through innovation, education and strategic planning, small and medium-sized enterprises can become an example of the successful implementation of green technologies and overtake large industrial companies.

4. DISCUSSION

The integration of sustainable management practices in small and medium-sized enterprises (SMEs) is often viewed as a key step toward achieving long-term environmental and economic benefits. However, studies indicate a lack of correlation between the awareness of sustainability principles and their practical implementation. This discrepancy highlights unresolved issues that hinder SMEs from adopting sustainable strategies effectively.

- Lack of Correlation in Sustainable Management Adoption

Empirical research suggests that while many SME owners acknowledge the importance of sustainability, this awareness does not necessarily translate into action. Despite available guidelines, incentives, and regulatory frameworks, the adoption of sustainable management practices remains inconsistent. Several studies have reported that even enterprises with sustainability goals struggle to implement them due to financial constraints, a lack of technical

knowledge, or resistance to change. This lack of correlation between awareness and implementation suggests that external pressures (such as regulatory requirements or consumer demand) may not be sufficient drivers of change unless they are complemented by internal strategic commitment and capacity-building efforts.

- Unresolved Issues in Implementation

Several unresolved issues further complicate the integration of sustainable management in SMEs:

- ✚ Financial Limitations – Many SMEs operate on tight budgets, making sustainability investments in energy-efficient technologies, waste management, or ethical supply chains difficult to justify in the short term.
- ✚ Knowledge Gaps – Business owners and managers often lack expertise in sustainability strategies, making it challenging to navigate regulations and implement effective green practices.
- ✚ Short-Term Business Focus – SMEs typically prioritize immediate profitability over long-term sustainability, leading to a reluctance to invest in eco-friendly solutions.
- ✚ Limited Market Incentives – Sustainable practices do not always translate into direct competitive advantages, especially in industries where cost remains the dominant factor for consumers.

These unresolved issues demonstrate why many SMEs struggle to move beyond theoretical commitments toward concrete sustainability actions.

- Relationships Between Observed Facts

The interconnections among these factors reveal a complex challenge for SMEs. For example, the financial limitations SMEs face are directly related to their short-term business focus, as enterprises with limited cash flow are less willing to invest in long-term sustainability initiatives. Additionally, the lack of knowledge about sustainability practices often exacerbates regulatory compliance difficulties, leading to uncertainty and hesitation in implementation. Furthermore, the limited market incentives contribute to the lack of correlation between sustainability awareness and action. Without clear economic benefits or consumer-driven demand for sustainable products, SMEs may see little reason to prioritize eco-friendly changes.

The findings suggest that while SMEs recognize the importance of sustainable management, multiple barriers prevent them from fully integrating these practices. The lack of correlation between sustainability awareness and real-world application, along with several unresolved issues, underscores the need for targeted support mechanisms. Addressing financial, educational, and market-related barriers could improve SMEs' ability to implement sustainable management effectively. Future policies should focus on bridging the gap between sustainability theory and practice by offering tailored incentives, educational resources, and regulatory simplifications that align with the realities of SMEs.

CONCLUSION

Sustainable management is a strategic approach that can provide SMEs with a competitive advantage, reduce costs and build a positive image. Although the challenges are significant, the benefits of this approach far outweigh the efforts. The integration of sustainable practices is not only an opportunity but also a necessity for SMEs to remain relevant in a rapidly changing world. Sustainability, as defined by the principles of environmental, social and corporate governance, represents a harmonious convergence of growth potential and responsible business

practices. By integrating environmental considerations, social impact and management standards, enterprises can not only withstand today's challenges but also thrive in the complex landscape of tomorrow. From the above, we can draw the following conclusions:

First, SMEs play a key role in advancing sustainability, despite facing budgetary and human resource constraints. While these constraints can pose challenges to implementing sustainable change and conducting in-depth measurement and reporting, it is crucial to recognize that significant improvements within SMEs are not only possible but also imperative. These enterprises, although smaller in scale, have the potential to contribute significantly to the broader sustainability landscape. This reinforces the idea that inclusive and impactful progress requires the active participation of enterprises of all sizes.

Second, embracing environmental, social, and corporate governance is not just a trend, but a strategic imperative for businesses seeking to create a lasting impact. It is a call to action for companies to reassess their practices, adopt a broader perspective on sustainability, and meaningfully contribute to a world where responsible business is synonymous with lasting success.

Third, the difference between classical and sustainable management lies in the approaches, objectives, and focus on management. Classical management focuses on efficiency, productivity, and profit maximization. It strives for short-term financial results and economic success. It usually ignores the social and environmental consequences of decisions. It relies on hierarchical structures and strict organizational discipline. It uses resources to the maximum, without paying much attention to their sustainable management. Sustainable management prioritizes a balance between economic, social, and environmental factors. It aims for long-term sustainable development, minimizing the negative impact on the environment and society. It includes stakeholders in the decision-making process and encourages responsible behaviour. It contains more flexible and collaborative structures that promote innovation and sustainability. It is characterized by the efficient and responsible use of resources, taking into account future generations. In summary, classical management is oriented towards immediate profit, while sustainable management is aimed at long-term well-being and harmony between business, society, and nature.

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ASSESSING THE IMPACT OF THE LEADER PROGRAM APPROACH ON THE SOCIAL AND ECONOMIC DEVELOPMENT OF RURAL AREAS IN BULGARIA: AN EMPIRICAL ANALYSIS

ABSTRACT

This paper presents an empirical analysis of the impact of the LEADER program approach on the social and economic development of rural areas in Bulgaria. The analysis is based on a structured survey conducted among 321 respondents from various municipalities across the country. The study explores key dimensions such as public awareness, participation levels, perceived benefits, barriers to engagement, and overall perceptions of effectiveness. The findings indicate a generally positive attitude toward the LEADER program approach and its outcomes, particularly in terms of community development and local

empowerment. However, the results also reveal significant gaps in information dissemination and highlight the need for more strategic and inclusive engagement of local stakeholders in the planning and implementation processes.

KEYWORDS: LEADER, local development, LAGs, survey research, social impact

JEL: R11, O18, Q18, L31, H77

INTRODUCTION

Over the past two decades, the LEADER program approach has emerged as one of the key instruments for promoting sustainable rural development within the European Union. Implemented through Local Action Groups (LAGs), the approach is grounded in bottom-up principles, enabling rural communities to design and execute local development strategies tailored to their specific needs, priorities, and available resources. These strategies aim to foster economic diversification, social inclusion, and stronger local governance by actively involving stakeholders from the public, private, and civil society sectors.

In the Bulgarian context, the LEADER program approach has been integrated into national rural development policy, with Local Action Groups serving as the main vehicles for its implementation. However, while considerable financial resources have been allocated to

support these initiatives, there remains a need for a deeper understanding of their actual impact on the social and economic fabric of rural areas.

1. LITERATURE REVIEW

The LEADER approach (*Liaison entre actions de développement de l'économie rurale*) has been developed as part of the European Union's broader policies to promote territorial cohesion and sustainable rural development. Its defining feature is the bottom-up methodology, which empowers local communities to actively identify challenges and propose tailored solutions for their development (European Commission, 2014). This participatory dynamic is institutionalized through the creation of Local Action Groups (LAGs), composed of a diverse mix of actors including local authorities, NGOs, farmers, SMEs, and civil society organizations. These groups form legally recognized partnerships aimed at promoting public-private cooperation, enhancing local governance, and building capacity for economic diversification (Buda, D., Pop, A., 2024).

Over time, academic discourse has emphasized the relevance of neo-endogenous development, a concept that blends endogenous potential with external linkages. Scholars such as Gkartzios, M., Lowe, P. (2019), Dax and Oedl-Wieser (2016), Shucksmith (2000), and Shortall (2008) have argued that strategic use of local resources, social cohesion, and cultural identity can significantly stimulate innovation and social capital. Shucksmith (2000) further interrogates the role of local elites and the representation process within LEADER, cautioning against imbalances in participatory governance, while Shortall (2008) underscores the need for inclusive engagement, particularly among women and marginalized groups.

In terms of tangible outcomes, research points to the LEADER approach as an effective mechanism for reinforcing territorial coherence and implementing integrated development actions, which can enhance economic diversification and community well-being (Florescu, M., Rahoveanu, A., 2021). For instance, more than 60% of LAGs in Romania attracted additional funds beyond their initial allocation, leading to the creation of over 3,400 new jobs - a compelling indicator of the program's economic impact (Staic, L., Vladu, M., 2021).

Functionally, the LAG serves as the central actor within the LEADER framework, tasked with designing and executing local development strategies in close collaboration with both public and private stakeholders. These strategies often target agrifood systems, rural tourism, small-scale enterprises, and infrastructure improvements, leveraging the LAG's position to align resources with community-specific priorities (Ferrazzi et al., 2013). The approach also enables an environment for governance innovation, where local actors are not just recipients of development, but co-creators of its direction and implementation (Florescu & Rahoveanu, 2021).

Beyond economic and institutional gains, LEADER's social dimension has also drawn scholarly attention. Menconi et al. (2018) argue that LAGs play a crucial role in enhancing the sense of belonging among rural residents by fostering connections with cultural, historical, and environmental assets. This emotional and psychological bond between people and place is viewed as fundamental to territorial identity and community resilience.

In the Bulgarian context, the 2014–2020 Rural Development Programme, administered by the Ministry of Agriculture, integrated LEADER as a central axis for supporting LAGs. Within this framework, each LAG developed and implemented a localized development strategy, financed through EU and national funding. Evaluations of implementation effectiveness in this period highlight several critical success factors: open communication with the community, technical support for applicants, and sensitivity to the specific local context.

Despite the overall positive narrative surrounding the LEADER program approach, the actual evaluation of its social and economic impact remains methodologically challenging and often inconclusive. As highlighted by the European Court of Auditors (2022), there is “insufficient evidence of the added value of the LEADER approach,” with concerns about financial efficiency, project relevance, and long-term outcomes. In the Bulgarian context, while the LEADER measure has been implemented as a core component of the Rural Development Programme (2014–2020), systematic empirical assessments of its impact on rural communities remain limited. Most existing analyses tend to focus on implementation processes rather than outcome-based evaluation. This research seeks to address that gap by providing an empirical analysis of the social and economic effects of LEADER/CLLD in Bulgarian rural areas, with particular attention to local development dynamics, stakeholder engagement, and measurable indicators of success.

In a broader context, we find several studies aimed at assessing the degree of socio-economic development of regions and municipalities in Bulgaria, such as Tsonkov (2023, 2024), Tsonkov, Petrov and Slaveva (2024), Petrov and Tsonkov (2023), Borisov, Petrov and Tsankov (2024), Aleksandrova-Zlatanska (2019), Tsekov (2021), Berberova-Valcheva (2024), Georgieva-Petrov (2024) and Angelova (2020). All of the authors mentioned examine various aspects of regional and municipal development, such as spatial and regional development, regional disparities and how to overcome them, fiscal autonomy and municipal policy, demographic development, and others. In this regard, the present study fills existing scientific gaps in the field of municipal regional development by assessing the contribution of the Leader approach and Local Action Groups.

2. METHODOLOGY

The aim of the present study is to assess the perceived effects of the LEADER program approach on the social and economic development of rural regions in Bulgaria. The analysis draws on data from a structured survey conducted among key local stakeholders, offering empirical insights into levels of awareness, participation, experienced benefits, and perceived challenges associated with the implementation of the approach.

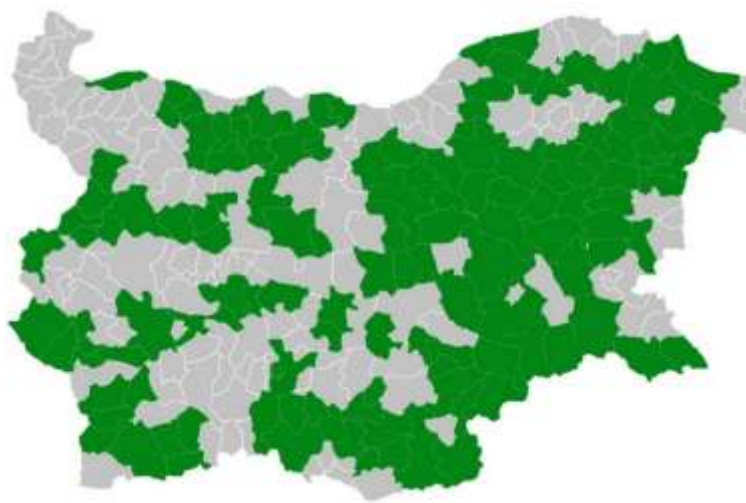
This study is based on a quantitative analysis of survey data collected from 321 respondents residing in municipalities located within the territories of various Local Action Groups (LAGs) in Bulgaria. The survey was specifically designed for this research and includes both closed- and open-ended questions. It is structured into six thematic sections:

1. Demographic characteristics of respondents (gender, age, education, affiliation, and geographic location);
2. Level of awareness and participation in the LEADER/CLLD programme;
3. Assessment of impact on key aspects of regional development, including economy, social services, infrastructure, culture, and environment;
4. Perceptions of the effectiveness of LAG activities;
5. Barriers to participation in the programme;
6. Suggestions for improvement and expectations from the local community.

The questionnaire was distributed online via Google Forms, as well as through collaboration with local partners such as LAGs and municipal authorities, during the period January–February 2025. The closed-ended items include Likert-scale questions ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), allowing for quantitative measurement of attitudes

and perceptions. The open-ended questions provided respondents with the opportunity to express specific observations, opinions, and recommendations.

Figure 1. Map of municipalities in Bulgaria that took part in the study.



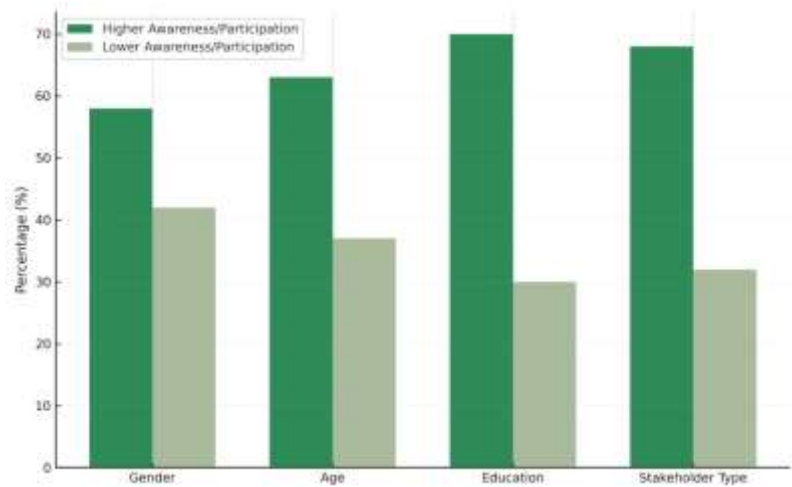
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3. RESULTS

Awareness and Participation

The survey findings indicate that 47% of respondents have participated in LEADER/CLLD-related projects. Women reported higher levels of actual involvement compared to men, while younger participants showed lower engagement rates relative to older age groups. The highest levels of awareness were observed among individuals with higher education and representatives of the public sector and NGOs. Awareness levels were significantly higher in municipalities where the LAG had conducted active outreach campaigns, including seminars and community events.

Figure 2. Awareness and Participation



Source: own

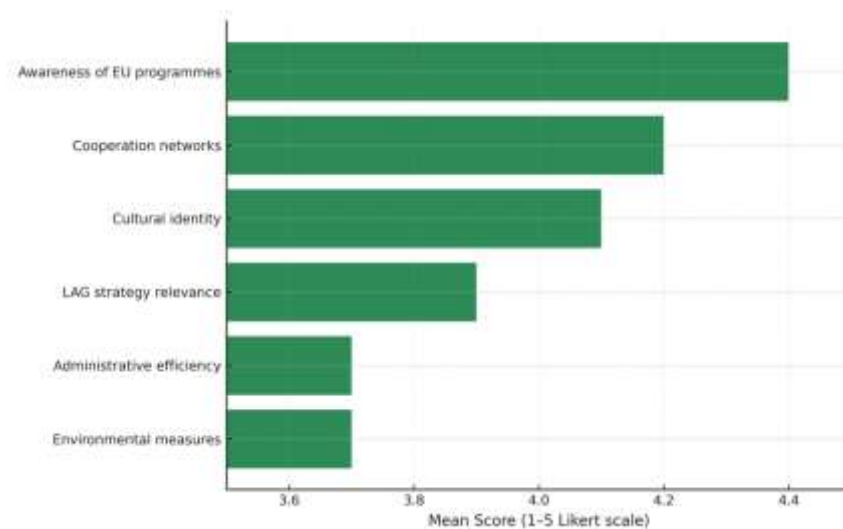
Perceived Impact

Respondents' ratings of LEADER/CLLD's impact on various aspects of regional development ranged from 3.7 to 4.4 on a 5-point Likert scale. The most positively rated aspects were:

- Increased awareness of EU programmes,
- Creation of cooperation networks, and
- Preservation of local cultural identity.

Lower scores were assigned to the administrative efficiency of municipalities and environmental measures. Despite these variations, most respondents believed that their LAG's strategy aligns with the needs of the local territory.

Figure 3. Perceived Impact



Source: own

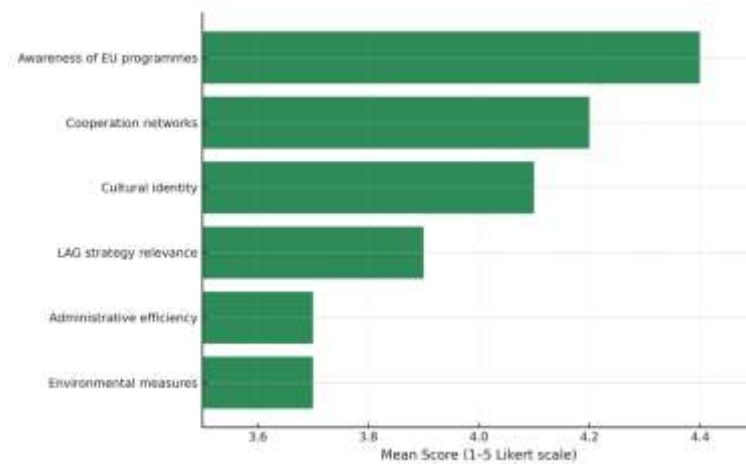
Perceived Benefits

Participants identified several key benefits from their involvement in the programme:

- Improved knowledge and professional development,
- Access to funding and advisory services,
- Opportunities to attend training and build networks with other stakeholders and local authorities.

Respondents from the business sector emphasized enhancements in entrepreneurial capacity and the ability to implement local initiatives.

Figure 4. Perceived Benefits



Source: own

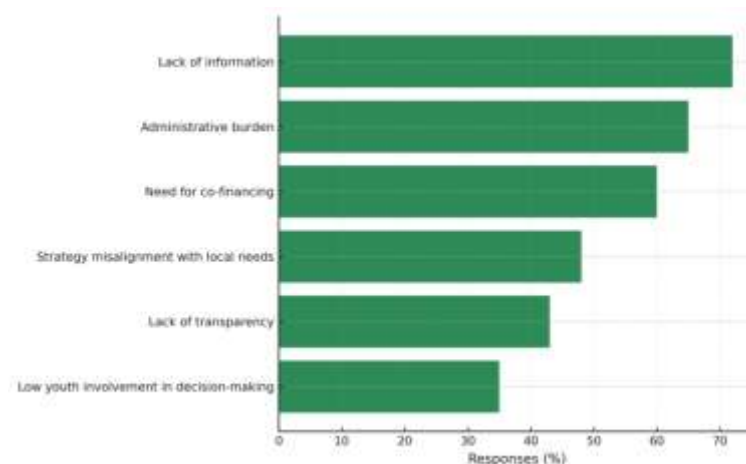
Barriers and Challenges

The most frequently mentioned barriers included:

- Lack of information,
- Cumbersome administrative procedures, and
- The need for co-financing.

Some participants noted that LAG strategies do not always reflect the current needs of local communities, and concerns were raised regarding transparency in project evaluation. Among younger respondents, there was a notable sense of limited involvement in decision-making processes.

Figure 5. Barriers and Challenges



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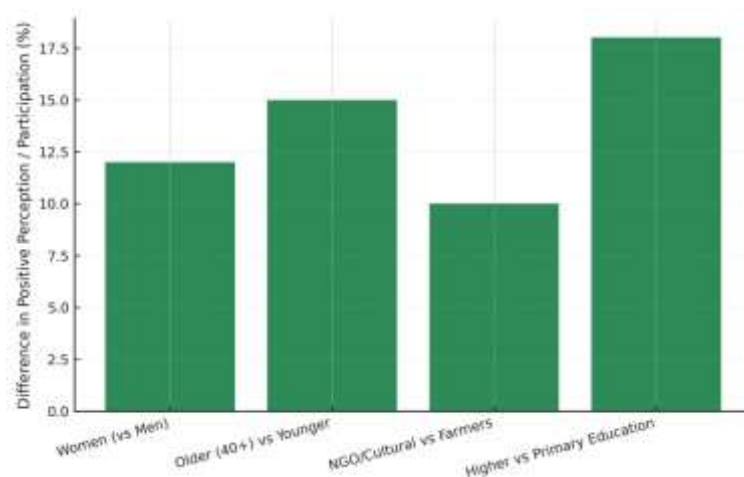
Group Differences

The analysis revealed important variations across demographic and stakeholder groups:

- Women demonstrated higher levels of participation and more positive perceptions of LEADER/CLLD outcomes.

- Older respondents (40+) were more inclined to assess the programme positively compared to younger individuals.
- NGO and community center representatives emphasized the social and cultural roles of the approach, while farmers focused on the need for clearer economic support mechanisms.
- In terms of education, participants with secondary and higher education assigned significantly higher impact ratings than those with only primary education

Figure 6. Group Differences



Source: own

1. DISCUSSION

The findings of this study confirm that the LEADER Program approach has a positive impact on several dimensions of regional development. The most highly rated outcome was the increase in public awareness regarding opportunities under the Rural Development Programme, which is a critical factor for encouraging active participation of local communities in project planning and implementation. This aligns well with LEADER's core objectives of mobilizing local capacity and fostering community-led initiatives.

The comparative analysis by demographic indicators reveals that women tend to be more actively engaged in LEADER program activities than men, and individuals over the age of 40 participate more frequently than younger respondents. This may be interpreted as a function of accumulated experience, existing institutional networks, and a stronger motivation to implement concrete initiatives in later stages of life.

Despite the overall positive perception of the programme, the research also identifies several important challenges. Some respondents reported that LAG strategies do not fully reflect the needs of all stakeholder groups, particularly small businesses, civil society organizations, and young people. Barriers such as limited access to clear and user-friendly information and burdensome administrative procedures were frequently mentioned. These issues are echoed in studies from Central and Eastern Europe, suggesting that there is a broader need to adapt implementation procedures to local contexts (e.g., Guzal-Dec & Zbucki, 2021; Kassai & Farkas, 2013).

Responses to the open-ended survey questions further emphasize the need to:

- Improve transparency in project evaluation and decision-making,

- Digitize communication channels, and
- Enhance citizen participation in governance processes.

In this context, LEADER/CLLD continues to hold strong potential as a tool for sustainable rural development, but it requires more targeted policy support at both local and national levels. Differences in participation and perception across gender and age groups also point to the necessity of developing more inclusive and tailored outreach strategies. Additionally, enhanced institutional backing and the simplification of application procedures would help unlock broader community engagement and foster more equitable access to programme benefits.

CONCLUSION

The LEADER approach has demonstrated a clear contribution to the sustainable development of rural areas in Bulgaria, particularly through the promotion of local participation, the strengthening of social capital, and the encouragement of entrepreneurial initiatives. The results of this study confirm that, when effectively implemented, the LEADER approach can serve as a valuable tool for empowering rural communities and addressing locally identified needs.

However, to further enhance its effectiveness and broaden its impact, several policy and implementation improvements are recommended:

1. Enhancing public awareness through targeted local information campaigns that increase visibility and understanding of the LEADER approach opportunities.
2. Providing more accessible advisory and support services to assist potential applicants throughout the project lifecycle.
3. Simplifying administrative procedures in order to reduce bureaucratic burdens and improve access to funding, particularly for smaller organizations and first-time participants.
4. Actively engaging youth and vulnerable groups through tailored outreach strategies and inclusive participation mechanisms.

By addressing these challenges and building on its existing strengths, the LEADER approach can continue to evolve as a key driver of inclusive and resilient rural development in Bulgaria and across the European Union.

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DIGITAL TRANSFORMATION: THE KEY TO SMART CITIES AND MODERN REGIONAL DEVELOPMENT

ABSTRACT

The process of organizational change through the use of digital technologies and business models to improve economic performance and respond to changing consumer behavior is inevitable for modern organizations. Digital transformation is a comprehensive process of integrating modern digital technologies into economic, social and administrative systems, in order to achieve more effective, adaptive and sustainable forms of management, production and service. It is not limited to the simple implementation of technologies but implies a deep rethinking and reorganization of business models, public policies and social interactions. The significance of digital transformation for the economy is multidimensional. At the macroeconomic level, it accelerates economic growth by increasing productivity, encourages innovation and creates new markets and forms of employment. At the same time, digitalization contributes to greater transparency, flexibility and efficiency in the management of public resources, which in turn improves the investment climate and competitiveness at the regional and national levels. At the macroeconomic level, digital transformation allows enterprises to optimize their processes, personalize the services offered and respond more adequately to the needs of consumers in the conditions of a globalizing and high-tech economy. In addition, it creates prerequisites for digital

inclusion and social innovation, which are essential for fair and sustainable economic progress. The aim of this study is to determine to what extent the demand for digital services is developing in Bulgarian regional development and what are the factors that limit this process. The determinants of demand are examined as a function of the interests and attitudes of users of digital services in the public sector.

KEY WORDS: digital services, artificial intelligence in municipalities, regional digitalization

JEL: H7, R53, R58

INTRODUCTION

Digital transformation plays a central role in creating smart cities and stimulating modern regional development. In recent years, information technologies have expanded their application in all areas of governance, economy and people's lives. Thanks to them, the world is moving rapidly from economy 3.0 to economy 4.0 and is expected to enter 5.0. The main feature that distinguishes economy 5.0 from previous ones is intelligent development. Through the integration of innovative technologies such as artificial intelligence, big data and blockchain technology, cities and regions can become more effectively connected and sustainable. Smart cities also use digital solutions to optimize transport systems, manage energy, monitor the environment and improve the quality of life of citizens. At the same time, regional development is accelerated through intelligent infrastructure, digital services and e-government platforms that facilitate communication between business, administration and citizens. Digitalization not only improves the efficiency of urban and regional systems, but also creates new opportunities

for economic growth, sustainable development and social inclusion. Despite all these opportunities, we can say that there are some difficulties in the introduction of digitalization. They are related to the higher initial costs of implementation, especially in smaller municipalities. Training people is also a serious challenge.

Of course, in order to achieve a high degree of connectivity and economic efficiency in the economy, it is necessary to universally implement new information technologies in all areas of the social and economic life of the countries. For this purpose, it is important to create a digital space in municipalities and between them. At the same time, with the advent of information technologies, interest in territorial and regional issues is growing, which partly explains the revival of interest in regional science and regional economics. This requires modeling regional development as a function of territorial and innovation (information) policies. In Bulgaria, statistics show a high degree of access to the Internet. However, digital connectivity and smart development in municipalities are still at a low level.

The transition to green energy and sustainable urban planning, driven by EU policies and local community perceptions, has positioned the concept of the “green city” as a key topic in both academic and practical discourse. This study provides an in-depth analysis of the current understanding of green cities, while identifying cities structurally prepared for this digital transition.

In recent years, several economic models of cities have been developed around this hypothesis, including at the European Union level. They differ above all in the specific characteristics of each region, but also in terms of culture, level of development, political decisions or pre-existing urban planning. Although all these economic models of cities share common principles such as the desire to have a variety of services when acquiring housing, a detailed analysis reveals that they differ significantly (Pozoukidou & Chatziyiannaki, 2021). After analyzing the existing specialized literature, a relationship can be observed between the perception of quality of life and the level of green spaces in the city. Giannico et al. (2021) conducted an in-depth study using a sample of 51 European cities, in which they showed that, from the perspective of citizens, urban governance of the city and green spaces contribute to the general well-being of their residents, reduce the effects of climate change and have a significant positive contribution to the overall health. This shows that the concept of a green city will be increasingly popular as a model for the development of European cities (Coison et al., 2024). Based on this type of study and model of digitalization development, we can say that external factors play a key role in the development of internal factors.

1. LITERATURE REVIEW

In our study, we examine the larger Black Sea municipalities. In Bulgaria, these are the municipalities of Shabla, Kavarna, Balchik, Aksakovo, Varna, Avren, Dolni Chiflik, Byala, Nessebar, Pomorie, Burgas, Sozopol, Primorsko and Tsarevo. Their total area amounts to 5,737.3 km², which represents 5.2% of the country's territory. It includes 202 settlements with a population of 726,745 people, or 10.4% of the country's population. The center in the northern part - the city of Varna - is the third most populous center, and the center in the southern part - the city of Burgas - is the fourth most populous city in the country.

The main objective of the study is to analyze the role of digital transformation as a key driver for building smart cities and sustainable regional development. The study aims to identify good practices, innovative technologies and management approaches that contribute to the modernization of the urban environment, improving the quality of life and stimulating economic growth at the regional level. The emphasis is placed on the interaction of the public sector, business and citizens in the process of digital transformation.

Often, an analysis of different groups of users is used as a tool, in terms of the market situation of certain services, as well as to assess their ability to influence or be influenced by the market price. In general, there is a big difference between the production and management approaches applied in large and small municipalities. The size of municipalities and the digital technologies they use are often related to the potential of the municipality to make investments and successfully develop its business. Larger municipalities have easier access to financing and can very quickly implement the digitalization approach, as long as they see a sense or motive for it. For smaller municipalities, digitalization does not create opportunities, but on the contrary, requires additional investments that are too much for them. High initial costs, associated in some cases with a risk of insufficient return on investment, can become a serious challenge in terms of the accessibility of the technological component of digitalization.

In order to have objective data, we will consider only municipalities with a population of over 1,500 people. Thus, they will fall into focus and analysis because they could build innovative systems for digitalization. In this direction, a number of studies can be found related to new trends in technological scale, which apply an adequate approach to studying municipalities. A similar study analyzes the innovative technologies of municipalities in the Black Sea region of Bulgaria (Tsonkov et al., 2024). In this analysis, the authors propose the formation of a criteria framework for assessing the degree of digitalization of municipalities in the Black Sea region of Bulgaria. It is important to note, despite the population, whether they have a regulatory environment and opportunities for the introduction of digitalization and innovation policies. In order to analyze the degree of application of modern information and communication technologies, it is necessary to use a systematic approach, comparative analysis, statistical assessment, geoeconomic analysis, and other scientific approaches to clarify the problem areas in the field of intelligent development of municipalities in the space of the Bulgarian maritime region. Due to the specificity of the relief, we can say that a multidisciplinary method is needed to assess digitalization and innovation for a smart and modern city

2. METHODOLOGY

Digital transformation is a subject of attention among several scientific researchers (Berman & Marshall, 2014; Chaffey, 2015; Stott et al., 2016; Scuotto et al., 2017), as well as managers, consultants from different sectors (Indulska et al., 2012; Li, 2018; Nagel-Martin, 2016; Wade, 2015). The definitions presented below express the essence of the concept of “digital transformation” in two different groups – business and public organizations.

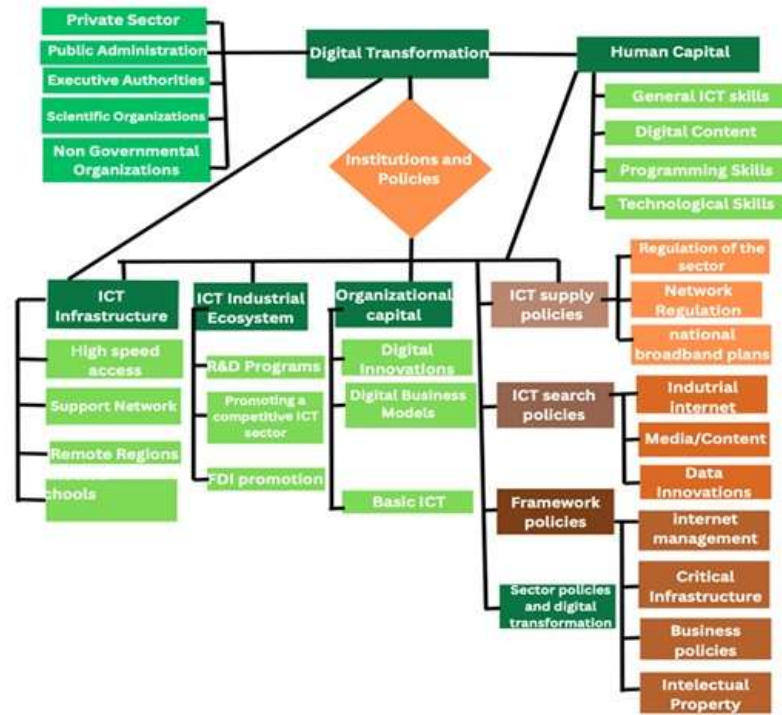
“Digital transformation refers to strategic, customer-centric business transformation that requires cross-sectoral/horizontal organizational change, as well as the implementation of digital technologies – digital transformation of business and business strategies. Digital transformation is not about something being digital or about digital products or services. It is a combination of transformative digital technologies, tools, processes and most importantly people (culture and mindset) that truly transform the way business is done today.” (Ministry of e-Government, 2022). Technology is of course an important part, but digital transformation is not limited to that. It is usually tied to innovation, as it is “not a reaction to today’s business environment, but rather a proactive approach to anticipate the next big opportunity” (Ministry of e-Government, 2022).

The development of information and communication technologies is the driver of digital transformation in the public sector. It is associated with initiatives such as launching online services or modernizing software. Therefore, the term is more likely to be “digitalization” than “digital business transformation” (Ministry of e-Government, 2022).

Digital transformation is a process characterized by the widespread implementation and combination of digital technologies in all spheres of public and economic life (Council of Ministers of the Republic of Bulgaria, 2020b).

Figure 1 presents a diagram of digital transformation with the main participants in it and the existing interconnections between them.

Figure 1. Diagram of digital transformation – Main actors and interrelationships (Council of Ministers of the Republic of Bulgaria, 2020b).

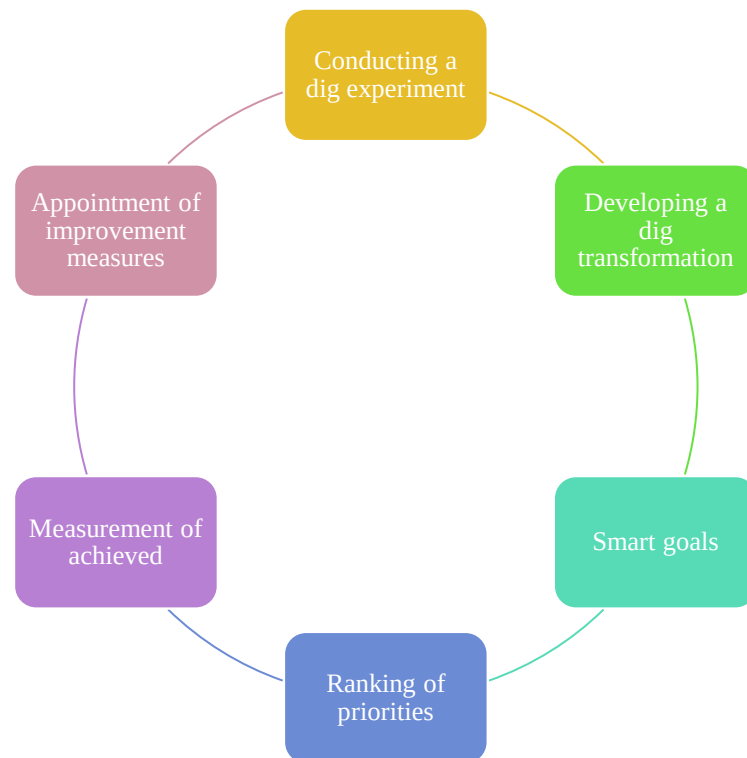


Source: Miroslava Boneva (2024), Factors for digital and business transformation.

The importance of digital transformation is associated with the broad impact that changes in the behavior of economic entities have. According to the sixth area of impact “Digital Economy”, presented in the strategic document “Digital Transformation of Bulgaria for the period 2020-2030” (Council of Ministers of the Republic of Bulgaria, 2020b), digital transformation itself has enormous potential for economic growth both at the regional and national levels. Bulgaria should build on its strengths in advanced digital technologies and its stable presence in traditional sectors to take advantage of the opportunities offered by technologies such as 5G networks, the Internet of Things, big data, robotics, AI, blockchain, 3D printing, etc. This is expected to allow Bulgarian organizations to take a share of the emerging markets of the products and services of the future. Industry and its interaction with services occupies a large share and plays an important role in the development of the Bulgarian economy. This interaction is important to be supported by facilitating investment in new technologies and accepting the changes that have occurred as a result of increasing digitalization and the transition to a low-carbon and circular economy. According to Slavova (2016) and the authors cited, the transformation of consumer experiences when using the organization’s goods and services is expressed in the in-depth study of market segments and their behavior in the marketing space, consumer behavior and loyalty, interactive communications with customers in the sales process and the digitalization of the largest possible number of touchpoints between the organization and customers. An algorithm for implementing digital business transformation has been proposed to improve administrative services. It aims

to transform processes and adapt to modern conditions caused by the dynamics of technological development, related to the regulatory framework, as well as the growing dynamics of consumer demand.

Figure 2. Algorithm for digital transformation in the organization



Source: Boneva, 2018

Figure.2 shows the digital transformation model. The logical sequence of key aspects when implementing digital transformation resembles the Deming cycle (Nedyalkov et al., 2018), as transformation is not a one-time act, but a process that serves to adapt the organization to the changing external environment and continuous improvements are needed.

The stages through which the digital transformation in the organization should go have a strict sequence:

- 1) Conduct a digital audit – this is the initial stage, as a diagnosis of the condition is necessary to proceed to other actions.
- 2) Developing a digital transformation strategy - based on the current state, a strategic framework for desired business development is outlined.
- 3) Setting SMART goals – in accordance with the strategic framework, goals are set that are specific, measurable, achievable, relevant, have practical significance and are time-bound.
- 4) Prioritization – arranging goals by degree of importance and allocating tasks for implementation.
- 5) Measurement of the achieved results - after completing the tasks, their implementation is checked and evaluated, compared with the indicators of the respective goal in order to assess the degree of its implementation.
- 6) Appointment of improvement measures - depending on the achieved results and the discrepancies with the set goals, as well with the changes that have occurred in the external

environment in the meantime, proposals for improvements are created, and a new transformation cycle begins.

In connection with the application of an adequate and relevant framework for studying this process, the research of Tsonkov and Petrov can be mentioned. The authors develop an analysis for assessing sustainable and smart cities (Tsonkov & Petrov, 2024). Their research and analysis represent a serious attempt to analyze the process of implementing new technologies and digital tools, including 5G technologies (Tsonkov & Petrov, 2024). According to the authors, the digital development of municipalities is directly related to the implementation of a new generation of mobile and Internet communications and technologies. Thinking in this direction, GIS technology offers a wide range of opportunities for developing a model for analyzing and assessing the digital transformation of Bulgarian municipalities. A similar experience, based on the GIS system, is the study of Tsonkov and Kostev (Tsonkov & Kostev, 2023). The authors examine the smart development of municipalities in Northeastern Bulgaria, using analysis of geospatial data and statistical models. On the other hand, Berberova-Valcheva attempts to examine the level of development and provision of electronic services in municipalities in Bulgaria, thus revealing the degree of digital transformation of Bulgarian cities (Berberova-Valcheva, 2024).

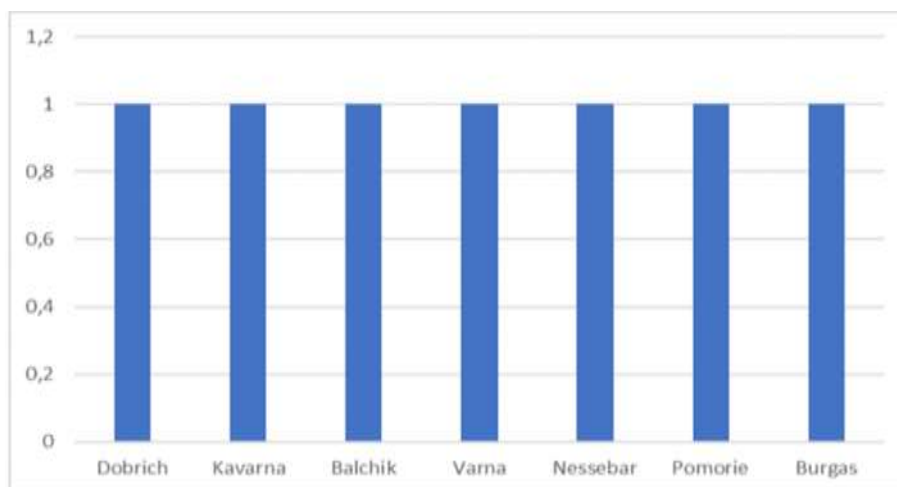
RESULTS

Analyzing both citizens' perceptions of urban green spaces and the European Commission's goal of achieving climate neutrality by 2050, it is clear that there is a clear shift towards green urban development. A smart city is a technologically advanced urban area that uses various types of electronic methods, voice activation methods, and sensors to collect specific data. The information obtained from this data is used to effectively manage assets, resources and services. In return, this data is used to improve operations in the city.

This study analyzes the applied innovation policies. In Bulgarian conditions, the concept of a smart city is vague, since activities related to the combination of information and communication technologies are carried out spontaneously and rarely proportionally to the existing information and physical environment. In Bulgarian conditions, new software and technological solutions are required, but the process is not sustainable, and management decisions do not have the necessary rationality. This requires the use of limited resources, improvement of the infrastructure, and the working and living environment as a condition for the introduction of intelligent systems in cities. In this sense, we can assume that a smart city uses a framework of information and communication technologies to create, implement and promote development practices to address urban challenges and create a unified technologically enabled and sustainable infrastructure [3]. This definition gives us sufficient reason to assume that a smart city is a set of territory in which there is a system of hardware, software (modern information and communication technologies), connected in a network through which modern problems of urban management are solved. The basis of smart cities is connectivity, a reliable information environment that allows for optimal decisions related to life in the urban system. Therefore, smart development combines modern information and communication technologies with decision-making system management that improves the environment, economic processes and the use of limited resources. We can conclude that smart management solutions combine connected information and communication technologies with the database and information flows to optimize management processes. In this regard, we can give an example of gamification. This is a simulation model in various fields through which we can predict when and where certain events will occur in order to take the necessary measures to prevent damage. According to the study by Tsonkov, Petrov, Berberova (2024), effective management of smart cities depends on strategic policies and innovations in regional development

Figure 3 shows a graph with selected Bulgarian cities that have undertaken strategies for innovative policies in their regional development.

Figure 3. Adopted strategies, intelligent content development as part of the document.



Source: systematization of the authors

Looking at the graph, we can summarize, and we can categorically state that in the indicated cities, strategies and policies have been adopted to develop intelligent innovative approaches to digitalization for a higher level of security of citizen service processes. "Digital transformation can refer to everything from IT modernization (e.g. cloud computing), to digital optimization, to the invention of new digital business models. The term is widely used in organizations by municipalities and customers.

According to Goodman (Goodman, 2016), every ten minutes we create as much information as in the first ten thousand generations of humanity. The cost of storing this data is also falling exponentially. This huge growth in the global information infrastructure is often called the "big data revolution". Through big data, several complex tasks are now finding their solution. For example, in the field of medicine, when all patient data is catalogued in electronic medical records, doctors will be able to monitor which treatment is most effective, notice deadly side effects of drugs and even predict the development of a disease before symptoms appear. As a result of big data processing, profit growth is observed in all industries and, according to the organizers of the World Economic Forum, data is "the new oil" (Goodman, 2016).

This is why the transformation of data from ongoing processes into value and added value for the organization is crucial.

In this regard, it is important to seek answers to questions such as:

Does the organization derive value from its data?

How can data sets be used to make informed decisions?

How can big data be processed through artificial intelligence and offer possible solutions?

How to transform data into suggestions that meet set intentions?

1. Digital transformation in organizations has the potential to answer some of these questions. For this reason, this scientific paper pays special attention to **the digitalization of the integrated management system**.

In this direction, the review of the municipalities along our Black Sea coast shows that the introduction of intelligent systems has made some progress. In practice, it is necessary to carry out a number of structural and organizational activities and strategies at the municipal level, despite the accumulated experience, as evidenced by Table 1, which shows the strategic understanding of the problem by the municipalities. As the author emphasizes in his publication, digital transformation is inextricably linked to the number of implemented projects.

Table 1. Implemented smart projects/initiatives, implemented strategies and platforms in Bulgarian maritime municipalities with 10,000 or more

Cities	Number of implemented or ongoing smart projects / Initiatives	Existing local smart city strategy and policy	Smart City Platform
Dobrich	8	1	0
Kavarna	3	1	0
Balchik	4	1	0
Varna	10	1	1
Nessebar	7	1	1
Pomorie	9	1	0
Burgas	25	1	1

Source: systematization of the authors

The analysis shows that all municipalities have implemented strategies for the development of smart systems, including several projects and initiatives. However, there is some delay in the construction and facilitation of smart city platforms. This shows that municipalities are ready to implement a wide range of electronic and digital technologies. This will lead to a transformation of the living and working environment in the region. Not least because the inclusion of such information and communication technologies requires training and sustainable management of these processes. Analyses of the development of specific smart city strategies in the Black Sea municipalities show that they need to catch up. Only the municipality of Burgas has prepared such a document. At the same time, the municipalities of Nessebar, Varna and Burgas have made their smart city platforms. Municipalities represent a key territorial unit where the interests of citizens, business and public administration intersect. In this sense, the digital transformation of municipalities is not just administrative modernization, but a strategic process that has a direct impact on the quality of life, sustainability and competitiveness of settlements. By introducing electronic services, cloud platforms and automated processes, municipalities can significantly improve the efficiency of public administration. This leads to better access to services, reduced bureaucracy and increased transparency in management. E-government not only improves the relationship between citizens and institutions but also increases trust in local government. Investments in smart infrastructure - intelligent transport systems, energy-efficient street lighting, waste management through sensors and environmental monitoring platforms - contribute to the sustainable development of cities. Municipalities that successfully integrate technologies become incubators for innovation and attractive investment zones. When there are conditions for a

favorable ecosystem, including the Internet, digital hubs, and training for start-ups, municipalities can stimulate the development of the local economy. Digitalization creates prerequisites for new business models, jobs, and economic diversification, especially in less developed areas. Digital transformation allows for new forms of citizen participation in the decision-making process, such as electronic voting, consultations, and open data. This leads to higher engagement, higher cohesion, and the development of a culture of joint responsibility in the local community. Of course, despite all the opportunities, the digital transformation of the municipality also faces some challenge, in terms of the lack of human potential, limited funding, as well as still weak coordination between institutions. This requires focused work to build unified policies at the European level.

CONCLUSION

Digital transformation is no longer a choice, but a necessity for modern society. It is a driving force that unlocks the potential of smart cities and provides the foundation for sustainable and modern regional development. By implementing innovative technologies, smart infrastructure and real-time data, cities and regions can become greener, more connected, and more attractive for people's businesses. Digitalization not only improves the quality of life but also creates new economic opportunities, increases administrative efficiency, and encourages civic participation. In a world where change is constant, digital transformation is the key that unlocks the door to a more innovative, fair, and sustainable future. Only by boldly embracing digital innovation can we build cities and regions that meet the challenges of the future. Technology gives us tools, but vision and trust between people are the true foundation of smart communities. Regional development is not measured only in kilometres of infrastructure, but in speed and connectivity, and quality of life. Digital transformation connects people, economies, and ideas in a common effort for progress and sustainability. The future belongs to those who realize the power of technology today and turn it into an engine of positive change.

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DIGITAL TRANSFORMATION IN ONCOLOGY: EUROPEAN APPROACHES TO REDUCING TREATMENT DELAYS

ABSTRACT

Cancer remains a leading cause of mortality worldwide. The European Cancer Plan (2021) and advances in personalized medicine and digital healthcare have improved detection and treatment. However, delays persist: each month of delay increases mortality risk by 10%; late diagnosis raises costs and reduces efficacy.

Delays stem from patient factors (low health literacy, socioeconomic barriers, fear), infrastructural issues (equipment and specialist shortages), and systemic problems (fragmented pathways, bureaucratic hurdles, inconsistent reimbursement), creating public-private inequalities.

Digital tools – integrated referral/tracking systems, AI diagnostic support, wearable monitors, telemedicine, and remote trials, can streamline pathways, reduce travel, and expedite care. Yet regulatory, technical, and organizational barriers impede adoption.

Ireland's National Cancer Information System and the EU Digital Europe programme illustrate the need for interoperable, secure, user-centred solutions with standardized processes and transparent wait-time reporting.

Timely, equitable oncology care in Europe requires coordinated policies, multidisciplinary collaboration, and digital infrastructure to cut delays, improve survival, and narrow inequalities.

KEYWORDS: digital health care, delays in cancer treatment, telemedicine, artificial intelligence in oncology, health inequalities

JEL: I11, I18, O33, L86, C88

INTRODUCTION

Cancer remains one of the leading causes of death worldwide accounting for nearly 10 million deaths in 2020. Early diagnosis and timely treatment have a profound impact on survival rates. Nevertheless, a number of challenges impede prompt intervention, including disparities in health-care infrastructure, shortages of medical personnel, inefficient patient-referral pathways, and socio-economic barriers. Addressing these issues requires a comprehensive approach that integrates technological innovation, policy reform, and optimized clinical workflows.

Since the launch of the European Cancer Plan in 2021, oncology care has undergone rapid transformation driven by advances in digital health, personalized medicine, and improved care

coordination. These innovations have enhanced early detection, diagnostic accuracy, and access to treatment. Yet significant delays continue to occur at every stage – from the first suspicion of cancer to initiation of therapy, which can have serious consequences for patients. Studies indicate that each month of treatment delay increases mortality risk by roughly 10%, while late diagnosis incurs higher healthcare costs and reduces overall survival. Reducing these delays is therefore critical to optimizing oncology care, ensuring timely intervention, and narrowing health-care inequities across Europe.

Despite national and regional efforts to streamline oncology services, substantial variation persists in patient access, diagnostic speed, and treatment coordination. Factors contributing to delays include both structural inefficiencies – limited diagnostic infrastructure, shortages of specialists, and complex reimbursement procedures – and socio-economic or geographic barriers that disproportionately affect underserved populations. Access to cancer care varies widely across European countries: colorectal-cancer screening rates in 2021 reached 79.4% in Finland, 3.6% in Bulgaria, and under 3% in Hungary (European Cancer Organisation, n.d.; European Commission, n.d.). Similar disparities exist in diagnostic capacity; for example, Iceland has nearly five CT scanners per 100,000 inhabitants, while Hungary has fewer than one (European Cancer Organisation, n.d.). Such discrepancies underscore the need for harmonized policies and targeted interventions to reduce waiting times and improve equitable access to oncology services.

Digitalization of cancer care is increasingly recognized as a key enabler of efficiency gains. Digitized referral systems, artificial-intelligence-driven diagnostics, and real-time data integration can enhance treatment coordination, reduce administrative burdens, and facilitate earlier intervention. However, fragmented digital infrastructure and interoperability gaps among health systems hinder progress. Overcoming these obstacles requires close collaboration among clinicians, researchers, policymakers, and technology innovators to develop comprehensive solutions that prioritize operational interoperability, patient-data security, and equitable access to care.

This article examines the complex nature of treatment delays in oncology, the role of digital technologies and policy initiatives in streamlining patient pathways, and the imperative to address health inequities in Europe. By adopting best practices in care coordination, integrating digital solutions, and fostering multidisciplinary collaboration, health systems can move toward a model in which every patient, regardless of location or socio-economic status, receives timely, high-quality cancer treatment.

1. THE ROLE OF DIGITAL TRANSFORMATION IN REDUCING TREATMENT DELAYS

Effective digital solutions must encompass the entire oncology care continuum – from mitigating the risk of delayed diagnosis to providing comprehensive support for patients at every stage of their disease. Rather than fragmented clinical interventions, the emphasis should be on continuous care that addresses each patient’s unique needs and the evolving dynamics of their condition.

Digital technologies ought to be appraised over the long term, as their effectiveness may shift with disease progression. They must also be designed to deliver personalized and culturally adapted care, ensuring that every individual receives treatment tailored to their circumstances. Moreover, the needs of caregivers and family members – particularly during advanced stages and end-of-life care – should be taken into account.

To place the patient at the center of care, digital solutions must balance robust data privacy protections with seamless information sharing. Health-care delivery models should evolve from hospital-centric approaches toward integrated, on-demand care accessible irrespective of a patient's location.

Digitized clinical-decision support systems have the potential to streamline oncology pathways by optimizing decision-making, reducing costs, and eliminating disparities in treatment quality between leading cancer centers and local facilities. Automated data-management tools embedded in electronic health records can accelerate workflows, enhance clinician efficiency and satisfaction, and minimize the risk of error.

For these innovations to succeed, they must meet both patient needs and health-care professionals' requirements. For example, when deploying biometric monitoring technologies, it is crucial first to define which metrics will be measured and how that data will inform care. In geriatric oncology, such tools can assess overall physical function, track adverse reactions, and monitor patients' functional status between visits.

Metrics must be clinically meaningful to patients. Cancer-related cachexia profoundly impacts quality of life, treatment options, and prognosis. While physical activity is a useful endpoint in clinical trials, traditional measurement methods are often complex, costly, and inconvenient. Digital technologies offer simpler, more accessible alternatives – studies indicate that most patients accept wearing small activity sensors as part of their treatment, and that step counts correlate with energy expenditure and quality of life in advanced-stage cancer (European Cancer Organisation, n.d.).

Furthermore, digital tools can boost clinical-trial participation. In a survey of over 1,100 cancer patients, 85% said they would join a trial if remote technologies reduced time and travel burdens; 67% would participate if experimental drugs could be administered intravenously in a convenient setting; and 82% would enrol if wearable devices enabled remote data collection (European Cancer Organisation, n.d.).

Integrating digital solutions into oncology care can markedly improve patient-pathway coordination by reducing diagnostic and treatment delays, enhancing therapeutic efficiency, and improving quality of life.

Delays in cancer treatment profoundly affect survival rates and overall health-care outcomes. A large body of research underscores that even short postponements in initiating therapy can increase mortality across various cancer types. The principal contributors to treatment delays can be grouped into three categories:

- **Patient-related factors.** Delays often stem from a lack of awareness, socio-economic barriers, and fear associated with a cancer diagnosis. Many patients postpone seeking medical help due to financial hardship, limited access to care, or psychological stress. Additionally, low health literacy means some individuals fail to recognize early warning signs, resulting in later-stage diagnoses and reduced treatment efficacy.
- **Infrastructural constraints.** Variations in health-care infrastructure play a significant role in treatment delays. Resource-limited settings frequently face shortages of diagnostic equipment, insufficient numbers of specialized personnel, and long waits for consultations and procedures. Deficits in key diagnostic tools – such as CT scanners and biomarker-testing facilities – further prolong the time to effective treatment initiation.

- **Systemic inefficiencies.** Within health systems, complex referral pathways, bureaucratic hurdles in therapy approval, and inconsistent reimbursement policies create barriers that delay cancer treatment. Moreover, disparities between public and private sectors lead to unequal access, with patients in public systems typically experiencing considerably longer wait times than those in private care.

Digitalization is increasingly recognized as vital for optimizing oncology services, especially in reducing treatment-waiting times. Europe's shortage of medical specialists heightens provider workloads, increasing the risks of fatigue, burnout, and medical errors – including medication mistakes.

Table 1. Consequences of Delayed Cancer Treatment

Consequences of Delayed Treatment	Description
Increased tumor progression and reduced treatment efficacy	Delaying treatment leads to more aggressive cancer growth and reduces the effectiveness of therapeutic interventions.
Higher mortality	Late diagnosis and untimely initiation of treatment increase the risk of fatal outcomes.
Greater emotional and psychological stress	Patients and their families experience heightened anxiety, fear, and uncertainty due to treatment delays.
Increased economic burden on healthcare systems	Treating advanced-stage cancer is significantly more expensive than early intervention, thereby increasing healthcare costs.

Source: own

The implementation of digital systems in oncology care can substantially reduce these risks by improving the coordination of medical processes and enhancing patient safety.

1.1. EUROPEAN STANDARDS AND IMPLEMENTATION OF DIGITAL SYSTEMS

One of the primary standards established by the emerging European Network of Comprehensive Cancer Centers is the adoption of digital medication management systems. This requirement aims to standardize procedures, reduce patient waiting times, and ensure traceability and accountability throughout the treatment process.

A successful model of digitization is the ONCOptimal project (Optimizing the efficiency of oncology day hospitals) in Spain, which aims to enhance the effectiveness of oncology day hospitals. The incidence of cancer in Spain continues to rise, increasing the demand for outpatient oncology services. Issues such as prolonged waiting times for medication and therapy, inefficient resource use, and prescription errors can delay treatment, increase toxicity, lower survival rates, and reduce patient satisfaction (Fundación para la Excelencia y la Calidad de la Oncología, 2023).

The ONCOptimal project provides recommendations focused on introducing new technologies as the most effective and cost-efficient way to reduce wait times and improve patient safety. Implementation of these recommendations could result in national savings of up to €2 billion, reduce the time from diagnosis to treatment initiation by eight days, and save over 4,500 hours of labor capacity monthly (Fundación para la Excelencia y la Calidad de la Oncología, 2023).

As in many European countries, cancer cases in Spain are increasing rapidly. By 2045, the number of diagnosed patients is expected to grow by over 33%, reaching more than 370,000 individuals. This increase in incidence results in higher demand for care. Day hospitals, which offer diagnostics, testing, and therapy without hospitalization, are the preferred setting for

cancer treatment. However, these facilities face immense pressure and are struggling to meet demand.

Key operational challenges in oncology day hospitals arise at multiple points in the care pathway. First, delays and errors in organizing patient appointments waste valuable resources and postpone the start of therapy. Second, limited laboratory capacity prolongs turnaround times for test results, often forcing unplanned hospital admissions and further deferring treatment. Third, staff shortages reduce the opportunity for direct, face-to-face communication between patients and clinicians, diminishing both satisfaction and safety. Fourth, the lack of an integrated electronic prescribing system prevents seamless coordination of drug orders and administration between healthcare teams and pharmacies – leading to treatment delays, preparation mistakes, and suboptimal resource use. Finally, reliance on manual prescription processes elevates the risk of human error during anticancer drug administration, directly threatening patient safety and treatment effectiveness.

These issues largely stem from inadequate state funding, low staffing levels, and outdated prescribing systems. As a result, patients face treatment delays, lower survival rates, and decreased satisfaction with healthcare services (All.Can, n.d.).

The ONCOptimal study identifies inefficiencies in the prescribing, preparation, and administration of medications. Full digitization of these processes could reduce average patient wait times by eight days and save the Spanish healthcare system over \$2 billion. Recommendations include using electronic prescribing systems instead of paper documents, automated mechanisms for real-time drug tracking to replace interdepartmental phone calls, and barcode systems for fast and accurate medication logging by nurses (Fundación para la Excelencia y la Calidad de la Oncología, 2023).

The ONCOptimal project highlights key challenges in oncology care and their impact on patient satisfaction and survival, outlining areas for necessary improvement. It demonstrates that technology implementation is the most effective and economically viable strategy to reduce wait times and enhance patient safety. Digitizing prescription and drug validation systems has significantly lowered adverse drug reactions, shortened waiting periods, and achieved financial savings. Furthermore, it has reduced the time from diagnosis to treatment initiation by eight days and saved 4,795 hours monthly in laboratory administrative processes.

ONCOptimal continues to promote the adoption of its recommendations in day hospitals across Spain. Each facility is expected to tailor the suggestions to its specific needs and implement them gradually. The project also aims to showcase hospitals that have successfully introduced these changes to demonstrate real improvements in efficiency and share best practices with other medical centers.

Additionally, ONCOptimal plans to conduct long-term studies on the impact of its recommendations, including their effects on patient survival and overall hospital efficiency (All.Can, n.d.).

1.2. Digitization of Oncology Information Systems: The Irish Model

Another successful example of effective digitization is Ireland's National Cancer Information System (NCIS). Launched in 2019 as part of the Government's e-Health strategy, NCIS aims to integrate all patient information into a single platform. Its core functionalities include

electronic prescribing, digital medical records, management of multidisciplinary team (MDT) meetings, and automated drug administration (Health Service Executive, n.d.).

The NCIS is a unified, national, computerized system that records and stores all cancer-related healthcare data for each patient. This encompasses demographic details (name and address), medical history, cancer diagnosis, treatment options, and systemic anticancer therapy (SACT) administration. The National Cancer Control Programme (NCCP) convened a working group to develop a procurement and implementation framework for NCIS, ensuring optimal and safe delivery of SACT, as well as electronic prescribing and administration of cancer medications in publicly funded hospitals.

Following an EU-wide tender process, the contract to build NCIS was awarded to Becton Dickinson (BD) Austria GmbH. The system was developed collaboratively by BD and its partners, coordinated with the NCIS team and the HSE's Technology and Transformation Division under the guidance of a specialized multidisciplinary steering committee (Health Service Executive, n.d.).

A key feature of NCIS is its “single system” approach, which provides seamless access to patient data across different healthcare facilities. This ensures that clinicians always have accurate, up-to-date information on a patient's status, regardless of the treating hospital. To date, NCIS covers 19 of Ireland's 26 cancer centres, with full rollout expected shortly.

Table 2. Summary of the National Cancer Information System (NCIS)

Category	Details
What is NCIS?	A computerized system that records and stores all cancer-related patient data, including diagnosis and treatment.
Implementation	Phased introduction across all public hospitals providing cancer services – including Children's Health Ireland (CHI) at Crumlin – began in 2019.
Rationale for NCIS	Developed by the National Cancer Control Programme (NCCP) in response to concerns from consultant medical oncologists and other healthcare professionals about patient-safety risks due to lack of information sharing, missing records, and absence of a centralized IT system.
Primary Objective	To deliver a clinical information system supporting oncology and haemato-oncology care nationwide, ensuring comprehensive SACT treatment records.
Key Functionalities	Electronic prescribing and verification of SACT orders; digital MDT coordination; automated tracking of drug dispensing and administration.

Source: Health Service Executive

1.3. Model for Digitized Oncology Care – The Paperless Transformation at Dénia Hospital

Hospital Dénia in Spain stands out as a leading example of a fully digitized oncology centre. Awarded the QH (Quality Healthcare) seal for its innovative health-tech implementation, Dénia has transformed its oncology department into a paperless environment, managing the entire treatment pathway digitally, from prescription to administration. This digital strategy accelerates cancer care processes, enhances operational efficiency, ensures patient safety, and improves coordination among clinical teams.

Dénia's digital strategy is built on two foundational pillars. First, it achieves complete digitization of oncology treatment, ensuring that every step – from prescription generation through drug administration, is managed electronically. This end-to-end digital workflow eliminates paper-based handoffs, minimizes delays, and substantially reduces the administrative burden on nurses and pharmacists. Second, the hospital employs a unified

information system that integrates all patient records into a single, interoperable platform. By consolidating data from disparate applications, this system standardizes clinical processes, strengthens data security, and gives care teams real-time access to vital patient information, thereby enhancing decision making.

As a result of these innovations, Dénia has dramatically shortened the interval between diagnosis and treatment initiation: first-cycle chemotherapy now begins within 24–48 hours of consultation confirmation. This rapid turnaround is enabled by an integrated digital protocol that coordinates prescription scheduling, ancillary medication procurement, nursing workflows, and continuous patient tracking.

The hospital's digital overhaul introduced three key innovations that have transformed oncology care. First, Automated Task Activation ensures that the moment a patient is registered, the system automatically orders laboratory tests, prepares medications, and allocates clinical staff – dramatically reducing administrative burden and accelerating each procedural step. Second, Real-Time Monitoring and Clinical Decision Support gives patient pathway coordinators and physicians continuous access to live treatment data. They can track task completion, monitor patient progress, and trigger additional interventions as needed; critical decisions – such as patient discharge, therapy changes, or protocol initiations, are automatically logged to guarantee seamless continuity of care. Finally, Interoperability and Transparency allow precise measurement of time intervals between all process steps, enabling hospital leadership to pinpoint bottlenecks, optimize workflows, and implement targeted improvements.

During a discussion on Dénia's digital transformation (European Cancer Organisation, n.d.), Grant Carroll emphasized that successful implementation hinges on aligning digital solutions with the real-world workflows of healthcare professionals. He cautioned that introducing overly radical or ill-fitting technologies without accounting for everyday clinical processes may provoke staff resistance and hinder adoption.

Therefore, effective digitization requires technology providers to collaborate closely with hospital teams to design user-centric, efficient digital tools. Dénia's paperless transformation exemplifies the transformative potential of digital technologies in oncology care. Through automation, interoperability, and real-time monitoring, the hospital has successfully reduced delays, optimized treatment, and elevated the quality of patient care. This model can serve as a blueprint for oncology centres worldwide striving for sustainable, digitally enabled cancer services.

Despite the clear advantages, challenges remain. Experts involved in these digitization efforts highlight the need for:

- **Workflow alignment** – Systems must simplify, not complicate, clinicians' and nurses' tasks.
- **Training and resource allocation** – Institutions must dedicate time and funding for staff education.
- **Robust technical support** – Ongoing maintenance and rapid troubleshooting are essential.

Digital transformation holds the promise of reducing treatment delays, enhancing patient safety, and improving healthcare system efficiency. European experiences – illustrated by ONCOptimal, NCIS, and Dénia's initiatives – demonstrate tangible benefits that other systems

can adopt. Full success depends on integrating these technologies into national health strategies, supported by governmental and institutional commitment to widespread implementation.

2. DISCUSSION

The digital revolution – driven by Industry 4.0 and globalization – has fundamentally transformed business practices across sectors, encompassing everything from new business models and smart technologies to big data analytics and integrated value chains (Diniz, Duarte, Amaral, & Pereira, 2021; Kraus et al., 2021). This shift has placed immense pressure on organizations to adapt and innovate to remain competitive. Successful adaptation hinges on the deployment of digital processes and collaborative tools, underscoring the crucial role of digital transformation. In a business context, digital transformation is intimately linked with technologies such as big data, artificial intelligence, and analytics, demonstrating their potential both as drivers and enablers of competitive advantage. Because digital transformation demands continual adjustment to a rapidly evolving and competitive environment, it can be viewed as a catalyst for change that affects all aspects of human life through technology (Donthu et al., 2020; Bruskin et al., 2017).

Despite its promise, healthcare has lagged behind other industries in digital transformation – a trend also evident in oncology care, where integrating digital technologies could enhance cancer diagnosis and treatment. Several factors contribute to this slow uptake. A study by Phichitchaisopa and Naenna (2013), using the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), identified performance expectancy, effort expectancy, and facilitating conditions as key determinants of user behavior.

Other research highlights a number of critical barriers, including regulatory, legal, and policy obstacles introduced by the digital health revolution (Berardi et al., 2024). Skepticism about the effectiveness of new technologies (Iyanna et al., 2022) and concerns over service quality and cybersecurity risks (Mumtaz et al., 2023) further impede rapid adoption. Interestingly, non-technological barriers – such as organizational culture, structure, and governance – are frequently cited as the primary hurdles to digital scale-up (Biesdorf & Thomas, 2018).

Nonetheless, healthcare now stands at a pivotal moment: accelerated digital transformation is both essential and achievable through strategic use of both novel and existing technologies. In Bulgaria, oncology care is likewise modernizing via telemedicine and digital medical record systems, which facilitate access to high quality treatment. Healthcare organizations possess a unique advantage here – they can learn from both the successes and failures of more digitally mature industries (Glaser & Shaw, 2022).

The term “digital transformation” is increasingly prevalent in healthcare, especially given rapid technological progress (Rowlands, n.d.). Whereas “digital health” – the use of technology to improve patient care – is relatively well defined, there is no single, universally accepted definition of “digital transformation.” This ambiguity stems from the inherently transformative – and thus theoretically diverse – nature of the term itself.

In Bulgaria, advanced diagnostic and treatment technologies – such as AI driven image analysis and robotic surgery – are boosting precision and therapeutic efficacy, leading to improved patient prognoses. Digital health encompasses the development of ICT in healthcare – from electronic medical records and wearable devices to telemedicine – and is expected to expand into health promotion, prevention, primary care, long term care, and self-management.

Despite varying definitions, common elements emerge: digital transformation in healthcare must be understood as a systemic, complex intervention. From this perspective, it can be defined as a planned change entailing the integration of inherently complex digital tools, which are challenging to implement and evaluate (Hulshof, 2022). Such interventions aim to induce change across the entire system – affecting all organizations and providers, to ultimately enhance healthcare efficiency, quality, and population-level outcomes.

The complexity of digital transformation in healthcare makes it difficult to fully grasp its impact. Yet digital health holds the potential to revolutionize healthcare delivery and experience by enabling remote monitoring, improving disease management, and supporting more personalized treatments. Moreover, patient-generated digital health data can substantially contribute to clinical practice and real-world evidence generation, aligning with the shift toward value and patient-centered care (Khosla et al., 2021). Digital tools can also empower providers to improve care quality and patient outcomes by preventing adverse drug events, enhancing treatment adherence, reducing duplicated testing, and potentially lowering costs (Jones, Peter, Rutter, & Somauroo, n.d.).

Organizations such as the World Health Organization and the European Commission have recognized the benefits of digital health, including greater access, improved quality and safety, and higher efficiency in care delivery (Mumtaz et al., 2023; European Commission, 2021). The EU's Digital Europe programme explicitly supports digital transformation across sectors. The Lancet–Financial Times Commission on Governing Health Futures 2030 similarly underscores the broad impact of digital transformation, suggesting it will soon become the primary lens through which health and wellbeing dynamics are viewed (Kickbusch et al., 2021). Digital technologies are already integral to our lives – directly impacting healthcare via electronic records, telemedicine, and self-monitoring, and indirectly affecting health through social, commercial, and environmental determinants, such as improved patient education and more efficient resource management (Kickbusch et al., 2021).

Today, establishing realistic timeframes for initiating cancer treatment post-diagnosis is a core principle embedded in clinical guidelines, national policies (including cancer plans), and European initiatives like the EU Network of Comprehensive Cancer Centres. Systematic collection and publication of patient waiting time data are essential to identify and address areas for improvement. This aligns with the need for transparent, accountable health systems—a goal Bulgaria shares with other EU member states.

Regarding digitalization, there is strong support for integrating fully functional, connected digital medication management systems within the EU Network of Comprehensive Cancer Centres, following the successful Irish NCIS model. Implementing a similar system in Bulgaria could markedly improve data exchange and care coordination. Effective nationwide digitalization, however, requires standardizing hospital processes – a task demanding dedicated resources and effort. Furthermore, digital systems must enhance transparency around treatment timelines to enable better management of bottlenecks and delays. Crucially, technology vendors must prioritize healthcare professionals' workflows to ensure user adoption and avoid disruptive rollouts, especially in Bulgaria, where existing digital infrastructure and training levels vary across institutions.

CONCLUSION

The future of healthcare lies in a dynamic environment characterized by rapid technological advances, evolving patient needs, and transformative innovations. This chapter has explored

key trends and forecasts shaping the industry, including AI integration, telemedicine, genomics, and patient empowerment. These shifts promise a healthcare ecosystem that is more efficient, accessible, and personalized than ever before. However, they also present challenges, such as data privacy, ethical considerations, and equitable access. Navigating this evolving landscape will require a careful balance between innovation and ethical practice, ensuring that the future of healthcare benefits all segments of society.

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REGIONAL DIFFERENCES IN PATIENT SATISFACTION WITH NURSING CARE QUALITY IN ALBANIA

ABSTRACT

This study investigates patient satisfaction with nursing care in six regional hospitals in Albania using the validated Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ). The findings reveal marked regional disparities, with satisfaction rates ranging from 26.8% in Fier to 77.5% in Lezhë. Higher satisfaction was observed in hospitals with better nurse-patient ratios and organizational practices, while lower scores reflected systemic challenges including understaffing and limited oversight. Sociodemographic differences also emerged, with lower satisfaction reported among patients with higher education, recent hospitalizations, or poor self-rated health. These insights underscore the critical need to embed patient feedback into national performance monitoring systems. Benchmarking satisfaction across institutions can support targeted reforms, enhance nursing quality, and promote equitable healthcare delivery. The study highlights the role of structured satisfaction assessments as tools for governance and accountability in transitional health systems.

KEYWORDS: patient satisfaction, nursing care, regional disparities, health system performance, benchmarking

INTRODUCTION

Patient satisfaction with nursing care is a critical component of healthcare quality and a key indicator of health system performance. It reflects not only patients' evaluation of clinical outcomes but also their perceptions of emotional support, communication, safety, and dignity during care. High levels of satisfaction are strongly correlated with improved treatment adherence, reduced hospital readmissions, better patient engagement, and increased institutional trust. Conversely, dissatisfaction can lead to poor compliance, negative health behaviors, and decreased utilization of health services.

In Albania, as in many health systems in transition, the routine measurement of patient satisfaction has not yet been fully institutionalized, particularly within the domain of nursing care. The absence of systematic evaluation impedes efforts to improve service quality, identify performance gaps, and design targeted interventions. This study addresses this gap by focusing on nursing care, a vital dimension of patient experience, as nurses are the most consistent point of contact throughout hospitalization. Using the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ)—a tool validated for the Albanian context—this research aims to assess satisfaction levels in a representative sample of regional hospitals.

Six regional hospitals were strategically selected to reflect geographic and demographic diversity across Albania: Durrës, Elbasan, Fier, Lezha, Shkodra, and Vlora. These institutions

vary in terms of capacity, resource availability, infrastructure, and workforce distribution, making them ideal for examining regional differences in perceived nursing care quality. A cross-sectional survey design was employed to capture data from a large, diverse patient population. While the design limits causal inference, it allows for a comprehensive snapshot of satisfaction and its associations with sociodemographic and clinical predictors.

This study is expected to highlight variations in satisfaction across hospitals and identify actionable factors that influence patient perceptions. By doing so, it provides critical evidence to inform quality improvement strategies and supports the integration of patient-reported outcomes into Albania's healthcare governance.

1. LITERATURE REVIEW

Patient satisfaction is a multidimensional construct that encompasses clinical effectiveness, emotional support, interpersonal communication, and organizational responsiveness. Globally, patient satisfaction has been widely recognized as a core dimension of healthcare quality and is routinely monitored in many countries to ensure accountability, improve service delivery, and guide policy reforms. Among the various elements of patient care, nursing services consistently emerge as one of the most influential in shaping patient perceptions due to the sustained, close interaction between nurses and patients throughout the care continuum.

Numerous international studies have demonstrated that satisfaction with nursing care is closely linked to communication clarity, responsiveness to patient needs, emotional empathy, technical competence, and respectful behavior (Aiken et al., 2014; Coulter et al., 2015). These factors are not only vital for enhancing patient experiences but also for improving clinical outcomes and reducing healthcare costs. The World Health Organization and other global health bodies have underscored the importance of incorporating patient feedback, particularly in evaluating frontline providers such as nurses, as a means of strengthening people-centered care.

In transitional healthcare systems, including those in the Western Balkans, patient satisfaction levels typically range from moderate to low. Studies conducted in Serbia, North Macedonia, Montenegro, and Greece report satisfaction scores generally between 40% and 60%, with substantial variation based on region, facility type, and service quality (Rechel et al., 2018). These differences are often attributed to structural deficiencies, such as underfunded public hospitals, uneven resource distribution, limited access to care in rural areas, and inadequate staffing levels.

Further, these regional studies have documented a lack of systematic patient engagement in quality monitoring processes, contributing to low responsiveness and diminished trust in healthcare institutions. Santric-Milicevic et al. (2016) and Kaitelidou et al. (2015) emphasize that workforce limitations, administrative inefficiencies, and outdated organizational practices frequently lead to negative patient experiences. This underscores the need for health systems in the region to invest in institutionalizing patient-centered evaluation mechanisms.

In contrast, high-performing health systems in countries like the United Kingdom, the Netherlands, and Denmark have shown that regular benchmarking of patient satisfaction can significantly improve hospital performance and accountability. These systems use patient feedback not only to monitor service quality but also to guide strategic decisions related to staff training, resource allocation, and regulatory oversight (Bjertnaes et al., 2020; Doyle et al., 2013). Moreover, global initiatives have increasingly focused on integrating patient-reported outcomes into national health information systems as a driver of transparency, trust, and continuous improvement (WHO, 2015).

In Albania, where healthcare reform remains a priority, there is a pressing need to incorporate validated, standardized tools for measuring patient satisfaction, particularly in nursing care. The PSNCQQ offers a reliable framework for this purpose and aligns with WHO's strategic direction on people-centered care (WHO, 2015). Despite ongoing investments in health infrastructure and workforce, systematic monitoring of patient experiences remains limited. As a result, health system leaders lack timely, actionable data on service quality from the patient's perspective.

Given the limited body of research on patient satisfaction in Albania and the absence of national benchmarks, this study seeks to fill a critical gap by providing empirical evidence on the quality of nursing care as perceived by patients across diverse regional settings. This study aims to assess patient satisfaction with nursing care quality in six regional hospitals in Albania using the validated PSNCQQ instrument, and to examine how satisfaction levels vary by region and patient sociodemographic characteristics.

2. METHODOLOGY

2.1 Study Design

This study adopted a mixed-methods approach, primarily based on a quantitative, cross-sectional survey, supplemented by qualitative data to provide deeper insight into patient satisfaction with nursing care. The cross-sectional design enabled the collection of data at a single point in time from a broad hospital-based population, facilitating the identification of patterns and associations between satisfaction scores and sociodemographic, clinical, and institutional variables (Setia, 2016). This design was well-suited to capture current perceptions and compare satisfaction levels across various healthcare settings.

Quantitative data were collected using the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ), a standardized and validated tool administered to patients before discharge. This allowed for robust analysis of satisfaction levels and the identification of regional disparities and sociodemographic predictors.

To complement the quantitative data, qualitative insights were drawn from open-ended responses and/or selected patient interviews. These narratives offered a nuanced understanding of patient experiences, especially regarding communication, emotional support, and nurse responsiveness. Although the cross-sectional design limits causal inference, the inclusion of qualitative data enhances the interpretation of results and the relevance of findings for health policy and clinical practice.

2.2 Setting and Population

The study was carried out in six public regional hospitals in Albania—Durrës, Elbasan, Fier, Lezhë, Shkoder, and Vlorë—selected to represent geographic, demographic, and institutional diversity. These hospitals serve as regional referral centers, providing inpatient and emergency care to urban and surrounding rural populations. They operate under the Ministry of Health and Social Protection and form part of the national public hospital network.

Each facility varies in terms of size, staffing ratios, and infrastructure, offering a suitable context for assessing differences in nursing care experiences across Albania's health system. The multi-site design enhances the representativeness of findings and facilitates comparisons that reflect national variations in care quality and equity.

Patients were eligible to participate if they were aged 18 or older, had been hospitalized for at least 48 hours in one of the participating hospitals, and were discharged from inpatient units such as internal medicine, surgery, or gynaecology/obstetrics. Participants needed to be

cognitively capable of giving informed consent and understanding the Albanian language, either independently or with minimal assistance. Individuals admitted solely to ICUs or emergency rooms without subsequent ward transfer, those with hospital stays shorter than 48 hours, and those with cognitive or severe psychiatric impairments were excluded. Critically ill patients or those unwilling to participate were also not included. The sampling strategy ensured diversity across clinical departments to capture a broad range of nursing care experiences.

To determine the appropriate number of participants, a single population proportion formula was employed, assuming a 50% satisfaction rate due to the lack of prior national data. With a 95% confidence level, 3% margin of error, design effect of 1, and accounting for a 15% non-response rate, the required sample size was calculated to be 1,206 patients. This ensured sufficient power to estimate satisfaction levels with high precision and to detect meaningful differences across hospitals and subgroups.

2.2.1 Ethical Considerations

Before data collection, permission was obtained from the Directorate of Harmonization of Healthcare Services at the Operator of Healthcare Services (Ministry of Health and Social Protection, Albania). The approval, dated 17 December 2024, authorized the study in regional and municipal hospitals under its jurisdiction, provided it complied with national laws, including the Law “On Healthcare in the Republic of Albania” and the Law “On Personal Data Protection,” and institutional regulations. The Directorate specified that study activities must be conducted only with prior consent from hospital staff, ensuring ethical standards and legal compliance.

2.3 Instrument

The Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) was used to assess perceptions of nursing care. Developed by *Laschinger et al. (2005)*, the PSNCQQ includes 19 core items measuring aspects such as communication, attentiveness, and coordination. It also includes three global items that evaluate overall satisfaction with hospital care, nursing care, and likelihood to recommend the hospital. Responses are captured on a 5-point Likert scale (1 = Poor to 5 = Excellent). An additional item measures patients’ self-rated health status.

For this study, the PSNCQQ was translated, culturally adapted, and validated for the Albanian context. The validation process involved forward and backward translation, expert panel review, and pilot testing to ensure linguistic clarity, contextual relevance, and psychometric reliability. The final version demonstrated good internal consistency and was deemed suitable for use in evaluating nursing care satisfaction in Albanian hospitals.

2.4 Statistical Analysis

Data were analyzed using IBM SPSS Statistics for Windows, Version 21.0. Descriptive statistics summarized sociodemographic variables and PSNCQQ item responses. Means and standard deviations were reported for continuous variables; frequencies and percentages for categorical ones.

Inferential analyses were conducted to explore relationships between patient characteristics and satisfaction scores. Independent sample t-tests compared mean scores between binary groups (e.g., gender), while one-way ANOVA assessed differences across multiple categories (e.g., age, education). Post hoc Bonferroni tests were applied when ANOVA indicated significance to identify between-group differences.

To assess predictors of high satisfaction, responses on overall satisfaction were dichotomized (e.g., excellent/very good vs. poor/fair), and logistic regression was used to explore associations

with sociodemographic factors. All statistical tests were two-tailed, and a p-value < 0.05 was considered statistically significant.

3. RESULTS

A detailed analysis of patient satisfaction scores based on sociodemographic characteristics is summarized in Table 1. The comparison covers key demographic variables, including age, gender, marital status, education, economic status, employment status, and regional hospital location.

Table 1 Comparison of Patient Satisfaction Scores According to Sociodemographic

Variables	N (%)	M	SD	t/F	P-value
Age group				0.398	0.754
≤30	210 (17.4)	3.64	0.98		
31-50	486 (40.3)	3.67	0.94		
51-70	382 (31.7)	3.67	0.96		
70+	128 (10.6)	3.58	1.07		
Gender				-1.29	0.196
Female	713 (59.1)	3.63	0.94		
Male	493 (40.9)	3.70	1.00		
Marital status				8.325	<0.001
Single	240 (19.9)	3.46	1.02		
Married/Cohabiting	663 (55.0)	3.63	0.97		
Separated/Divorced	240 (19.9)	3.87	0.85		
Widowed	63 (5.2)	3.85	0.91		
Education level				83.2	<0.001
8-years	125 (10.7)	4.07	0.96		
High school	690 (58.4)	3.84	0.90		
University	373 (30.9)	3.16	0.96		
Economic status				76.2	<0.001
Low	445 (36.9)	3.85	1.03		
Moderate	560 (46.4)	3.76	0.84		
High	201 (16.7)	2.94	0.79		
Employment status				29.6	<0.001
Employed	763 (63.3)	3.54	0.82		
Unemployed	115 (9.5)	4.42	1.27		
Retired	263 (21.8)	3.63	1.04		
Student	65 (5.4)	3.74	1.00		
Regional Hospital				56.3	<0.001
Durres	286 (23.7)	3.81	0.73		
Elbasan	255 (21.1)	3.82	0.85		
Fier	190 (15.8)	3.70	0.51		
Lezhe	127 (10.5)	4.29	0.56		
Shkoder	222 (18.4)	4.12	0.51		
Vlorë	126 (10.4)	3.10	1.14		

Source: based on national statistics data adapted by the author

Characteristics

A detailed analysis was conducted to evaluate how patient satisfaction scores varied by sociodemographic characteristics across the six regional hospitals. This analysis examined the influence of factors such as age, gender, marital status, education, economic status, and employment, revealing important regional differences and demographic patterns. The comprehensive findings from this comparison are summarized in Table 2.

Table 2: Patient Satisfaction Scores Across Regional Hospitals According to Sociodemographic Variables

Variables	Hospital Durrës	Hospital Elbasan	Hospital Fier	Hospital Lezhë	Hospital Shkodër	Hospital Vlorë	P - value
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD		
Age group							
≤30	3.48±0.98	3.73±0.80	3.68±0.53	4.37±0.52	4.14±0.54	3.29±1.18	<0.001
31-50	3.81±0.65	3.75±0.90	3.67±0.45	4.22±0.59	4.17±0.39	3.12±1.13	<0.001
51-70	3.81±0.57	3.96±0.83	3.76±0.59	4.37±0.49	4.10±0.53	3.01±1.09	<0.001
70+	4.00±0.64	3.91±0.83	3.40±0.35	4.53±0.46	4.10±0.61	3.02±1.19	<0.001
Gender							
Female	3.84±0.74	3.75±0.80	3.63±0.49	4.43±0.39	4.08±0.52	2.95±1.04	<0.001
Male	3.79±0.72	3.91±0.93	3.94±0.56	3.99±0.72	4.18±0.50	3.29±1.23	<0.001
Marital status							
Single	3.59±0.81	3.78±0.86				2.95±1.21	<0.001
Married/Cohabiting	3.83±0.65	3.79±0.91	3.58±0.45	4.40±0.46	4.02±0.49	3.14±1.09	<0.001
Separated/Divorced	4.17±0.61	3.97±0.64	3.66±0.50	4.10±0.67	4.29±0.50	3.06±1.25	<0.001
Widowed	4.02±0.69	3.92±0.75	4.01±0.60	4.28±0.79	4.19±0.55	3.11±1.37	0.032
Education level							
8-years	3.97±0.56	4.27±0.59	3.86±0.80	4.24±0.52	4.04±0.60	4.04±0.83	0.545
High school	4.00±0.60	4.02±0.79	3.74±0.49	4.45±0.40	4.16±0.52	3.24±1.16	<0.001
University	3.43±0.85	3.35±0.83	3.45±0.57	3.71±0.72	4.06±0.39	2.69±0.98	<0.001
Economic status							
Low	3.87±0.77	4.06±0.76	3.94±0.62	4.41±0.54	4.20±0.54	3.37±1.37	<0.001
Moderate	3.82±0.64	3.94±0.75	3.66±0.40	4.26±0.49	4.15±0.39	3.20±1.09	<0.001
High	3.65±0.90	2.94±0.79	3.32±0.51	3.59±1.02	3.56±0.73	2.56±0.46	<0.001
Employment status							
Employed	3.78±0.54	3.52±0.77	3.62±0.46	4.15±0.55	4.04±0.42	3.00±0.93	<0.001
Unemployed	4.36±1.43	4.92±0.10	4.79±0.00	4.86±0.07	4.93±0.09	3.83±1.72	0.003
Retired	4.08±0.57	4.06±0.77	3.84±0.56	4.31±0.55	4.10±0.59	2.93±1.14	<0.001
Student	2.82±1.21	4.02±0.72	3.47±0.30	4.51±0.28	4.30±0.37	3.55±0.99	<0.001

Source: based on national statistics data adapted by the author

Patient satisfaction scores showed notable variation across different sociodemographic groups. While age and gender did not significantly impact overall satisfaction levels, other variables such as marital status, educational attainment, economic status, employment, and regional hospital location revealed statistically significant differences.

Married, separated/divorced, and widowed individuals reported significantly higher satisfaction than single patients, suggesting the possible buffering role of social support. Education level was inversely associated with satisfaction: patients with only 8-year schooling or high school education tended to report higher satisfaction compared to those with a university degree. Economically disadvantaged patients also reported greater satisfaction, while those with higher economic status were significantly less satisfied, potentially reflecting a discrepancy between expectations and perceived care quality.

Unemployed and retired patients were markedly more satisfied compared to employed individuals, and this trend remained consistent across hospital locations. By contrast, employed patients reported lower satisfaction scores, possibly indicating time constraints, elevated expectations, or more critical assessments. Regional analysis revealed substantial disparities: patients from Lezhë and Shkodër reported the highest satisfaction levels, while those from Vlorë consistently expressed the lowest satisfaction across nearly all subgroups.

A multivariate logistic regression analysis further examined independent predictors of satisfaction. The model demonstrated good fit according to the Hosmer and Lemeshow test ($\chi^2 = 8.973$, $p = 0.345$). Key findings include the significantly lower satisfaction among patients admitted post-procedure (OR = 0.33), university-educated patients (OR = 0.33), and those with high economic status (OR = 0.45). Conversely, unemployed individuals had dramatically higher odds of satisfaction (OR = 7.55), followed by retired patients (OR = 1.57). Widowed individuals also reported significantly higher satisfaction (OR = 2.30).

Self-rated health emerged as a strong predictor: patients who rated their health as excellent were nearly twice as likely to be satisfied, while those who rated their health as poor, very poor, or were uncertain showed significantly reduced odds of satisfaction. Other variables, such as age, gender, and the number of hospitalizations, did not maintain statistical significance in the multivariate model.

In summary, satisfaction with nursing care in Albania's regional hospitals is significantly shaped by educational, economic, and employment status, as well as by perceived health and the specific hospital where care was received. These results underscore the importance of tailoring interventions to demographic and regional contexts to improve patient experiences and equity in nursing care delivery.

4. DISCUSSION

This study evaluated patient satisfaction with nursing care in six regional hospitals in Albania using the validated PSNCQQ tool. The findings reveal significant disparities in satisfaction levels both across hospitals and among different patient subgroups, providing valuable insights for improving health system performance, equity, and responsiveness.

A key finding of this study was the considerable variation in satisfaction levels between hospitals, ranging from as low as 26.8% in Fier to as high as 77.5% in Lezhë. This stark contrast underscores the presence of deep-rooted regional disparities in the quality and perception of nursing care across Albania's public hospital system. Notably, hospitals located in the northwestern (Lezhë) and northern (Shkodër) regions demonstrated the highest levels of patient satisfaction. These findings may be attributed to a combination of favorable structural and organizational characteristics, such as higher nurse-to-patient ratios, stronger adherence to clinical guidelines, regular staff training, and possibly greater institutional stability or local accountability mechanisms. These hospitals may also have more effective management practices that foster a supportive work environment, enabling nurses to provide more attentive and individualized care.

In contrast, hospitals in the southern region, particularly Fier and Vlorë, reported significantly lower satisfaction scores. This suggests the presence of persistent systemic challenges in these regions, potentially including chronic understaffing, aging infrastructure, inconsistent quality monitoring, and insufficient investment in human resources. The findings may also reflect a lack of effective managerial leadership or weaker regional health governance. For example, southern hospitals may be more vulnerable to workforce migration, both within Albania and abroad, leading to greater reliance on temporary or underqualified staff. Furthermore, socioeconomic and demographic differences across regions may also influence expectations and perceptions of care, but the sharp contrast observed here suggests that institutional and systemic factors are likely to be the dominant drivers.

Such regional disparities mirror those reported in other studies of transitional healthcare systems, where uneven distribution of healthcare resources, geographic isolation, and governance fragmentation can severely affect care quality (Rechel et al., 2018; Santric-Milicevic et al., 2016). In the Albanian context, where health reforms are ongoing and decentralization is unevenly implemented, the findings point to the urgent need for differentiated strategies. High-performing regions like Lezhë and Shkodër could serve as reference models for peer learning and quality improvement, whereas low-performing institutions in Fier and Vlorë may require targeted investment, focused managerial support, and robust oversight mechanisms. Addressing these regional imbalances will be critical for ensuring equity in service delivery and advancing a truly patient-centered healthcare system.

Such inter-hospital variation is not unique to Albania. Studies across the Western Balkans and other low- and middle-income countries (LMICs) have documented similar regional disparities, often driven by health financing inequalities, workforce shortages, urban-rural divides, and differing levels of political commitment (Rechel et al., 2018; Petrova et al., 2019). This heterogeneity underscores the urgent need for localized strategies tailored to hospital-specific deficiencies. For instance, in Fier and Vlorë, reforms could prioritize investments in nursing education, workload management, and patient engagement strategies. The contrasting outcomes between northern and southern hospitals may also reflect broader socio-economic and political development differences across regions.

From a sociodemographic perspective, our study found that patients with higher education and income levels reported lower satisfaction scores. This aligns with global findings that more educated patients are more likely to scrutinize service quality, demand clear communication, and express dissatisfaction when expectations are unmet (Coulter et al., 2015; Khosravizadeh et al., 2020). In contrast, unemployed, retired, and widowed patients—many of whom may rely exclusively on public hospitals—expressed higher satisfaction, potentially due to fewer alternative care options and reduced expectations. This phenomenon reflects the importance of considering patient expectations and prior care experiences when interpreting satisfaction data.

Another critical factor influencing satisfaction was the mode of hospital admission. Patients admitted after a medical or surgical procedure were substantially more likely to report dissatisfaction, suggesting gaps in perioperative care, post-procedural follow-up, or pain management. These findings resonate with studies indicating that complex medical interventions require more comprehensive, coordinated nursing efforts, which may not always be consistently delivered (Kalisch et al., 2012). Similarly, frequent hospital users—who are more exposed to fragmented or bureaucratic care—tended to evaluate services less favorably, possibly reflecting cumulative negative experiences.

Self-rated health status emerged as a powerful predictor of satisfaction. Patients reporting excellent health were significantly more likely to express satisfaction with nursing care, while those in poor or very poor health had markedly lower satisfaction levels. This pattern suggests that individuals with complex conditions may require more emotional support, personalized

care, and communication from nursing staff—needs that are often unmet in resource-constrained systems (Pawlikowska et al., 2012). As a result, patient satisfaction should not be interpreted solely as a judgment on staff performance but also as a reflection of the system's ability to accommodate vulnerable groups.

The policy implications of these findings are substantial. Patient satisfaction is a core component of person-centered care and is widely recognized as an indicator of health system responsiveness, accountability, and quality (Doyle et al., 2013; WHO, 2015). For Albania, embedding satisfaction measurement into routine hospital monitoring and integrating results into performance evaluations could drive quality improvement and system reforms. Furthermore, utilizing tools like the PSNCQQ nationally could create benchmarks for inter-institutional comparisons and inform national accreditation or incentive schemes.

In line with best practices from countries such as the United Kingdom, Sweden, and the Netherlands, Albanian policymakers should consider developing a national satisfaction reporting system linked to clinical outcomes and quality metrics (Coulter et al., 2015; Bjertnaes et al., 2020). Evidence-based reforms should include regular training on communication skills, better nurse-patient ratios, structured feedback mechanisms, and patient-centered care plans. Equally important is the decentralization of quality assurance efforts, empowering regional hospitals to develop context-specific strategies.

High-performing hospitals in this study—particularly Lezhë and Shkodër—could be leveraged as regional training centers or models of excellence, disseminating effective strategies across the system. Their organizational models, staff motivation, and patient interaction protocols could serve as blueprints for replication in lower-performing areas. Conversely, persistently underperforming facilities such as those in Fier and Vlorë must undergo targeted audits and receive technical assistance to address infrastructural, managerial, and human resource gaps. Regional health authorities in the south could particularly benefit from additional oversight, performance-based incentives, and increased investment.

Limitations of this study include its cross-sectional design, which limits causal inference, and the exclusion of ICU or emergency-only patients, who might have distinct satisfaction profiles. Nonetheless, the study's large sample size, use of a validated instrument, and national scope offer robust insights into the state of nursing care satisfaction in Albania.

This study contributes valuable evidence that patient satisfaction is not only a measure of individual experience but also a lens through which systemic strengths and weaknesses can be observed. Addressing the disparities uncovered requires concerted efforts at the institutional, regional, and national levels. Through regular satisfaction assessments, evidence-informed policy reforms, and a genuine commitment to patient-centeredness, Albania can make meaningful progress toward a more equitable and responsive health system.

CONCLUSION

This study provides critical insight into the state of patient satisfaction with nursing care across six regional hospitals in Albania, revealing significant inter-hospital disparities and important sociodemographic determinants. The use of the validated PSNCQQ tool enabled robust comparisons and highlighted the varying experiences of patients within a health system undergoing transition and reform.

Key findings show that patient satisfaction is not uniformly distributed, with institutions such as Lezhë and Shkodër demonstrating significantly higher levels of satisfaction, while Fier and Vlorë lag behind. These disparities underscore the role of institutional factors—such as staffing ratios, nurse-patient communication, responsiveness, and facility quality—in shaping patient

experiences. The association of lower satisfaction with higher education, higher economic status, and recent procedures suggests a mismatch between patient expectations and service realities, particularly for more informed or critically positioned patients.

Conversely, elevated satisfaction among unemployed, retired, or widowed patients may reflect more modest expectations or gratitude for accessible care. However, this should not mask systemic inadequacies. The findings support the growing international consensus that patient satisfaction is both a quality outcome and a tool for health system accountability (Doyle et al., 2013; WHO, 2015).

To address these inequities and foster a culture of excellence, health policy in Albania must institutionalize patient satisfaction assessment within hospital performance metrics. Strategic investments in nursing workforce development, clinical governance, and hospital infrastructure—especially in underperforming regions—are vital. Furthermore, leveraging high-performing hospitals as centers for training and innovation can enhance nationwide care quality.

Ultimately, patient satisfaction is not only a measure of service quality—it reflects dignity, communication, and trust in the health system. This study calls for a paradigm shift towards more equitable, patient-centered care in Albania, anchored in evidence-based policy, continuous quality improvement, and the voices of patients themselves.

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METHODOLOGICAL IMPLEMENTATION OF CRISP-DM IN FINTECH SERVICES

ABSTRACT

The financial markets are undergoing a significant transformation due to the changing behavior of individual investors. This shift is moving away from traditional investment options towards more complex financial products. Advancements in technology and a greater understanding of investments have contributed to this change by diminishing trust in conventional financial institutions. The integration of big data analytics within FinTech is essential for understanding client behavior and personalizing services to meet individual needs. By employing methodologies such as the Cross Industry Standard Process for Data Mining (CRISP-DM), FinTech firms can systematically extract insights from data, ultimately enhancing customer satisfaction through tailored investment strategies. The CRISP-DM framework outlines critical stages for effectively managing the complexities of data-driven decision-making in the financial sector.

This paper discusses the methodological implementation of CRISP-DM in the FinTech industry, highlighting its role in optimizing service delivery and improving customer engagement through data analysis and strategic modeling.

KEYWORDS: fintech industry, CRISP-DM, individualization, data analyses

JEL: M10, G40, C81

INTRODUCTION

The revolutionization of financial markets finds its roots in the dynamic change of individual investors. A new niche based on investment opportunities is emerging due to the changed customer attitude. There is a migration from traditional investment opportunities to complex financial products.

The return of the individual investor is rooted in the change that has occurred in the investment markets, in terms of the development of technology companies. There are also changes in traditional financial structures and the savings products they offer. Finally, a positive trend is being established in the growth of the volume of knowledge in the field of investments (Marchev & Marchev, 2023c). The factors listed above are leading to revolutionary trends in a conservative market, such as the market for financial services and investments.

The revolution in financial markets is primarily driven by the evolving behavior of individual investors. A new niche focusing on diverse investment opportunities is emerging due to shifts in customer attitudes. There is a transition from traditional investment options to more complex financial products.

1. Essentials of the FinTech industry

The FinTech sector represents a modern approach to delivering financial services, leveraging advancements in technology that have appeared over recent decades. Companies within this space are responding to the rapid evolution of technology by positioning themselves as alternatives to traditional financial institutions, offering services that are not only faster but also more adaptable to consumer needs. The aftermath of the 2008 financial crisis, marked by a significant erosion of trust in conventional financial entities, has catalyzed the growth of the fintech industry.

FinTech firms focus on enhancing customer service experiences by providing financial solutions that are responsive to the changing dynamics of the global market. This includes innovative strategies for managing customer expectations, such as implementing advanced monitoring systems aimed at maximizing overall satisfaction. The industry's goal is to create a more efficient and personalized financial service landscape, which is increasingly essential in a world where consumer demands are continually evolving.

The development of financial systems is driven by the rapid and dynamic evolution of new technologies. According to Chaudhry et al. (2022), the short timeframe within which the tangible impact of financial technology evolution is felt significantly impacts the performance of financial activities and transactions with customers.

Fintech companies focus their efforts on part of the financial services available in the portfolio of traditional representatives of the banking system. The main point of distinction between these service providers is rooted in the way they are provided. The advantage that FinTech has over traditional financial institutions is the flexibility of its services in meeting customer needs. They provide new channels for delivering the desired product while improving the process, both in terms of financial aspects and in terms of speed and convenience.

Fintech companies are distinguished in several key domains where they offer more competitive products compared to traditional commercial banks. These areas include money transfer services, digital wallets, lending solutions for small and medium-sized enterprises (SMEs), asset management, and various other financial services.

The evolution of the entire palette of financial services from conventional to electronic form is realized through the development of new technologies, and in particular, the opportunities provided by the development of the Internet.

Financial agents in the economy aspire to satisfy customer needs more fully, which is directly related to improving the quality of services offered. In line with this, a new range of modern products is being developed to further increase customer satisfaction.

FinTech based on big data analyses

In recent decades, the impact of big data on society and science has become undeniable. The financial system, as part of the broader economic landscape, cannot escape the rapid advancement of large volumes of information. The influence of this data on the development of financial systems has been well established. The topic was explored by Mhlanga (2024).

The nature of extensive data and the analytical methods associated with it enable financial institutions to gain a comprehensive understanding of their clients. As a result, they can offer a new type of service tailored to meet the individual desires and needs of their customers.

According to Costa and McCrae (1989), "personality traits are continuous and consistent characteristic reactions of individuals when interacting with different circumstances." These

personality aspects are key drivers of individual behavior; they offer insights into expected responses in various situations and how individuals interact with their environments.

Beyond personal characteristics, general qualities also significantly influence behavior. These qualities are a set of behavioral norms typical of most people, although individuals may possess them to varying degrees. They serve as benchmarks for behavioral analysis (Allport, 1961).

By considering both individual and general characteristics, we can create an individualized approach to developing and managing investment portfolios. This approach considers a range of previously identified traits deemed important in selecting investment opportunities (Marchev & Marchev, 2023c). The personalized strategy offers a variety of investment options tailored to the preferences, desires, and needs of individuals.

The abundance of information in financial services needs a structured approach to understanding, analyzing, and extracting insights from consumer behavior. The CRISP-DM methodology provides an appropriate sequence of actions for this purpose.

2. Cross Industry Standard Process for Data Mining (CRISP-DM)

The industry standard process method for extracting knowledge from data - Cross Industry Standard Process for Data Mining (CRISP DM), is a set of interconnected and sequential steps for understanding and discovering the needs of the business under consideration, reviewing and analyzing information, building a model, and validating the process (Leaper, 2009; Schröer et al, 2021).

The method under consideration is an open standard that is available to all interested parties. It was developed by a consortium of over two hundred interested organizations with funding from the European Union. The model is focused on the data mining process but assumes the necessary flexibility to respond to a wide range of analytical styles (Brown, 2015). In 1996, Daimler-Benz, Integral Solutions Ltd. (ISL), NCR, and OHRA began the development of a single standard for extracting information from data. A dynamic development in the direction of targeted data mining followed, and a consortium was formed to improve the new approach. In terms of design and implementation, the method is neutral concerning the application industry. To fulfil this task, representatives of different industries and businesses were integrated into the project. The method integrates an interdisciplinary approach aimed at standardizing the processes under consideration. Colin Shearer writes more on the subject (Shearer, 2000).

CRISP-DM is based on a set of initial attempts to standardize a methodology for extracting knowledge from data (Reinartz, Wirth, 1995; Adriaans, Zantinge, 1996; Brachman, Anand, 1996).

The process plays a vital role in comprehending and overseeing the interactions within this intricate process. The adoption of a standardized process model in the market offers numerous advantages. It can act as a shared reference framework for discussions surrounding data mining, enhancing the collective understanding of key data mining challenges among all stakeholders, particularly from the customer perspective (Wirth, Hipp, 2000). A single standard is established to improve understanding by unifying criteria and framing the overall process

For the purposes of this paper, a detailed overview of the processes has been made, following the logical sequence of the industrial standardized process method for extracting knowledge from data. The method under consideration is used in the research as the main toolkit for processing information arrays.

Business understanding

The first phase of the method is called Business Understanding. This subsystem includes several components that define as their main task the correct and adequate identification of the business situation under consideration.

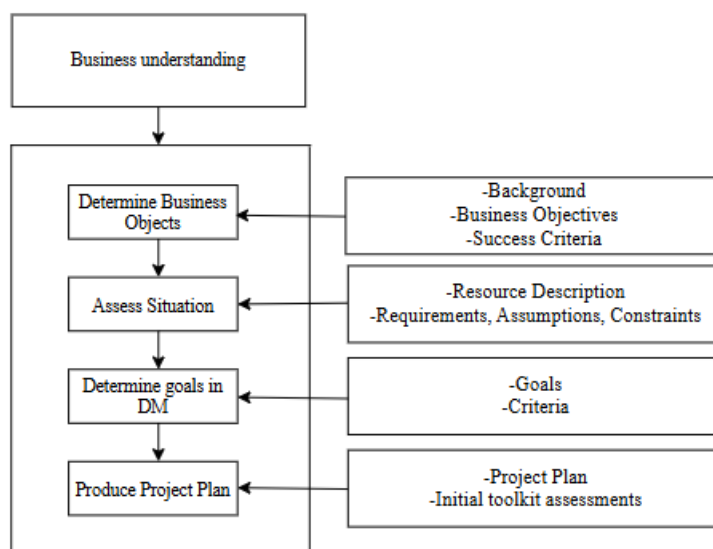
It is essential to define the main business objectives that are set before the model integrating the CRISP-DM method. Business goals are generally in correlation with the main aspects of the business/organization under consideration. They should be in harmony with both the historical achievements of the company and its current and future development plans.

An essential moment in understanding the business situation, in addition to accurate and appropriate goal setting, is establishing the main criteria for success. The specified criteria can be determined as certain desired states of a series of indicators for which a specific measure is available.

In work, it is necessary to carry out a complete analysis of the current situation. The correct and adequate assessment of the positive and negative features has a significant role in the adequate application of the method under consideration. It is necessary to conduct a thorough review of the available resources to set up the main requirements, assumptions, and limitations from the point of view of the algorithm of action. Establishing the main risks and a series of rules in case of unforeseen circumstances is essential for adequately calculating the expected benefits and costs associated with the project.

Extracting information from data is a complex, labor-intensive, and time-consuming process. However, if correct and situation-appropriate goals related to this process are generated, it can have significant benefits for the project's development. For this purpose, it is necessary to set proper criteria for the relevance of the tasks set before the algorithm.

Figure 1 Business Understanding Subsystem Structure



Source - own

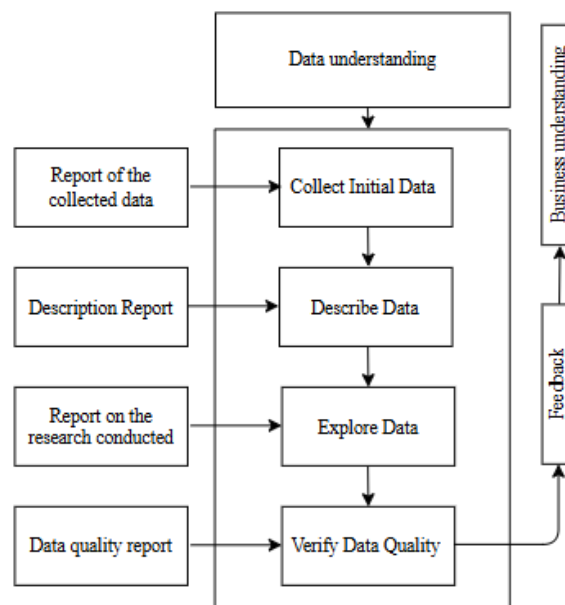
The phase of the process of understanding the business environment passes through the preparation of a project plan. From the point of view of the method it is necessary to determine the toolkit of work. It includes the requisite tools for conducting the project, software security, technical training of the participants and the technical aspects of the goals set above. Initial assessments are made of the available toolkit and set of techniques.

Data understanding

Next step in the considered standardized data extraction method is related to the process of insight into the essence of the available information arrays (Fig. 2). The observed phase starts with actions to provide the model with the necessary amount of information. Data related to the studied system are extracted using a set of algorithms. This is a process in which it is required to generate an array that is maximally consistent with the goals and criteria set in the first phase of the method.

Following the data extraction step, the next phase involves a thorough examination and description of the available data sets, focusing on their specifics and characteristics. The primary goal of this subphase is to gain an in-depth understanding of the collected data sets and their alignment with the established goals. After preparing a comprehensive description of the data, proceed to the detailed study and analysis.

Figure 2 Subsystem structure Understanding data



Source - own

Data analysis is the stage where the alignment of available information with established criteria and goals is evaluated. Monitoring this alignment can reveal challenges in determining project affiliation. If discrepancies are found, the method allows for revisiting the initial phase to revise the set goals. Additionally, this phase offers the opportunity to identify shortcomings in understanding the nature of the business. The primary tasks during the analysis phase involve conducting research and defining the characteristics of the data.

If the results obtained satisfy the set goals, it proceeds to verification of the data sets in correspondence with the set criteria for compliance. The stage concludes with the preparation of a report on the quantity and quality of the available data sets.

Data preparation

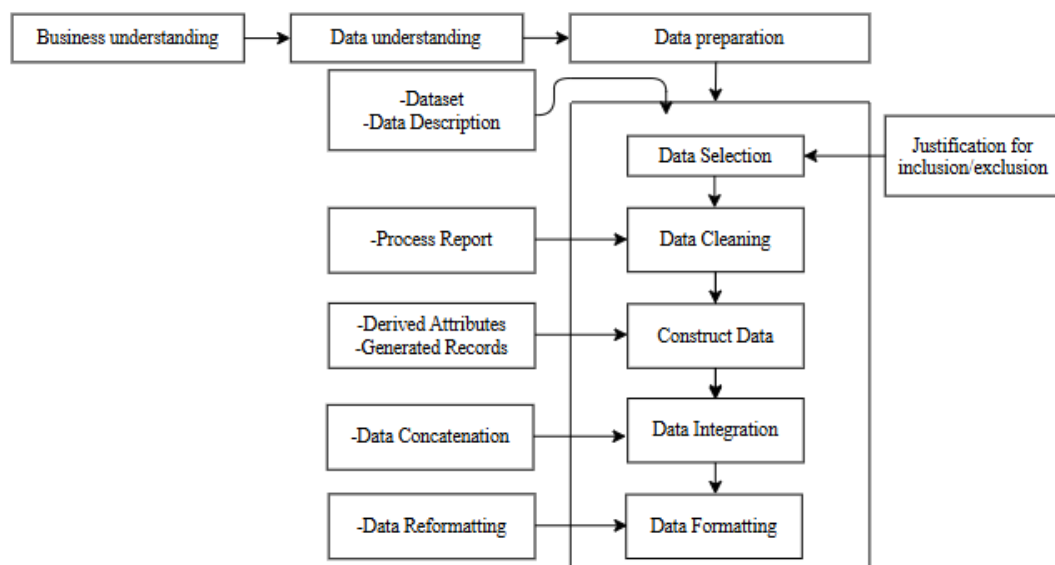
The data preparation phase (Fig. 3) is one of the most resource-intensive stages in the standardized data extraction method. This phase emphasizes the necessity for adequate time management.

The provided data sets are organized and described in a manner proper to the purposes of the process. Both the strengths and weaknesses of the characteristics of the available information set are identified. These steps serve as a transitional stage between understanding the data and preparing it for subsequent use.

The analyzed datasets provide the process manager with essential information for making informed decisions about which data should be included in the overall dataset for further analysis. At this stage, additional justification is required to determine whether to include or exclude specific datasets from the main set of information.

After preparing the final data set, the next step is to clean it by removing any information that is not suitable for modeling. It is possible that some of the collected data has been synthesized or intended for different purposes. This requires specifying and formatting the data so that it can be effectively used in the subsequent steps of modeling.

Figure 3 Structure of the data preparation process



Source - own

In the data preparation phase, alongside the previously discussed stages of data selection and cleaning, it is important to identify the need to generate additional features and characteristics of the data. Key considerations include the proper preparation of the dataset, its analysis, and recognizing the necessity to create new features derived from existing ones. This process involves the combination, synthesis, and selection of specific characteristics.

It is also essential to determine whether additional records must be generated from the existing data. This can be achieved through a random selection of available rows and their duplication.

After completing these tasks, the data integration process begins. This involves merging different datasets to create a single unified information array. If necessary, further data reformatting is performed to ensure the information is in a more convenient and suitable form for modeling.

Modeling

The modeling process (see Fig. 4) is the fourth key step in the standardized industrial process for extracting knowledge from data. Essentially, modeling involves a sequence of steps and techniques that use algorithms to develop a system for knowledge extraction from data. In this

method, the modeling process consists of several main steps: selecting a modeling technique, designing a test plan, constructing the model, and evaluating its performance.

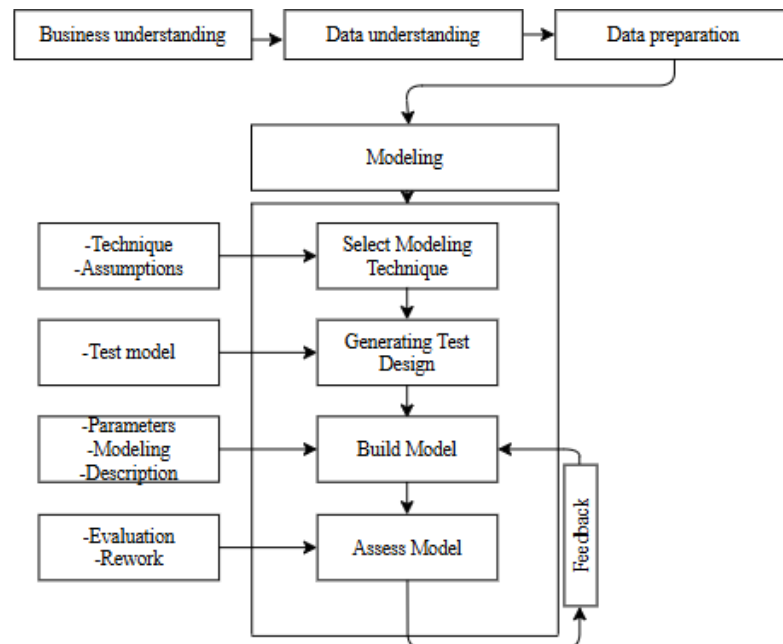
Selecting a modeling technique involves identifying the appropriate methods based on the organization's needs, the data available, and the competencies of the modeling team. A list of appropriate techniques is created, identifying the strengths and weaknesses of the tools under consideration. Assumptions are made regarding the methodology being studied, the expected outcomes, and the need to enhance the existing tools. A modeling method that meets the intended objectives is selected.

Once an informed choice about the modeling method is made, the next step is to build a test model. Constructing a test environment for modeling is essential for validating the suitability of the chosen techniques. This phase focuses on identifying potential weaknesses in the selected methods and exploring ways to improve the model's performance.

The testing phase and the identification of potential inaccuracies establish the prerequisites for progressing to the actual modeling phase, which is model building. The model development occurs in several key stages.

- The first stage is related to the determination and adjustment of the parameters. The accuracy of the model's outcomes is dependent on this phase.
- The second stage focuses on the actual modeling process, which includes the intentional selection, combination, and integration of various algorithms.
- The third stage is dedicated to describing the developed model. This includes preparing detailed documentation for each component within the model, outlining the processes involved and the algorithms utilized.

Figure 4 Structure of the modeling process



Source - own

After completing the modeling phase, the next step is to proceed to verify the results and assess the quality of the model. If the results meet the established criteria - advance to the next phase. If they do not - need to identify the gaps in the modeling process by reviewing all the steps taken, from setting the coefficients to the final phase.

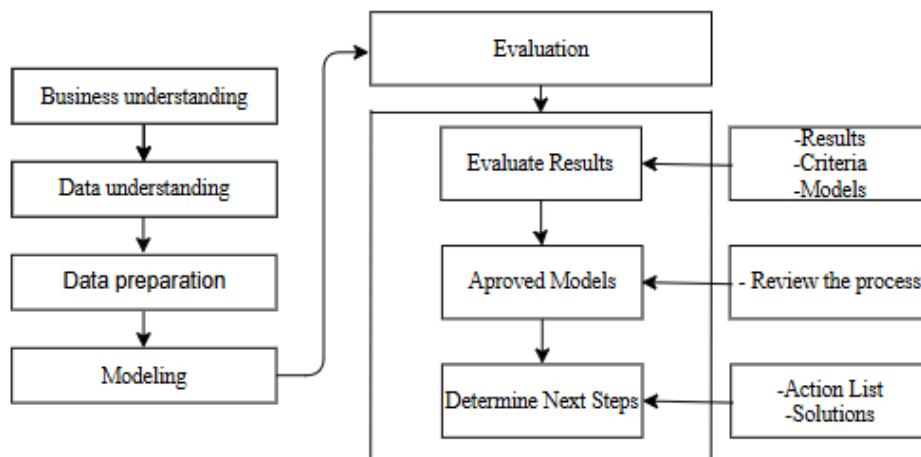
Evaluation

The evaluation stage in the standardized method for extracting knowledge from data involves a thorough assessment of the previous phases. To ensure accurate analysis and evaluation, it is essential to determine whether the results obtained during the first four stages are meaningful and suitable for business objectives.

The evaluation process (Fig. 5) consists of three main phases: assessing the results, reviewing the process, and determining the next steps. During the results evaluation phase, a thorough analysis of the outputs generated by the model is conducted. The relevance and adequacy of these results are assessed based on the established goals and the specific business area. The statistical significance of the results is determined, along with their relevance to the overall process. In the second step of the evaluation, the relevance of the established business success criteria and the adequacy of the measurements used are monitored. The results obtained from the validated models are then evaluated and compared.

The next phase of the process involves a detailed breakdown and analysis of the workflow. Monitoring is carried out on all steps and components of the model to identify any potential weaknesses in the planned sequence of work.

Figure 5 Structure of the assessment process



Source - own

The third phase of the process focuses on determining the next steps. Based on the results from the previous two phases, a detailed list of potential actions is created. If the outcomes from these stages are unsatisfactory, the list includes guidelines for improving the actions at any necessary phase. Conversely, if the results meet the initially established criteria and standards, then they are implemented accordingly.

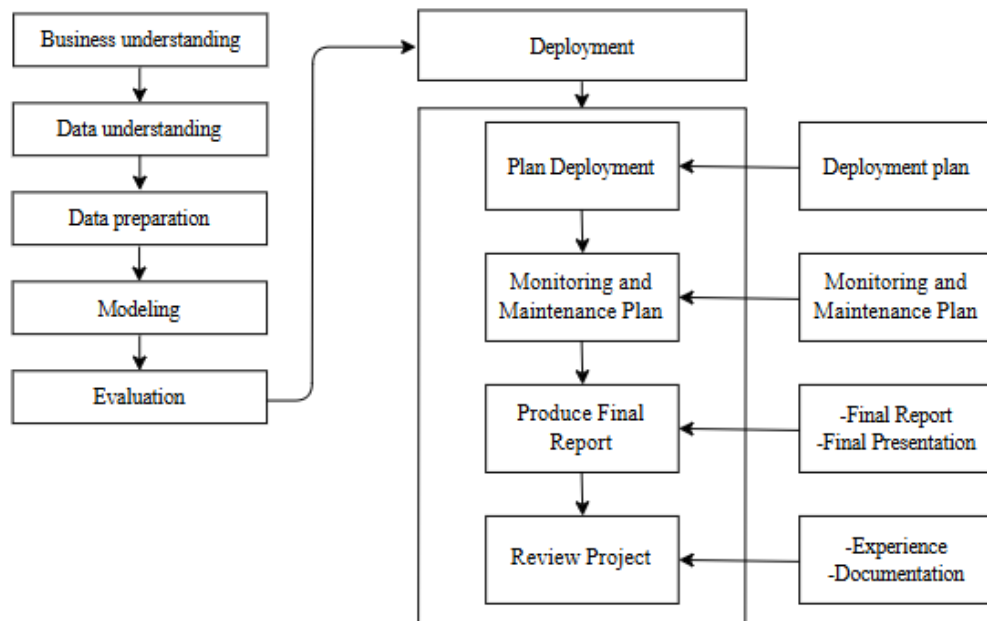
Deployment

The sixth and final phase of the CRISP-DM method focuses on implementing the new knowledge gained and integrating it into the organization's processes. This phase consists of four key stages: creating a deployment plan, developing a monitoring and maintenance plan, preparing a final report, and conducting a project review (see Fig. 6)

When preparing a plan for the deployment and implementation of the knowledge acquisition process, it is crucial to consider the need to improve and optimize work processes within the organization. This ensures the effective integration of newly developed processes.

To successfully integrate these new work processes, it is essential to establish fundamental criteria for monitoring and maintaining the system. Additionally, plans should be created for regular review of the system. The frequency of monitoring and maintenance will depend on the complexity of the model developed, the intricacies of the data extraction process, and the specific requirements of the business, among other factors.

Figure 6 Structure of the implementation process



Source - own

After establishing the plans for implementing and maintaining the process, a final report is prepared to summarize the work completed. This report outlines the steps in the process along with their descriptions. Additionally, a suitable visualization of the actions taken is created.

The final phase of implementing the standardized method for extracting knowledge from data, known as CRISP-DM, involves reflecting on the experience gained throughout the project. This includes compiling detailed documentation for each part of the process.

Individualization through a clustering algorithm (CRISP-DM implementation)

Business understanding

When creating individualized financial instruments, it is essential to adopt a comprehensive approach that maximizes the level of customization possible. However, economic feasibility does not necessarily mean designing unique products for every individual. A feasible method for addressing this challenge is clustering. This process involves segmenting individuals into clusters based on their similar characteristics, using a clustering algorithm. By grouping individuals into larger categories, we can achieve personalization at the group level.

This method identifies several key groups of variables that facilitate individualization through the analysis of large data sets. These key groups are established based on prior knowledge during the model construction process. The study is centered around the following main groups:

Demographic Variables. This group includes key demographic data relevant to building an individualization model. The aim is to establish the relationships between these indicators and to differentiate among individual groups.

Socio-Economic Variables. This refers to constructing a comprehensive profile of individuals to aid in the distinction of different groups. It focuses on financially active participants and their characteristics.

Psychological and Personal Variables. A crucial aspect of building an individualization model involves variables related to psychological traits and personal characteristics.

Financial and Banking Variables. This group emphasizes the need to construct a profile of active users of financial services. It analyzes individual behavior regarding the active use of financial products.

Personal Preferences. A foundational element in developing individualized models, this category encompasses both clients' desires and the challenges and uncertainties they encounter.

Individual Risk Preferences. This is a strictly personal measure reflecting how individuals respond to uncertainty in investments. This indicator is dynamic and varies according to individual characteristics and personal experiences.

One of the key elements in creating personalized investment instruments is understanding an individual's personal preferences. Along with information about specific investment options, it is essential to gather data on the personal and financial goals of the individual to achieve a more effective and tailored investment experience. This comprehensive approach combines various characteristics, encompassing both the individual's preferences for investment instruments and insights related to their financial objectives.

Data understanding

In the context of big data in financial services, there are fundamental challenges related to the complexity of the data and legal regulations, such as the Personal Data Protection Act, the Bank Secrecy Act, the GDPR, and others. The methodology for acquiring data to support the model involves generating information arrays.

Collecting data through standard survey methods is a complex and time-consuming process. The specificity of the required information often leads to negative responses from respondents.

Given these challenges, an alternative approach is needed to gather the necessary data. One effective method is to simulate a synthetic database that includes a variety of demographic, personal, individual, and banking variables and indicators.

Due to the specificity requirements of the empirical study, it is essential to generate this database using a combination of simulation techniques. The individual data components are combined through a process known as probabilistic concatenation

A variety of software and algorithms based on different data simulation methods are employed. The data simulation process consists of several key phases:

- Variable selection
- Choice of the simulation approach
- Data simulation
- Analysis
- Validation

This topic is thoroughly explored by the authors of this study (Marchev, Marchev, 2023a, 2023b; Marchev et al, 2023).

Data preparation

The variable transformation phase involves modifying a portion of the initially collected data to create new variables or to make existing ones more recognizable by models that use this information.

For the current information array, a transformation of the type is required from absolute values into categories that correspond to specific ranges. The first step in preparing the data for analysis is to code each column in a manner suitable for the software being used.

Table 1 Sample of variable encoding performed

Variable	System code
Sex/Gender	sex
Age - completed years	age
Level of education	lv_educ
Employment status	empl_stat
Marital status	marit_stat

Source: own

Additionally, the available data requires further processing. Along with processing the available information, it's essential to convert all non-numerical data into corresponding numerical indicators. During the data preparation phase, steps should be taken to maintain the statistical distributions derived from the original information sources. If needed, groups of variables with a small number of records can be combined with others.

Modeling

Individualization as a product is achieved through a clustering process applied to the database created in the previous step. The result of clustering is a collection of groups, or clusters, which are distinguished based on the variables used and the similarities among the individual records.

A fundamental aspect of the individualization process through clustering is the quality of the available information. To ensure this quality, data that has been previously prepared, cleaned, and transformed is utilized. Necessary scalar measures are determined for each factor included in the upcoming process.

The information set is divided into a training set and a test set by specifying the proportions for each part. For this research, the dataset is divided as follows: 80% of the data is allocated to the training set, while the remaining 20% is designated as the test set.

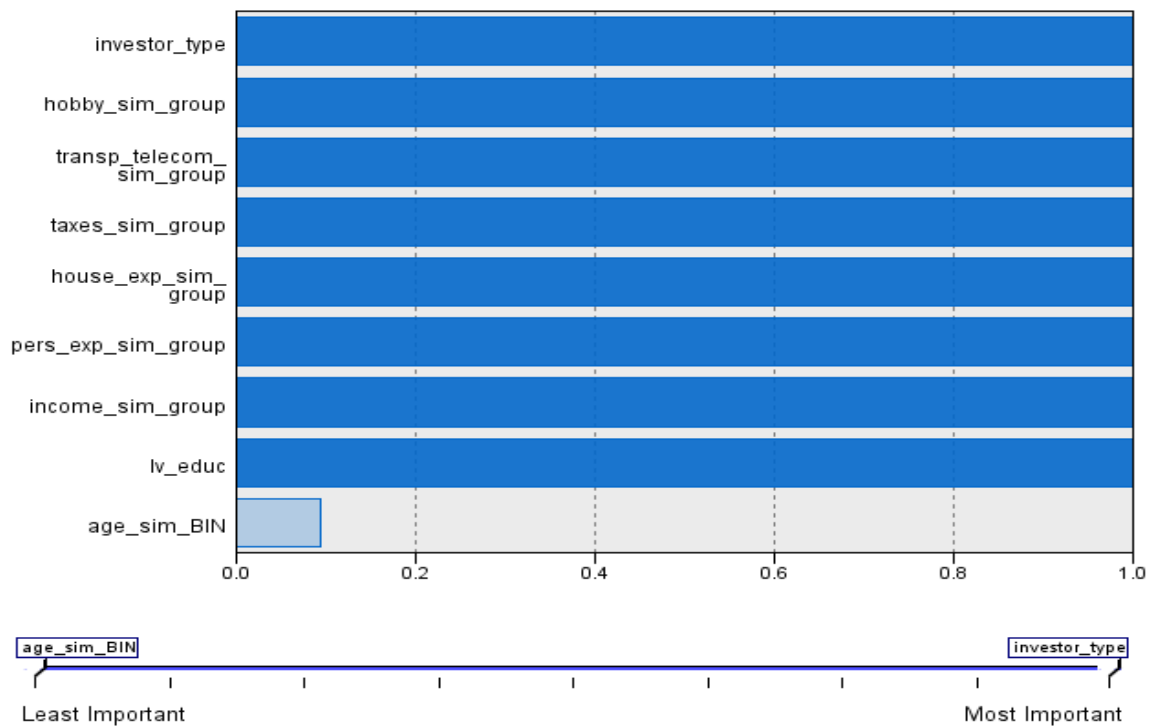
Building a clustering model involves a series of sequential steps. After determining the training and test subsets, the selection of a working method is carried out after testing various approaches to identify the most effective one. Multiple methods have been observed in the clustering process. Marchev (2021) provides more detailed information on the matter. This selection process considers the specific characteristics of the data, and the goals set for the research.

Evaluation

The analysis of the individualization model through cluster generation involves identifying and monitoring the characteristics which are with most statistical significance, based on the selected method.

The data most influential in this process can be found among individual characteristics, demographic features, and personal qualities of individuals.

Figure 7 Analysis of the characteristics



Source: Own

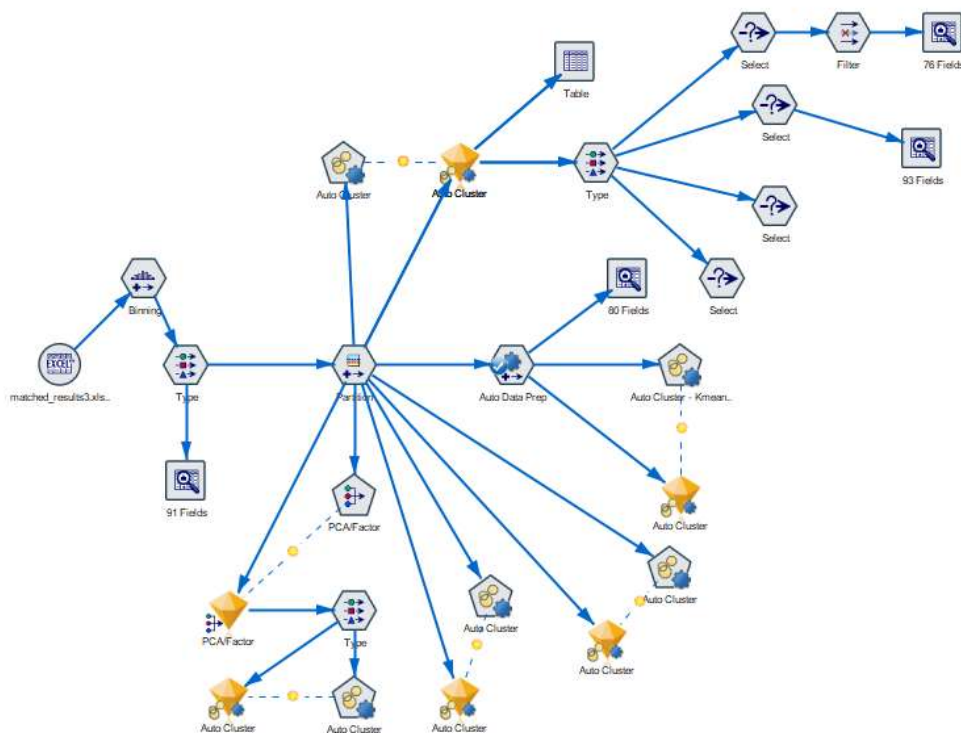
The quality of the chosen method for conducting the study is crucial. It is important to note that the effectiveness of the clusters is directly related to the appropriateness of the selected method for generating the necessary large data sets. If the chosen tool for identifying individual groups is not suitable, it may result in the creation of many individual clusters that exhibit relatively lower quality in the clustering process.

Deployment

The implementation of an individualized model through clustering can be carried out using various software tools. The most used options for this purpose include SPSS Modeler, MATLAB, Python, and R/R Studio.

Each of these tools has its own advantages and disadvantages, depending on the specific needs of the model being developed. When selecting software, it is important to consider both the expertise of the research team, and the time required to complete the work.

Fig. 8 Cluster model diagram



Source: own

CONCLUSION

In conclusion, integrating the Cross-Industry Standard Process for Data Mining (CRISP-DM) into the FinTech sector marks a significant advancement in leveraging big data to enhance user experiences and optimize financial services. This approach provides a framework to navigate the dynamic environment of the FinTech industry, enabling a more comprehensive understanding for customers, regulators, and potential sector investors. The structured methodology of CRISP-DM facilitates a thorough grasp of business objectives, data characteristics, and modeling processes essential for effective knowledge extraction.

The evolving behavior of individual investors, combined with technological advancements, has created a favorable environment for FinTech companies to thrive by offering personalized financial solutions tailored to specific consumer needs. By systematically implementing this methodology, FinTech companies can improve service delivery and foster greater customer satisfaction through customized investment strategies. The dynamic nature of the financial system provides a solid foundation for the adoption of such data-driven approaches. Furthermore, these actions are becoming essential for maintaining competitiveness and meeting the ever-changing demands of consumers in the financial services market.

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FINANCIAL NEEDS ANALYSIS OF FARMERS AS A FACTOR TO DIFFERENTIATE THE PRODUCT POSITIONING OF COMMERCIAL BANKS

ABSTRACT

This study, based on a structured survey of 33 Bulgarian agricultural producers, explores the specific financial needs of farmers and how these shape the effective positioning of financial products offered by commercial banks. The research examines several key financial instruments, including working capital loans, overdrafts, advance financing credit lines, investment loans, and revolving credit. Each need was evaluated using a six-point Likert scale and analyzed using cumulative scoring and the Fishbein method to determine the significance of each factor in product positioning. Based on the results of the survey the following conclusions are identified: (1) Financial institutions must better differentiate their products based on farmers' needs across different financial categories, especially in regions with high land acquisition costs or growing mechanization demands; (2) Strategic positioning markers, such as loan size, repayment terms, and purpose, are essential tools for aligning bank offerings with the realities of agricultural production. (3) There is a critical opportunity for commercial banks to enhance their competitiveness by offering value-added services such as business consulting, more flexible collateral requirements, and financing options

aligned with subsidy cycles.

KEYWORDS: positioning, financial products, financial needs, farmers, strategy for positioning

JEL: G21, M31, Q14

INTRODUCTION

Differentiation is a fundamental approach to developing a positioning strategy. It may also be interpreted as a concept or vision for market development. In this context, differentiation represents the process of distinguishing a firm's product from those of its competitors.

Positioning constitutes the final stage in the process of target market development and is of crucial importance for achieving market success. The core idea of positioning is that competing products must differ from one another (Iyer, Davari, Srivastava, and Paswan, 2021). Positioning theory asserts that a product must be distinguished from its competitors in a meaningful way in the minds of consumers. Merely advertising the benefits of a product—especially if those benefits are also offered by competitors - proves ineffective, even when supported by an extensive and aggressive advertising campaign. It is not enough for a company to simply inform potential consumers that its product is superior in one or more key attributes. Rather, the firm

must identify an unoccupied space in the consumer's mind and propose a unique approach to capturing consumer attention.

To achieve effective positioning, each company must differentiate its products from those of competitors. Differentiation is the process of creating tangible and intangible distinctions based on one or more product characteristics that set the offering apart from major competitors (Andonov, 2014). This is the stage during which the product must be prepared for mental positioning in the consumer's perception. Marketing managers must decide in what ways the product will differ from and resemble competing products. In doing so, they essentially lay the foundation for future product or brand positioning, as the product's predefined characteristics - *points of difference* and *points of parity* - determine how and where the product will be positioned relative to its competitors. Furthermore, they influence the brand's ability to maintain its competitive position against both established rivals and new substitute products entering the market (Andonov, 2014).

Once the competitive frame of reference for positioning is established—by defining the target market and the nature of market competition - marketers can identify suitable points of parity and differentiation for their products. Points of parity may be defined as attributes that are not necessarily unique to the company's product. These attributes may also be shared with other competing offerings. Points of parity appear in two principal forms: category and competitive parity (Baack, Wilson, and Charles, 2016). *Category points of parity* are associations that consumers perceive as essential for assigning a product to a given category. In other words, these are necessary but not sufficient conditions for consumer choice. Points of parity within a specific product category may evolve due to technological advancements or changes in consumer behavior. It is important to note that achieving parity on attributes prioritized by consumers is a critical condition for market success. Examples of such attributes include product design, packaging type, quantity, and product insurance. For a product to be successful in the market, it must achieve similar or comparable ratings (relative to direct competitors) in the minds of consumers regarding its core characteristics. Under these conditions, the company's product will have the opportunity to realize superiority or advantage in other characteristics where competing products are perceived as weak or insufficient.

For a company and its product to achieve points of parity regarding a specific attribute or customer benefit, it is essential that "a large portion of consumers believe that the product meets their specific requirements" (Gul and Jamil, 2021). In the theory of marketing positioning, the concept of a "zone of tolerance or acceptance" is introduced, within which the points of parity for a product must fall in order to succeed in the market (Udriyah and Azam, 2019). Customers must feel that the offered product adequately combines all important characteristics and benefits relevant to their needs.

For example, when seeking an investment loan, customers prioritize factors such as the grace period and the expectation that repayment can follow a flexible instalment schedule. If competing loan products offer similar conditions, consumers—assuming all else equal—will base their choice on other specific characteristics and benefits associated with the loan product.

Points of differentiation refer to attributes or benefits that customers frequently associate with a particular product. These represent "positive evaluations and perceptions that customers do

not find in the same way in competing products from the same product category" (Sahi, Gupta, and Lonial, 2018). These clearly expressed and recognized associations, which define the points of differentiation, can be related to customer perceptions regarding any characteristic or utility of the product. In the loan market, examples of such points of differentiation could include guarantees of the lowest interest rates, opportunities for refinancing, or flexible changes in the principal repayment schedule.

Establishing clearly expressed positive associations with a product—that is, creating points of differentiation—is a critical factor for the success of marketing specialists, as these actions are crucial for achieving effective competitive positioning in the market (Lilien, 2007).

Research Objective. The objective of the present study is to identify differentiation markers for positioning financial products offered by commercial banks to meet the needs of agricultural producers.

Methodological Approach

An organized survey is conducted to identify the financial needs of agricultural producers regarding the following financial products: (1) Working capital loans; (2) Overdrafts; (3) Credit lines for advance financing under direct payment schemes and measures; (4) Investment loans for purchasing land and machinery, or for production needs; (5) Revolving credit lines. These products represent the most frequently positioned financial offerings by commercial banks, which have addressed farmers' financial needs in the market over the past six years.

The farmers' preferences are evaluated by using the Fishbein model (Andonov, 2014). The model is among the most widely used frameworks for analyzing consumer needs and belongs to the category of multi-attribute models. These models assume that a consumer's attitude toward an object is determined by the beliefs they hold about multiple attributes of the object. Applying a multi-attribute model implies that consumer attitudes toward a company, product, or brand can be forecasted by identifying relevant competitive beliefs and combining them to derive insights into the overall consumer need concerning the objects in question.

Data Collection for the Application of the Fishbein Model. The required information is collected through a structured survey in which respondents (agricultural producers) assess each attribute of each offered financial product using a Likert scale. Each respondent is asked to evaluate every attribute across each financial product, providing a quantitative expression of their preference (attitude). A six-point Likert scale is utilized, as follows:

- 1 – Completely dissatisfied;
- 2 – Slightly dissatisfied;
- 3 – Neutral;
- 4 – Slightly satisfied;
- 5 – Mostly satisfied;
- 6 – Completely satisfied.

Survey card and interpretation of Results. Each respondent completes a survey card structured as shown in Table 1, using the six-point evaluation scale. The data from all completed

cards are aggregated into a single, comprehensive master card. The aggregated results are interpreted using the following formula:

$$A_{ijk} = \sum (\beta_{ijk} \times I_k)$$

where:

- i denotes the attribute,
- j denotes the brand (financial product),
- k denotes the consumer (agricultural producer),
- I_k is the importance weight assigned to attribute i by consumer k ,
- β_{ijk} is the belief of consumer k regarding the degree to which the product satisfies attribute i ,
- A_{ijk} is the overall attitude score toward the financial product.

Table 1. Survey card.

Attribute	Importance
"Proposed loan amount"	
"Approved initial loan amount"	
"Purpose of the loan"	
"Currency in which the loan is granted"	
"Loan repayment term"	
"Interest rate on loan repayment"	
"Availability of a grace period"	
"Fee for reviewing the loan application"	
"Loan management commission"	
"Early loan repayment commission"	
"Method of loan repayment (number of installments, and repayment options such as via received subsidies or through another loan)"	
"Type of collateral (type of pledge)"	
"Requirement for a guarantor"	
"Requirement for insurance"	
"Possibility for business consulting provided by the bank"	
Overall Attitude Score (Aijk)	

Source: Own interpretation

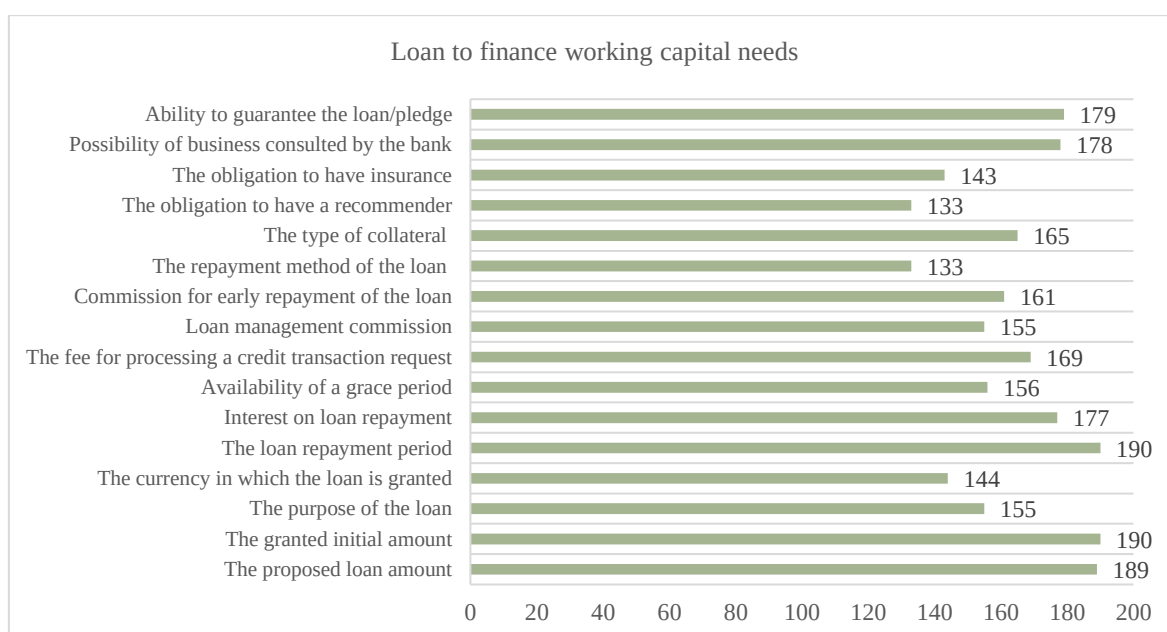
By completing the super-card, two valuable outcomes are achieved. The first outcome is that the super-card identifies the most significant attitudes from the perspective of agricultural producers when making decisions regarding the consumption of specific financial products offered by commercial banks. The second outcome is that the super-card facilitates the definition of key markers for future financial product modeling, as well as the appropriate positioning strategy to be adopted.

Analysis of the Results

Using the method of expert evaluation, combined with a Likert scale, the most important needs of farmers within each product group were identified. Figure 1 presents the assessment of farmers' needs within the product group “credit for financing working capital,” based on the survey results. The study included 33 respondents (farmers). According to the cumulative evaluation, the following needs were identified as the most significant within this product group:

- (1) the initially approved loan amount (with a cumulative expert evaluation score of 190 points);
- (2) the loan repayment period – 190 points;
- (3) the proposed loan amount – 189 points.

Figure 1. Identification of farmers' needs in positioning the financial product "Working Capital Loan".



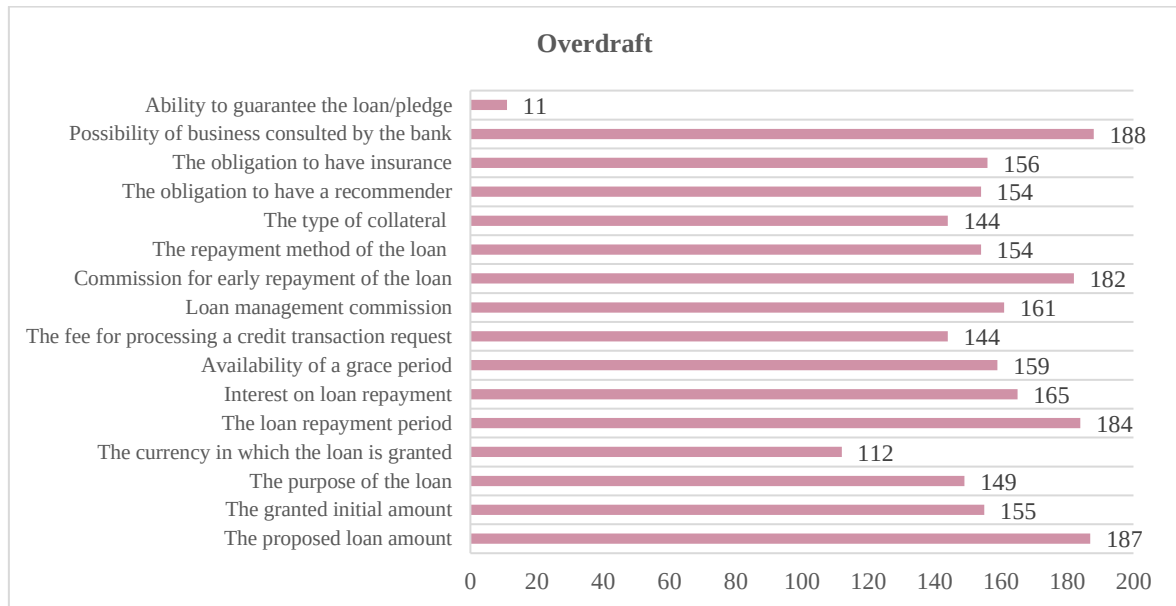
Source: Survey conducted among 33 agricultural producers. Each respondent assessed each need using a six-point Likert scale, where 1 – completely dissatisfied, 2 – somewhat dissatisfied, 3 – neutral attitude, 4 – somewhat satisfied, 5 – rather satisfied, and 6 – completely satisfied.

These three needs were indicated by the farmers as the most critical factors influencing their consumption of working capital financing loans.

In Figure 2, the assessment of farmers' needs within the product category “Overdraft” is presented. According to the survey data, the most significant needs identified are:

- (1) the possibility of receiving business consulting services from the commercial bank, with a score of 188 points;
- (2) the proposed size of the overdraft – 187 points;
- (3) the repayment period of the overdraft without penalty interest – 184 points.

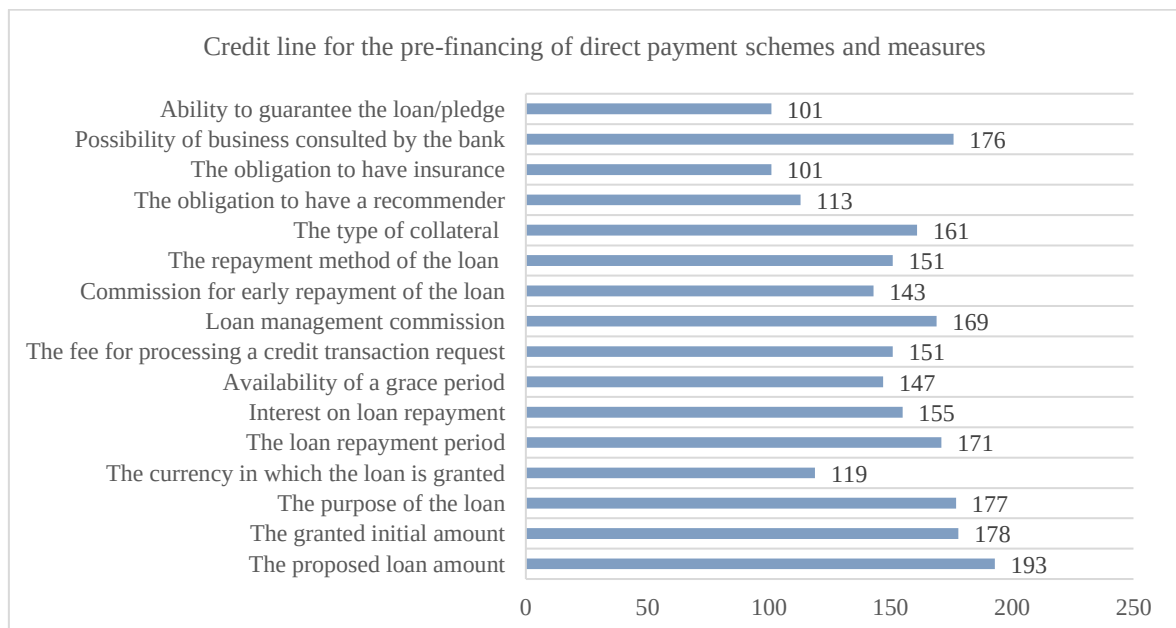
Figure 2. Identification of Farmers' Needs for Positioning the Financial Product “Overdraft.”



Source: Survey conducted among 33 agricultural producers. Each respondent assessed each need using a six-point Likert scale, where 1 – completely dissatisfied, 2 – somewhat dissatisfied, 3 – neutral attitude, 4 – somewhat satisfied, 5 – rather satisfied, and 6 – completely satisfied.

Each need was evaluated based on a cumulative score. The following figure presents the assessment of farmers’ needs regarding one of the most popular financial products within the agricultural sector: loans for advance financing under schemes and measures for direct payments.

Figure 3. Identification of Farmers' Needs for Positioning the Financial Product “Credit Line for Advance Financing of Schemes and Measures for Direct Payments.”



Source: Survey conducted among 33 agricultural producers. Each respondent assessed each need using a six-point Likert scale, where 1 – completely dissatisfied, 2 – somewhat dissatisfied, 3 – neutral attitude, 4 – somewhat satisfied, 5 – rather satisfied, and 6 – completely satisfied.

Each respondent assessed each need using a six-point Likert scale as described above. The cumulative score for each need was used for analysis. According to the surveyed farmers, the three most important needs in this product group are:

- (1) the proposed loan amount, evaluated with 193 points;
- (2) the initially approved loan amount requested by the farmer – 178 points;
- (3) the purpose of the loan – 177 points.

Competition among commercial banks in this product group is particularly intense.

Almost all 13 commercial banks offering financial products tailored to farmers' needs provide credit lines for advance financing of schemes and measures for direct payments. Most banks require a signed financial support agreement between the farmer and the State Fund Agriculture (SFA) as collateral for granting the loan.

A smaller number of banks, demonstrating a highly proactive and client-oriented approach, accept merely the submission receipt of the aid application filed with the SFA as sufficient collateral.

The state's active intervention in the financial support of agricultural activities over the past 15 years has led to several adverse consequences for farmers, including a sharp increase in farmland prices, dependence on subsidies, and the entry of "new players" primarily aiming to maximize subsidy absorption.

These negative trends, resulting from national and European subsidization policies, have created much larger investment needs for farmers seeking to expand their operations.

The main limiting factor for this expansion has become the high price of agricultural land, especially in Northeastern Bulgaria.

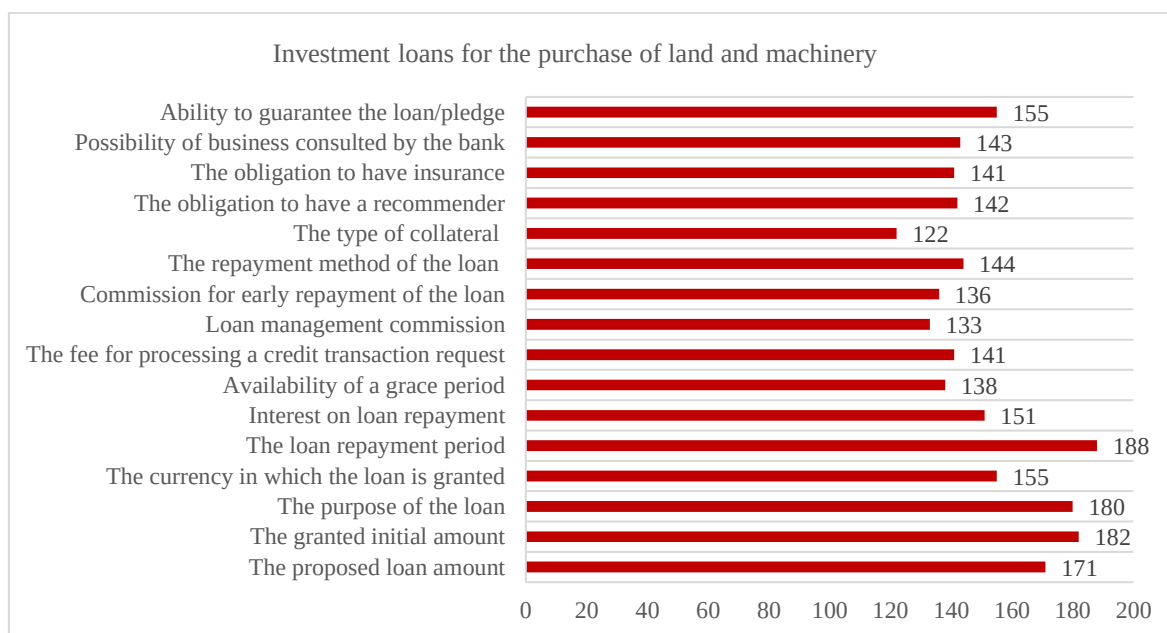
The expensive land resource necessary for expanding agricultural production has driven significant interest among farmers in another financial product — the **“investment loan for the purchase of land, machinery, and equipment”** (see figure 4)

Within the consumption of this financial product, the following key needs were identified:

- (1) the loan repayment period – 188 points;
- (2) the initially approved loan amount – 182 points;
- (3) the purpose of the loan – 180 points.

These three needs are considered primary drivers in the consumption of this particular product group. It should be noted that, according to data from the Bulgarian National Bank, the average size of an investment loan in the "Agriculture" sector exceeds BGN 186,000. This highlights the strategic importance of this financial product in meeting the financial needs for the realization of farmers' investment strategies in Bulgaria.

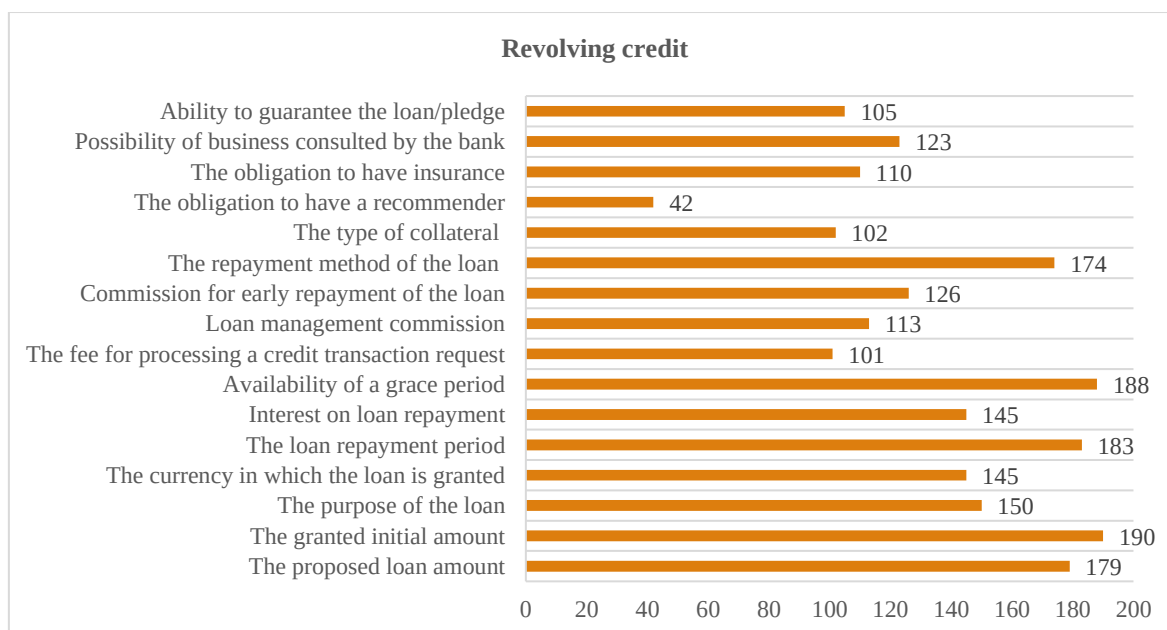
Figure 4. Identification of Farmers' Needs for Positioning the Financial Product “Investment Loan for Purchase of Land, Machinery, and Equipment.”



Source: Survey conducted among 33 agricultural producers. Each respondent assessed each need using a six-point Likert scale, where 1 – completely dissatisfied, 2 – somewhat dissatisfied, 3 – neutral attitude, 4 – somewhat satisfied, 5 – rather satisfied, and 6 – completely satisfied.

The following figure 5 presents the most significant needs of farmers in relation to the financial product category “Revolving Credit.” This is the product category with the least competitive activity among commercial banks.

Figure 5. Identification of Farmers’ Needs for Positioning the Financial Product “Revolving Credit.”



Source: Survey conducted among 33 agricultural producers. Each respondent evaluated each need using a six-point Likert scale: 1 – completely dissatisfied, 2 – somewhat dissatisfied, 3 – neutral, 4 – somewhat satisfied, 5 – rather satisfied, and 6 – completely satisfied.

The evaluation of each need is presented as a cumulative score. Revolving credit is not a preferred product in the financial portfolios of commercial banks.

According to the survey data, the three most important needs within this product group are:

- (1) the initially approved amount of the revolving credit – 190 points;
- (2) the existence of a grace period – 188 points;
- (3) the loan repayment term – 183 points.

The survey results aimed at identifying the key financial needs of farmers when utilizing financial products in Bulgaria show that the greatest needs lie in two areas: working capital and investment financing. These two needs received the highest cumulative scores across all evaluated product groups.

Table 2. Markers for Modelling the Product Positioning Strategy of Commercial Banks Serving Farmers' Financial Needs.

Product Type	Positioning Markers	Marker Significance
Working Capital Loan	(1) Initially approved loan amount; (2) Loan repayment period; (3) Proposed loan amount	(1) Very high; (2) High; (3) Medium
Overdraft	(1) Access to business consulting from the commercial bank; (2) Proposed overdraft amount; (3) Overdraft repayment period without penalty interest	(1) Very high; (2) Very high; (3) Very high
Credit Line for Advance Financing of Schemes and Measures for Direct Payments	(1) Proposed loan amount; (2) Initially approved loan amount requested by the farmer; (3) Loan purpose	(1) Very high; (2) Very high; (3) High
Investment Loan for Purchase of Land, Machinery, and Equipment	(1) Loan repayment period; (2) Initially approved loan amount; (3) Loan purpose	(1) Medium; (2) High; (3) High
Revolving Credit	(1) Initially approved amount of revolving credit; (2) Existence of a grace period; (3) Loan repayment period	(1) High; (2) Medium; (3) Medium

Source: Survey results obtained through the application of the Fischbein method.

This assessment provides valuable information on the key needs of farmers that should be taken into account when formulating a strategy for positioning financial products. These core needs serve as **strategic markers** in shaping the financial product portfolio. These markers perform two main functions:

- (1) they allow for differentiation and adaptation of the product group to meet client requirements;
- (2) they enable control over the adherence to the positioning strategy, serving as milestones that guide the product positioning process.

The following table 2 presents validated markers used in the strategic positioning of financial products for farmers' needs.

CONCLUSIONS

This study, based on a structured survey of 33 Bulgarian agricultural producers, explores the specific financial needs of farmers and how these shape the effective positioning of financial products offered by commercial banks. The research examines several key financial instruments, including working capital loans, overdrafts, advance financing credit lines, investment loans, and revolving credit. Based on the results the following conclusions are identified:

1. **Financial institutions must better differentiate their products** based on farmers' needs across different financial categories, especially in regions with high land acquisition costs or growing mechanization demands.
2. **Strategic positioning markers**, such as loan size, repayment terms, and purpose, are essential tools for aligning bank offerings with the realities of agricultural production.
3. There is a **critical opportunity for commercial banks to enhance their competitiveness** by offering value-added services such as business consulting, more flexible collateral requirements, and financing options aligned with subsidy cycles.

Based on the the conclusion of the survey, the following recommendations should be taken:

- (1) Banks should **adopt a customer-centric approach**, integrating advisory services and offering flexible financing solutions tailored to farm size, region, and production focus.
- (2) Policymakers should **monitor the secondary effects of subsidy mechanisms** to mitigate land speculation and ensure equitable access to financial instruments.
- (3) Further research is needed to explore **regional variations** in farmers' financial needs and how banks can adapt their portfolios accordingly.

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CORPORATE VOLUNTEERING: STRATEGY, CONTRIBUTIONS, AND COMMUNITY IMPACT

ABSTRACT

In recent years, corporate volunteering has gone from a simple act of goodwill to a strategic pillar for many companies. By encouraging professionals to contribute their skills and expertise to social causes, organisations are not only supporting communities but also improving their own corporate social responsibility (CSR) profiles. This dual-purpose approach helps companies foster a positive public image, attract and retain top talent, and build a goal-oriented work culture. The object of this research is corporate volunteering within the CSR strategies of business organizations. The role, benefits, and measurable impacts of corporate volunteering on both organizational performance and community development are the subject of the study. The main tasks of the study include identifying and systematizing the strategic benefits of corporate volunteering, analyzing the leading practices of corporate volunteering in Bulgaria, formulating recommendations for improving the quality and effectiveness of corporate volunteering programs. The methodological approach combines literature review, qualitative synthesis of best practices and comparative analysis of corporate volunteering initiatives implemented by leading companies in Bulgaria.

In this article, we explore how corporate volunteering serves as a bridge between professional development and community contribution, and how it has become an essential element of modern corporate strategies.

KEYWORDS: corporate volunteering, corporate social responsibility (CSR), employee engagement, community development, impact measurement

JEL: M14, O35, L31

INTRODUCTION

Our society is becoming increasingly committed to social causes. Many companies are realising the benefits of offering volunteering programmes in the workplace. These programs allow employees to use their skills and time to help causes that are important to our society while being encouraged by their employers. In the most general case, corporate volunteering is seen as employees of a company volunteering their time in support of community significant causes with employer support.

Corporate volunteering not only reinforces corporate social responsibility (CSR) strategies but also generates measurable benefits for employees and organizations alike. A growing body of literature highlights that volunteering contributes significantly to employees' professional development, enhances engagement, and strengthens interorganizational partnerships.

In the contemporary business landscape, corporate engagement in societal issues is no longer a peripheral activity but a central component of organizational strategy. One of the most

prominent manifestations of corporate social responsibility (CSR) is the facilitation of employee involvement in volunteering activities. To accurately frame this phenomenon, it is essential to distinguish between several closely related concepts: corporate volunteering, business volunteering, and employee volunteering.

Corporate volunteering typically refers to employer-supported initiatives where employees donate their time and skills to external nonprofit or community organizations. Business volunteering, often used interchangeably, reflects broader corporate-supported engagement aimed at societal development. In contrast, employee volunteering emphasizes the individual's contribution of time and expertise, with or without direct corporate support, and increasingly includes occupation-related volunteering - activities closely aligned with employees' professional competencies.

The table below summarizes the key definitions of these terms for conceptual clarity:

Table 1. The key definitions

Term	Definition
Corporate Volunteering	Planned, employer-supported volunteering where employees donate time to third-sector organizations; integral to CSR strategies; also seen as a formalized aspect of corporate philanthropy aimed at community betterment through structured programs.
Business Volunteering	Often used interchangeably with corporate volunteering; it generally refers to employee volunteering initiatives supported by businesses, aligning with CSR strategies to engage communities and enhance brand value.
Employee Volunteering	Volunteering, where employees contribute time, skills, and effort without pay, often within employer-supported initiatives, can include occupation-related volunteering, where employees use their professional expertise to benefit nonprofits or community projects

Source: Own

1. LITERATURE REVIEW

Business volunteering, as a component of corporate social responsibility (CSR), has emerged as **an increasingly significant strategic tool for organizations**. It serves dual purposes: contributing to community development and reinforcing organizational goals such as employee engagement, brand enhancement, and talent attraction (Barkay, 2012; Brzustewicz et al., 2024).

The evolution of corporate volunteering has witnessed a shift from philanthropic gestures to structured, **skill-based interventions** aligned with business objectives (Kuznetsova, 2020). Companies today integrate volunteering into broader CSR strategies **to differentiate themselves** in competitive labor markets, leveraging it for employer branding and stakeholder engagement (Naumova & Kopyl, 2024). Research emphasizes that employees participating in corporate volunteering initiatives often experience a deeper sense of work meaningfulness, driven by the interpersonal connections they form through volunteering (Hatami, Glińska-Noweś, & Hermes, 2024).

Brzustewicz et al. (2024) investigated the moderating role of employee participation in business volunteering, finding it strengthens the link between workplace relationships, perceived work meaningfulness, and affective organizational commitment. This underscores the notion that corporate volunteering not only benefits external communities but also enhances **internal organizational culture and employee retention**. The organizational benefits of structured employee volunteer programs are confirmed by Veleva et al. (2012) who measure the impact of volunteer programs on businesses. Their findings suggest positive correlations between

volunteering and key human resources outcomes such as **job satisfaction, morale, organizational pride, and employee engagement**.

Pevnaya and Kuzminchuk (2018) highlight that in the Russian context, corporate volunteering serves not only as a CSR practice but also as **a driver for personnel development**, noting that employees involved in volunteering report higher satisfaction levels and a stronger commitment to their organizations.

The corporate perspective often blends ethical responsibility with strategic self-interest, as exemplified by Barkay's (2012) ethnographic study on Coca-Cola Israel, which revealed how the company designed its corporate volunteering programs to simultaneously **address community needs and reinforce brand loyalty and employee morale**.

Additionally, volunteering programs are increasingly seen as **forms of social innovation**. Kuznetsova (2020) frames corporate volunteering as a distinct business process and a social innovation, facilitating solutions to societal issues while enhancing corporate stability in volatile environments.

Liszt-Rohlf et al. (2021) emphasize that voluntary activities facilitate **the acquisition of valuable competencies** such as leadership, communication, and problem-solving. They argue for integrating volunteering into business education to foster experiential learning and to enhance employability, underscoring that volunteers often overlook the professional skills developed through their engagements. Their study demonstrates the necessity of formal validation processes to recognize these competencies, particularly in labor market contexts that value practical experience alongside academic qualifications.

Similarly, Biermann, Breitsohl, and Meijs (2024) propose the concept of **occupation-related volunteering**, which bridges professional expertise and volunteer activities. They underline that volunteers not only contribute their skills to nonprofit causes but also reinforce their occupational identity and social capital, extending the traditional understanding of skills-based volunteering beyond pro bono engagements to a broader spectrum of professional contributions.

Lough et al. (2016) highlight **the importance of institutional factors** in encouraging employee participation in volunteer programs. Their research identifies community engagement training as a critical driver of participation, over and above the effect of traditional benefits such as rewards or paid time off. These findings highlight the role of internal motivation and the value of well-designed volunteer engagement policies.

From **a nonprofit perspective**, Liang et al. (2024) examine how corporate volunteering is perceived within nonprofit organizations, particularly within the emerging concept of retail corporate volunteerism. They distinguish between nonprofits that commodify corporate volunteer programs for financial sustainability and those that prefer relational, mission-aligned collaborations. This nuanced view of corporate–nonprofit partnerships highlights potential tensions but also opportunities for strategic CSR alignments.

Finally, Brzustewicz et al. (2021) focus **on the collaborative dynamics between companies and NGOs** in the context of corporate volunteering. They argue that mutual value creation is achievable when partnerships are built on shared goals, trust, and co-created initiatives, which facilitate not only societal benefits but also enhance companies' CSR impact and NGOs' operational capacities.

From **a broader societal perspective**, the Time Well Spent survey by NCVO (2019) indicates that volunteering is predominantly local, reflects diverse participation patterns, and provides significant personal and professional benefits. However, demographic disparities remain, suggesting that more inclusive strategies are necessary to broaden participation across different

socio-economic groups. Organizations also recognize the importance of structured incentive programs to maximize participation. According to Leveraging Corporate Volunteer Incentives (2024), initiatives such as paid volunteer time off and skill-based volunteering are instrumental in boosting engagement and corporate citizenship behaviors.

From a **stakeholder perspective**, corporate volunteering enhances loyalty and trust. Naumova and Kopyl (2024) argue that corporate volunteering effectively manages stakeholder loyalty, including that of employees, customers, and the broader community, thus contributing to achieving strategic business goals.

Finally, volunteering resonates with broader sustainability and **social impact goals**. Rahman (2024) posits that CSR, including volunteering activities, underpins sustainable development by balancing economic growth with social equity and environmental stewardship.

In sum, corporate volunteering has transcended its traditional charitable role to become a **multi-faceted instrument** that addresses social needs, enhances employee experiences, strengthens organizational culture, and supports sustainable development. Organizations that strategically leverage corporate volunteering initiatives position themselves not only as socially responsible entities but also as employers of choice in increasingly purpose-driven labor markets.

The role of corporate volunteering is undeniably significant across various dimensions of organizational and societal development. Based on a synthesis of recent literature, five key benefits can be identified:

- **Strategic CSR practice** - Corporate volunteering enhances employer branding and nurtures a purpose-driven organizational culture. It strengthens employee loyalty and organizational cohesion while contributing to greater corporate resilience and adaptability in times of uncertainty.
- **Talent attraction and competitiveness** - Corporate volunteering programs significantly enhance a company's ability to attract and retain employees who share its values and commitment to social responsibility. By aligning organizational missions with employees' personal values, companies foster deeper engagement, loyalty, and purpose-driven performance, thereby gaining a competitive advantage in increasingly value-oriented labor markets.
- **Individual and organisational advantages** - On an individual level, volunteering fosters the development of critical skills such as leadership, communication, and problem-solving. It improves job satisfaction and morale, builds social and cultural capital, and reinforces occupational identity, contributing to both personal fulfilment and professional growth.
- **Cooperation between corporations and non-profit organizations** - Volunteering initiatives facilitate the creation of trust-based partnerships between companies and nonprofit organizations. These collaborations not only amplify the social impact of corporate responsibility programs but also enhance the operational capacities of the nonprofit sector.
- **Dynamic civic engagement and increased social capital** - Employee internal motivators, initiation and management of projects related to personal causes, combined with strategies and organized engagement are more effective. In addition, bridging demographic gaps is essential to ensure more inclusive and diverse participation in corporate volunteering initiatives.
- **Contribution to sustainable development** - Corporate volunteering aligns closely with global sustainability objectives. It promotes social equity, strengthens community

resilience, and supports the balance between economic growth and societal well-being, thus playing a vital role in achieving the broader goals of sustainable development.

In essence, corporate volunteering goes beyond traditional charitable giving and becomes a strategic tool that benefits organizations internally and externally, enhancing their role as agents of social change and sustainable development.

2. TRENDS AND BEST PRACTICES IN CORPORATE VOLUNTEERING: EVIDENCE FROM BULGARIA

A review of leading companies operating in Bulgaria reveals a variety of innovative approaches to corporate volunteering. These practices can be categorized into several thematic clusters, highlighting different strategic objectives - from supporting employee-driven initiatives and educational programs to promoting environmental preservation and social entrepreneurship. Table 2 presents a summary of selected companies and their key volunteering initiatives.

Table 2. Best practices

No	Company	Key volunteering practices	Specific initiatives (Examples)	Awards and recognitions
1.	A1 Bulgaria	Internal volunteering portal; Paid volunteer leave; Employee-driven initiatives (#HelpFOR1)	Environmental clean-ups; Tree planting; Shelter renovations; Food drives	Winner at 'The Heroes' Awards by TimeHeroes for inspiring employees to volunteer
2.	ABB Bulgaria	Community engagement in education, diversity & inclusion, and environmental care	Supported children's football tournaments; "Caps for the Future" plastic recycling initiative; "Martenitzas with a Cause" campaign	Silver Annual Sign "Responsible Company - Responsible Employees" by BCause Foundation
3.	Accenture Bulgaria	Season of Impact program; Employee-led initiatives; Support for social entrepreneurship (Dar Pazar, Let's GO)	Over 25 volunteer activities annually; Support for BCNL social entrepreneurship; Community renovation projects; outdoor space of the Svetlina Crisis Center, which provides shelter for children affected by violence	Best Volunteering Program Award by Bulgarian Donors Forum (2023)
4.	Coca-Cola HBC Bulgaria	Employee volunteering and regular donation programs	Developed a workplace donation program; Participated in environmental clean-ups and social support initiatives	Honorary Donation Badge "Responsible Company - Responsible Employees" by BCause Foundation
5.	IBM Bulgaria	Volunteer Committee; Environmental initiatives (tree planting); UNICEF platform development	New Forest of Sofia tree planting; Blood donation platform; UNICEF digital safety campaign (#GrowCyberSurvivor)	Second place at the Socially Responsible Strategic Management Awards by the Ministry of Labor and Social Policy
6.	Paysafe Bulgaria	Four paid volunteer days; Community engagement month; Support for vulnerable groups	Donations to Plusheno Meche and Project Northwest; Elderly home support; Breast cancer awareness race	Award for Largest Corporate Contributor to Employee Volunteering by Bulgarian Donors Forum
7.	SAP Labs Bulgaria	Education programs (ITversity, Robotics for Bulgaria); University collaborations	Snap! workshops for students; University IT courses; Robotics clubs in schools	Award for Best Corporate Volunteering Program by Bulgarian Donors Forum
8.	TELUS International Bulgaria	TELUS Days of Giving; Community Board Foundation;	Bee preservation programs; Environmental and sustainability	Silver Award for "Responsible Company -

Nº	Company	Key volunteering practices	Specific initiatives (Examples)	Awards and recognitions
		Internal cause-based initiatives (#Stand4ACause)	education; Charity markets for social causes	Responsible Employees” by BCause Foundation
9.	UniCredit Bulbank	Team-based volunteering; Paid volunteer leave; Foundation grants	"Team with a Cause" Initiative (2024) - employee volunteering teams supporting NGOs; Paid day off for volunteering; Community Board funded projects UniCredit Foundation's endowment program	Internal CSR awards; Recognized for strong employee engagement initiatives
10.	Vivacom	VIVACOM Cares Volunteer Club; Disaster relief (Mizia); Support for children without parental care	Orphanage support; Green space cleanups; Assisting animal rescue centers; Partnering with Step for Bulgaria for educational programs	Multiple first prizes for Volunteering Program by Bulgarian Donors Forum

Source: Own (Adapted from the official websites of the companies.)

Corporate volunteering has evolved into a key pillar of corporate social responsibility (CSR) strategies in Bulgaria. A critical review of leading companies reveals diverse approaches to structuring and encouraging employee engagement in community service. To better understand these practices, they can be clustered into thematic categories that reflect their strategic priorities and societal impact (Table 3).

Table 3. Thematic clusters of corporate volunteering practices

Thematic clusters	Characteristics	Examples:
Organizational support for volunteering	Companies provide structural and institutional backing for employee volunteering, offering paid volunteering leave, establishing internal platforms for participation, and incentivizing engagement through additional benefits.	• <i>A1 Bulgaria</i> launched an internal volunteering portal and grants additional paid leave for volunteering. • <i>UniCredit Bulbank</i> supports team-based volunteerism with an extra day off. • <i>Paysafe Bulgaria</i> offers four paid volunteer days annually.
Employee-driven initiatives	Encouraging a bottom-up approach, some companies empower employees to propose and lead volunteering initiatives, fostering ownership and intrinsic motivation.	• <i>Accenture Bulgaria</i>’s “Season of Impact” program — 70% of initiatives are employee-led. • <i>IBM Bulgaria</i>’s Volunteer Committee enables employees to design and execute community projects.
Focus on education and youth development	Investments in education and mentoring form a significant part of corporate volunteering, aimed at cultivating future talent and promoting lifelong learning.	• <i>SAP Labs Bulgaria</i> with programs like “ITversity” and “Robotics for Bulgaria.” • <i>Vivacom</i>'s partnership with “Step for Bulgaria,” supporting children without parental care.
Support for social entrepreneurship and vulnerable groups	Some companies extend their impact by supporting social enterprises and vulnerable populations through mentoring, fundraising, and hands-on activities.	• <i>Accenture Bulgaria</i> supports Dar Pazar, a platform for social enterprises, and backs the Let’s GO initiative for social entrepreneurs. • <i>Vivacom</i>’s disaster relief efforts in Mizia and long-term support for youth education.

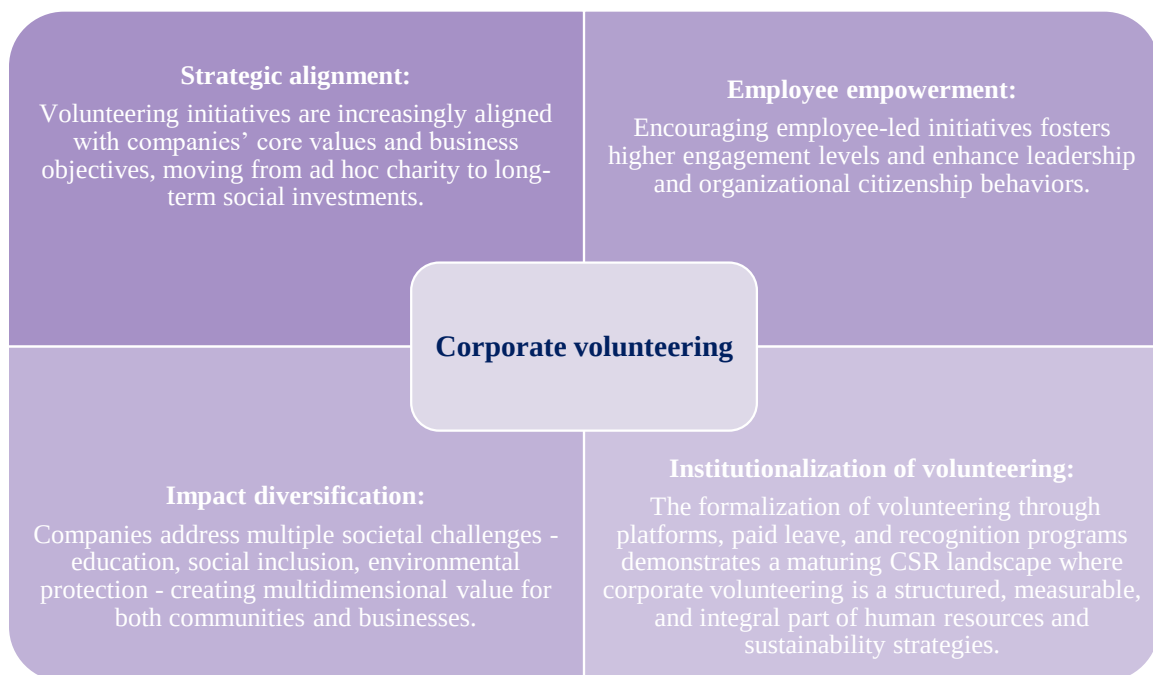
Thematic clusters	Characteristics	Examples:
Environmental and nature conservation initiatives	Environmental stewardship is reflected in activities like afforestation, environmental education, and clean-up campaigns	• <i>IBM Bulgaria</i> participated in Sofia's "New Forest" planting project. • <i>A1 Bulgaria</i> organizes environmental clean-up events. • <i>bTV Media Group</i> mobilizes volunteers for the annual "Let's clean Bulgaria together" campaign (all companies participate)

Source: Own (Adapted from the information of official websites of the companies.)

These practices reflect broader global trends where corporate volunteering is not just an act of goodwill, but a strategic component of workforce engagement and sustainability. Most companies are multinational and transfer good practices, but it cannot be overlooked that there are traditions of corporate volunteering in small and medium-sized enterprises with wholly Bulgarian ownership. Often, these initiatives enter steadily into training, team building activities and gradually separate as an important component of corporate social responsibility, representing a transition to more mature and impactful models that position companies as key actors in societal transformation and community impact.

The clustering of corporate volunteering initiatives reveals several key trends, shown in Figure 1.

Figure 1. Key trends in corporate volunteering



Source: Own

Despite the notable activity of individual companies and organizations, the absence of centralized statistics makes it difficult to assess the overall impact of corporate volunteering in Bulgaria. It is not possible to track how many participants there are, how many hours of voluntary work they put in or what the contribution is, but there is some data provided by the companies themselves. TELUS International Bulgaria shares that in 2025, nearly 500 employees from nine countries, including Bulgaria, participated in synchronized events focused on environmental conservation and social support. Accenture Bulgaria declares that in 2023, more than 300 employees engaged in over 25 volunteer initiatives as part of the "Season of

Impact" special program. A1 Bulgaria launched in 2023 an internal volunteering platform offering over 20 initiatives across more than 10 regions in the country. Since 2010, Vivacom through its "VIVACOM Cares" program, employees have been involved in monthly volunteering activities, including the cleaning of green spaces and supporting children's homes.

As is evident from this data, the information is insufficient, difficult to compare and no conclusions can be drawn from it, but nevertheless it can be summarized that corporate volunteering has its place and meaning, it is used as a powerful tool for social responsibility and employee engagement.

While outlining promising developments, the current landscape of corporate volunteering in Bulgaria is characterised by fragmented data and a lack of standardised frameworks for measuring impact. The absence of centralized statistics on the number of volunteers, hours contributed, and the tangible outcomes of volunteering programs poses challenges for both academic research and corporate accountability. While individual companies report impressive participation figures and community initiatives, the broader societal impact remains difficult to quantify and compare.

3. RECOMMENDATIONS

Given the above, this study highlights the need to develop comprehensive frameworks for assessing the qualitative and quantitative outcomes of corporate volunteering, and several recommendations can be made for both practitioners and researchers:

- Development of standardised indicators for measuring the qualitative and quantitative impact of corporate volunteering. Metrics should capture not only the number of volunteer hours and participants but also the social outcomes achieved, such as improved community well-being, skill development, and employee satisfaction.
- Implementation of impact assessment frameworks to facilitate better reporting, benchmarking, and strategic planning. Due to the wide variety of activities that are meaningful, and relevant, it would also be useful to apply them to align corporate volunteering initiatives with broader CSR and sustainability goals.
- Integration of qualitative research to explore the depth of employee experience and community change as a result of corporate volunteering. Again, there are examples of in-depth interviews and beneficiary comments available, but these are not sufficient to study the big picture.
- Exploring the knowledge, skills and competencies that employees acquire and how they transfer to job tasks and whether they are related to better performance, motivation, and sense of belonging. In addition, it is important to track how these skills affect career development. A study of internal and external motivations for participation in corporate volunteering will give a good understanding of employees and will be reflected in the design of the programme.
- Comparative studies in different sectors and regions would enrich the understanding of sector-specific volunteering models and their effectiveness by providing information on best practices and areas for improvement. Corporate volunteering practices can be mapped, best practices can be derived and adapted for other companies, regions or sectors according to the requirements and needs of the environment.
- The data availability - it is imperative to collect information and track corporate volunteering over time to assess its sustainable impact on both employees and

communities. Based on the data, trends can be tracked and policies, measures and initiatives can be adjusted.

CONCLUSION

Corporate volunteering initiatives align with broader CSR strategies, offering employees structured opportunities to engage in meaningful projects. These activities, ranging from pro bono consulting to educational mentorship and environmental conservation, enable professionals to apply their knowledge in new contexts, ultimately benefiting both society and the company. Moreover, research shows that employees value employers who are committed to social causes. Corporate volunteering programs have become a key differentiator in competitive labor markets, providing companies with a tool to boost employee satisfaction, loyalty, and brand reputation. Through active community engagement, companies not only fulfill their ethical obligations but also gain strategic advantages in talent acquisition and corporate branding.

The findings reveal that corporate volunteering generates multidimensional benefits - enhancing employee competencies, fostering organizational cohesion, advancing social innovation, and contributing to the community. However, the lack of centralized data and standardized metrics poses challenges for impact measurement and comparative assessment.

This study highlights the need to develop comprehensive frameworks for assessing the qualitative and quantitative outcomes of corporate volunteering. Further avenues of research could include the development of standardised impact evaluation models, studies of volunteering outcomes, and exploration of strategies for wider participation.

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HOW VOLUNTEERING BOOSTS COMMUNITY WELL-BEING: PATHWAYS TO A MORE CONNECTED AND SATISFIED SOCIETY

ABSTRACT

Volunteers significantly improve the well-being of individuals and communities by positively influencing subjective personal factors such as satisfaction with life, mental health, and self-confidence, as well as social factors such as cohesion and trust. This relationship is supported by several theoretical frameworks, including the theory of social capital, which suggests that volunteering improves community interconnection and reciprocal trust. The theory of human capital emphasizes the development of personal and professional skills of volunteers that improve personal growth and social productivity.

However, obstacles such as socioeconomic inequality, cultural norms, limited time, and organizational obstacles have a significant impact on volunteers' participation. Evidence shows that volunteer roles are closely linked to motivations and capacities and positively linked to improved well-being. In particular, official volunteer activities have shown a strong correlation ($R = 0,523$) with the satisfaction of life in the countries of the European Union.

KEYWORDS: volunteering, well-being, social capital, human capital, social integration

JEL: I31, D64, J24

INTRODUCTION

Today, volunteering is considered an individual or collective commitment for the benefit of others or to support the community, for which volunteers do not receive material compensation. Modern research has found that these activities have a positive impact not only on the recipients of assistance, but also on the volunteers themselves and the wider community. For example, people who regularly volunteer tend to report higher life satisfaction and better mental health than those who do not volunteer (Morrow-Howell et al., 2003; Pilkington et al., 2018). At the same time, volunteering can strengthen community links and social capital, networks, standards of trust, and reciprocity that promote collective action, i.e., improvement of public welfare (Putnam, 2000; Stukas, 2005). In this sense, it can be considered not only as a catalyst for social development but also as a form of social investment (Jenkinson et al., 2013).

The relationship between volunteering and well-being is complex and is influenced by many factors: (1) Bidirectional relationship because volunteering and well-being strengthen each other. Happier and healthier individuals are more likely to volunteer, and volunteering itself increases personal happiness, satisfaction in life, self-esteem, and social integration (Thoits &

Hewitt, 2001), and (2) contextual facilitators, through cultural norms, socioeconomic conditions, and modernization processes, significantly reduce the link between volunteers and the well-being of volunteers, forming both levels of participation and the results associated with it (Livingston et al., 2022). In fact, there are significant variations in European countries, influenced by historical contexts and civil traditions. The high civic involvement of the Nordic countries contrasts with the low engagement of the post-communist eastern European countries, reflecting the broad historical and sociocultural influences (European Commission, 2025). Recent data indicate a decline in the official voluntary rate in the EU, from 18,9% in 2015 to 12,3% in 2022, highlighting structural and possibly generational changes affecting participation (Eurostat, 2025). Consequently, social and contextual factors have a significant impact on how volunteering can lead to improved personal and community well-being.

1. VOLUNTEERISM AND WELL-BEING: A SYSTEMATIC REVIEW

Several studies have documented positive connections between volunteerism and subjective well-being outcomes for individuals. Volunteers report higher happiness, happiness and purpose than nonvolunteers, and fewer depression and stress levels (Morrow-Howell et al., 2003; Pilkington et al., 2018). For example, a systematic review by Jenkinson et al. (2013) found that in observation studies, volunteers reported a better self-reported state of well-being and a lower level of depression, and an average mortality rate higher than those who did not. These benefits of mental and physical health can arise because volunteering often provides social contacts, cognitive involvement, and the sense of doing something meaningful, all known to protect mental health, particularly for older adults (Greenfield & Marks, 2004). By participating in volunteer work, people often experience a positive boost or 'helper high' after performing altruistic actions, according to the theory that prosocial behavior gives the donor emotional rewards (Post, 2005).

From a psychological point of view, volunteering can meet basic psychological needs and improve the well-being of eudaimonic, the sense of purpose and meaning in life. The theory of role identity suggests that people obtain a sense of self-worth and purpose from the social roles they occupy. 'Volunteer' is a role that can become an important part of one's identity, especially if volunteer work is in line with deeply held values. According to this theory, the more prominent the identity of a volunteer role is for a person, the more it provides a purpose and meaning, which in turn promotes well-being (Thoits, 2012). In other words, volunteering can meet the human need for meaning and contribution and improve overall satisfaction with life and mental health. Volunteers can also increase self-confidence and -efficacy, as volunteers feel proud and useful and learn confidence to master new tasks, which contributes to psychological well-being (Musick & Wilson 2003).

It is important to recognize that the relationship between volunteering and subjective well-being can be reciprocal and depends on the nature of the volunteer experience. Healthy and happier people can first have more capacity and motivation to volunteer, which complicates the causal interpretation of the observed benefits (Li & Ferraro, 2006). Furthermore, not all volunteer experiences are asymmetric; if a volunteer's role is very demanding or if a volunteer feels ineffective, it can lead to stress or burnout. The net benefits for happiness may depend on a good match between volunteer motivation and volunteer experience (Snyder & Omoto, 2008). This question is addressed by the functionalist approach to the motivation of volunteers (Clary et al., 1998), which suggests that people volunteer to fulfill specific functions (such as expressing altruistic values, seeking personal growth, or gaining experience related to a career). When motivational goals are achieved by volunteering, they are more satisfied, they continue to volunteer, and maximize their positive impact on well-being (Clary 1998; Stukas 2005). In

general, under typical circumstances, volunteering tends to improve subjective well-being through direct psychological rewards and the social mechanisms discussed in the following.

Beyond individual happiness and health, volunteerism is closely related to social capital and community well-being. Social capital refers to resources available in social networks and communities, including interpersonal trust, mutual assistance, and civic participation (Putnam, 2000). Volunteering builds and uses social capital: people often start volunteering through social connections and shared standards, and in turn, volunteering creates new networks and strengthens standards of trust and reciprocity. Community's higher volunteerism often enjoys greater social cohesion as people come together from different backgrounds to work together for common causes (Wilson, 2000).

Empirical research supports the idea that volunteering can strengthen community bonds. Volunteers establish bridges between social capital by meeting and working with people outside their immediate family or friends' circle, thus promoting broader social ties (Putnam, 2000; Paxton, 1999). They also strengthen the bond of social capital within their own group by collaborating towards common objectives. These network connections are accompanied by standards of cooperation and trust. Volunteer experiences can foster a sense of community, shared purpose, and solidarity. For example, Stukas et al. (2005) argue that volunteering contributes to social capital by creating "trust and reciprocity" among participants. By volunteering, people practice citizenship, learn to trust others, and build expectations of reciprocity, extending to the social climate (Uslaner & Brown, 2005; Putnam, 2000). The improvement of social capital through volunteerism has several implications for collective well-being. Higher trust and civic engagement in a community are associated with higher rates of crime, improved governance, and greater resilience to crises (Putnam, 1993; Aldrich, 2012). Volunteering regularly indicates that societies are highly socially generous, and citizen initiatives can improve collective well-being, the overall quality of community life, and the availability of social support. For example, communities with active volunteer networks often offer better social services (through nonprofits or mutual assistance efforts), improving the well-being of vulnerable groups and the community as a whole (Salamon & Sokolowski, 2001). In addition, the act of volunteering for community projects (cleaning public spaces, organizing cultural events, or helping schools) directly improves the local environment and services and contributes significantly to the quality of life of residents.

The perspective of social capital also emphasizes that the relationship between volunteerism and the well-being of a community can work in both ways: a certain basis of trust and social networks in a community encourage more people to volunteer (because they are more likely to be asked by friends or to believe that others will do the same), creating a virtuous cycle. On the other hand, in communities with very low social capital, characterized by distrust or social isolation, the percentage of volunteers tends to be low, meaning that these communities lose the potential benefits of volunteering. This dynamic suggests that interventions to increase voluntary activities could start broader improvements in social cohesion and vice versa. It also coincides with the theory of social integration in sociology. Volunteering is a pathway by which individuals are socially integrated into their communities, forming links that link them to the social fabric (Durkheim, 1997). Greater social integration is generally associated with positive social outcomes such as lower suicide rates, better public health, and greater collective effectiveness, illustrating how individual volunteer acts can be integrated into social benefits.

2. VOLUNTEERING AS AN INDICATOR OF SOCIAL CAPITAL, HUMAN CAPITAL AND THE WELL-BEING OF COMMUNITIES

Beyond individual happiness or health, volunteering is closely related to social capital and the well-being of communities. Social capital refers to the resources of social networks and communities, including interpersonal trust, mutual assistance, and civic engagement (Putnam, 2000). Volunteering builds and uses social capital: people often begin volunteering through social connections and shared norms, and in turn volunteering creates new networks and strengthens norms of trust and reciprocity. Putnam (2000) in his seminal work "Bowling Alone" highlighted volunteerism and participation in civil associations as key indicators of the social capital of a community. Communities with higher volunteerism often enjoy greater social cohesion when people come together from different backgrounds to work for common causes (Wilson, 2000). Empirical studies support the idea that volunteerism can strengthen community bonds. Volunteers establish bridges between social capital by meeting and working with people outside their immediate family and friends' circles, thus fostering broader social bonds (Putnam, 2000; Paxton, 1999). They also strengthen the bonds between social capital and their own group by working together on common goals. These networks are accompanied by guidelines for help and trust; volunteer experiences can foster a sense of common destiny and solidarity in the community. For example, according to Stukas et al. (2005), volunteering contributes to social capital by creating "trust and reciprocity" between participants. Through volunteerism, individuals practice citizenship, learn to trust others, and build expectations of reciprocity that expand into the social environment (Uslaner & Brown 2005; Putnam 2000).

The improvement of social capital through volunteering has several implications for collective well-being. High levels of trust and civic engagement in the community have been linked to a reduction in crime rates, an effective government, and greater resilience to crises (Putnam, 1993; Aldrich, 2012). Volunteers regularly show a high level of social solidarity and citizen initiative in society, which in turn can improve collective well-being, the general quality of community life, and the availability of social support. For example, communities with active volunteer networks often have better social services (through nonprofits or mutual assistance), which improves the well-being of vulnerable groups and the community as a whole (Salamon & Sokolowski, 2001). In addition, volunteering for community projects (cleaning public spaces, organizing cultural events, or helping schools) directly improves the environment and local services, and thereby contributes significantly to the quality of life of residents.

Social capital also argues that the relationship between volunteering and community well-being can function in two ways: a certain baseline of trust, and community social networks encourage more people to volunteer (because they are more likely to be asked by friends or to be confident that others will give in), creating a virtuous cycle. Conversely, communities with low social capital, high distrust, and social isolation have relatively low volunteer rates, missing out on the potential benefits of volunteering. This dynamic suggests that interventions to strengthen volunteering could accelerate broader improvements in social cohesion and vice versa. It also corresponds to the theory of social integration in sociology. Volunteering is a means by which individuals are socially integrated into their communities and form links that link them to the social fabric (Durkheim, 1997). Greater social integration is generally associated with positive social outcomes, such as lower suicide rates, better public health, and greater collective effectiveness, which shows how individual acts of volunteering can be aggregated in terms of social benefits.

Another theoretical lens to understand impact is the theory of human capital. Human capital is the ability, knowledge, experience, and health of individuals to become productive members of society (Becker, 1993). Volunteering can be viewed as a form of informal education and skill training, a way of establishing human capital outside of formal education or employment.

Unlike paid jobs, volunteer positions often offer flexibility for people to take on new roles, learn by doing, and develop their competencies in a relatively low stake environment. Research has shown that volunteering helps people acquire new skills or improve existing skills (communication, leadership, and project management), gain work experience, expand their professional networks, and even improve language and cultural skills when working in various groups (Wilson & Musick 1997; Handy & Mook 2011; Toncheva-Zlatkova 2023). These improvements in human capital can improve the prospects and incomes of a person's long-term employment, which contributes to their economic well-being and their life satisfaction.

From a socio-economic perspective, volunteering can indirectly influence well-being through improved economic results. In Europe, voluntary work is sometimes promoted as an opportunity for young people or the long-term unemployed to gain experience and integrate into the labor market. This concept is conceptually similar to formal dual education models that integrate work-based training with education. For example, the dual system of vocational education in countries such as Germany is recognized to facilitate the transition from school to work by combining structured experience in the workplace with classroom learning (Boyanov, 2018). Volunteers can serve as informal parallels to this approach, offering practical experience and professional networks that complement formal education. In other words, volunteer work can be an investment in human capital that pays off in material well-being, especially for those who do not have formal work experience or educational qualifications. This is supported by the fact that people with higher education and income are more likely to be invited to volunteer and play a leading role in voluntary organizations (Forbes & Zampelli, 2014), creating a cycle where human capital and voluntary activity reinforce each other.

At the macro level, some academics believe that economic development and volunteerism have positive links. As countries become richer (beyond meeting basic needs), more citizens have time and resources to participate in voluntary activities, and more organizations are established to facilitate voluntary opportunities (Salamon & Sokolowski, 2001). In advanced economies with a broad education system, there is a greater pool of qualified persons who can play a specialized role (e.g., free advice or volunteer in hospitals and schools). These activities have real value for society, and, the economic value of volunteering is estimated to be considerable, and volunteer hours are equivalent to a significant percentage of GDP when monetized. Although the focus here is on well-being rather than economic production itself, it is important to note that contributions to human capital can have cumulative economic benefits that indirectly improve social well-being (through better productivity, less dependency on welfare, etc.). Recent analysis of human capital in the national context emphasizes that the development of skills and abilities (the essence of human capital) involves not only formal education but also informal and experiential learning (Krasteva, 2024). In this sense, activities such as volunteering contribute to the 'presence' of more human capital in society by promoting socialization, organization, and the transfer of knowledge outside traditional economic structures (Krasteva, 2024).

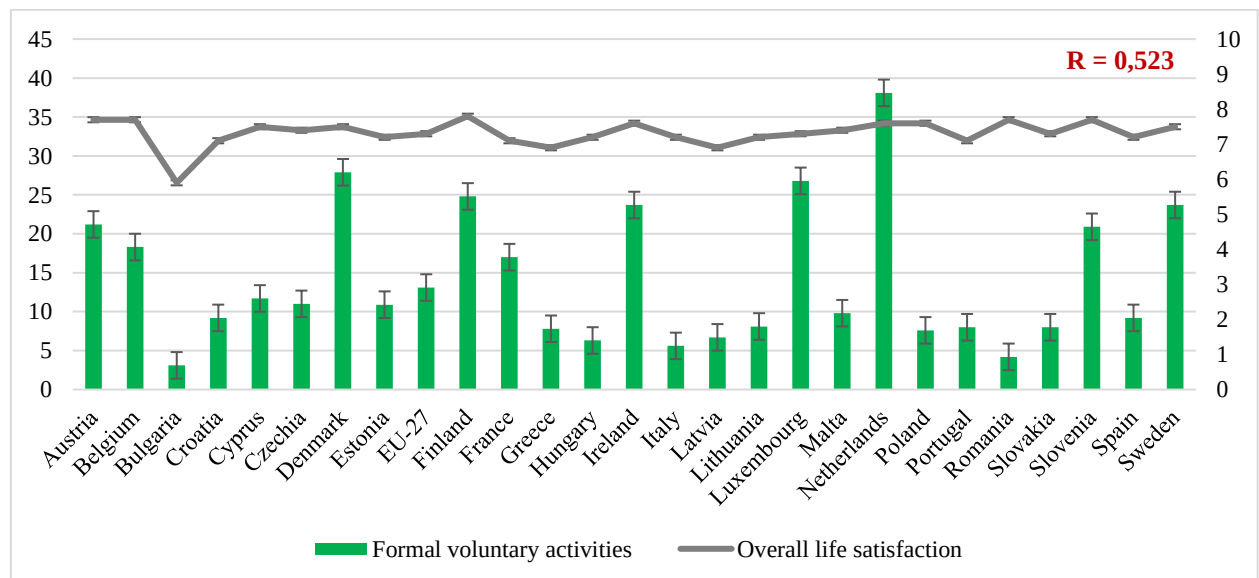
Functionalist perspectives relate to this discussion by highlighting the many functions that volunteerism serves both individuals and society. A classic functionalist view of sociology (in Durkheim or Parsons) suggests that volunteering plays an important role in the social system: it contributes to the socialization of individuals into community values, provides services and support that neither the market nor the government fully provide, and acts as a 'safe valve' or integrated mechanism that keeps society united. For example, volunteering in charities or community organizations can address social needs in a way that complements national programs, thus maintaining social stability and solidarity. Modern functional approaches to volunteerism in psychology, such as Clary et al.'s Volunteer Functions Inventory, identify several functions that volunteerism serves individuals, including expression of values, professional experience, social bonds, self-esteem protection, personal improvement, and

learning/understanding (Clary et al., 1998). This functional approach means that, when motivation functions are met by volunteering, they are more satisfied and more likely to continue volunteering (Clary et al., 1998; Stukas et al., 2005). To meet these motivations (for example, a volunteer who values altruism expresses altruistic values, or a person seeking professional skills acquires relevant experience) leads to personal growth and satisfaction, again linked to improved subjective well-being. In short, human capital and functional perspectives show that volunteering is not simply an activity that ‘gives time’ but that can build valuable skills and fulfil purposeful functions for individuals and society, thus improving well-being in various dimensions.

3. EMPIRICAL INSIGHTS INTO THE RELATIONSHIP BETWEEN VOLUNTEERING AND LIFE SATISFACTION IN THE EUROPEAN UNION

The latest cross-border data provide empirical support for the theoretical link between volunteering and subjective well-being in Europe. Analysis of 2022 and 2023 EU countries (excluding Germany due to data constraints) shows a moderately strong positive correlation between the number of formal volunteers and the average level of satisfaction (Pearson $R = 0,523$). In general, countries with a higher proportion of adults engaged in official volunteer work tend to report on average a greater satisfaction with life. For example, the Netherlands has the highest number of volunteers (approximately 36% of adults in 2022) and is one of the countries with the highest quality of life satisfaction, while Bulgaria is at the lowest level in both metrics (only 3,1% of volunteers; 5,9/10, the lowest in the EU) (Figure 1).

Figure 1. The relationship between the level of volunteering and the satisfaction score of life in the European Union (2022, 2023)



Source: own, based on Eurostat, 2025 [ilc_scp39__custom_16890068, ilc_pw01__custom_14745205]

In general, figures throughout the EU show that life satisfaction increases along with volunteering – a pattern consistent with the idea that an active civil society contributes to social well-being. The scale of the correlation suggests a significant connection in the social sciences: Volunteerism accounts for a significant part of the intercultural variation in happiness, although far from the entire, which implies that other factors also play an important role in national well-being.

Interpretation of the correlation. A Pearson r of 0,523 indicates a strong positive relationship that is statistically and substantively significant in cross-border contexts. This conclusion is

consistent with the theory of social capital, which states that communities rich in civic involvement and trust enjoy a higher quality of life. Countries with active voluntary sectors tend to cultivate stronger interpersonal networks, greater social cohesion, and greater mutual trust, conditions that promote overall well-being. Consequently, earlier studies have shown that societies with strong civic participation generally report better overall outcomes of life (Putnam, 2000; Helliwell & Putnam, 2004). This correlation is also consistent with the perspectives of human capital and modernization. More wealthy and educated societies often have more citizens able to volunteer (if basic material needs are met) and report higher life satisfaction, indicating a shared development basis for both phenomena (Salamon & Sokolowski, 2001).

For example, Eurostat data (2019) show that people with higher education volunteer at a much higher rate than those with only primary education; countries characterized by a highly educated population (e.g., Nordic countries) therefore show above-average volunteerism and life satisfaction. Modernization theory also argues that post-industrial values promote self-expression and civic participation, which go hand in hand with a greater emphasis on the quality of life. In highly modernized democracies such as Finland, Denmark, and the Netherlands, volunteering has become a widespread and reflective activity (Hustinx & Lammertyn, 2003), providing citizens with meaningful social roles (the theory of role identification) and opportunities for development of skills (the theory of human capital), contributing to subjective well-being. Indeed, when volunteer work meets important personal motivation and identity needs, it is related to greater purposes in life and greater satisfaction in life for individuals (Thoits, 2012). At the macro-level, these individual benefits can be combined to improve national well-being. In summary, the moderate correlation observed is very consistent with theoretical expectations. Volunteer societies tend to be happier societies, partly because volunteerism is a product of social capital, skills, and positive identities that support human prosperity.

3.1. NOTABLE CROSS-NATIONAL VARIATIONS

Despite the overall positive trend, the data also reveal significant differences and outliers that reduce the relationship between volunteering and well-being. Some countries diverge from the main trend, underlining that volunteering is not the only determinant of life satisfaction. Romania is a remarkable anomaly, with an average life satisfaction of the EU (7,7 on a scale of 0 to 10) among the highest, despite one of the lowest official volunteering rates in Europe (4,2%). Similar trends have been observed in Poland, which is more than average in terms of satisfaction (7,6) with a very low percentage of volunteers (7,6%). These cases suggest that other factors, cultural, economic, and social – can compensate for a low level of formal volunteering. In Romania and Poland, rapid economic growth and improved living conditions in recent years have contributed to increasing life satisfaction, but the legacy of communist distrust and the weakening of civil society continue to suppress formal volunteering (Howard 2003; Voicu & Voicu 2009). In addition, informal support networks (family support, neighbor support) are not included in official volunteer statistics and can contribute to the well-being of these societies. In other words, citizens of these countries could benefit from social support and objectives from family and community links instead of organized volunteer activities. This would reduce the expected life satisfaction deficit from low volunteering. Italy represents another notable case: Italian volunteer participation is astonishingly low (approximately 5,6% of adults), but Italians are relatively satisfied with life (7,2 near the EU average). This paradox follows Putnam's observations of strong family-based "social capital" in southern Italy, which compensates for lower civic involvement (Putnam, 1993). Traditional family structures, religions, and other cultural supports in these situations can improve well-being independently

of formal volunteering. These national idiosyncrasies highlight that the impact is influenced by a broader sociocultural context, a point highlighted by previous research.

On the other hand, there are cases where the high prevalence of volunteerism does not lead to an exceptionally high level of life satisfaction, suggesting a reduction in profits or compensatory factors. For example, Luxembourg has one of the highest forms of volunteering in Europe (26,8%, equal to that of the Netherlands and the Nordic countries), but only average life satisfaction (7,3, about the EU-27 average). France also has relatively vigorous volunteer participation (about 17%), but a little lower life satisfaction (7,1) than its volunteer level may predict. These discrepancies mean that while volunteering contributes to well-being, it cannot completely overcome other influences that limit overall satisfaction with life. In the case of Luxembourg, extremely high living costs, income inequality, or culturally stringent assessment of life satisfaction can counteract the benefits of strong civic engagement (Delhey & Newton, 2005; Wilkinson & Pickett, 2010). The example of France reminds us that social well-being is influenced by factors such as economic security, political climate, and social cohesion, and even if voluntary work is widespread, it is only part of this puzzle. These outliers highlight a critical view: The connection between volunteerism and happiness is real but mediated by context. As Eurostat notes, ‘cultural norms, economic conditions and historical traces’ form the way in which volunteering effectively translates into well-being results. Societies differ in the degree to which volunteering is integrated into daily life or rewarded with psychosocial benefits, which in turn affects the strength of its influence on national happiness.

3.2. INTERPRETIVE CONSIDERATIONS AND THEORETICAL INTEGRATION

The significant correlation ($R = 0,523$) must be interpreted in terms of understanding the underlying causal complexity. First, the direction of influence can be reciprocal: A flourishing volunteer sector can improve not only the quality of life, but a healthier and more satisfied population can also have greater capacity and motivation to participate in volunteerism (Thoits & Hewitt, 2001). Thus, part of the association can reflect happier societies that produce more volunteers, rather than volunteering that causes happiness unilaterally. Secondly, both volunteering and satisfaction in life are jointly influenced by third variables, in particular economic development and quality of governance. Wealthier countries tend to have both higher happiness and more resources (education, time, civic infrastructure) to support voluntary work. This confusing factor means that the correlation partially captures a broader modernization effect. However, even after accounting for development, cultural factors seem to modulate the relationship. For example, modernization and secularization have led to a ‘reflexive’ type of volunteering in northwestern Europe – more episodic and individually guided - that can produce personal fulfillment but rather weaker community connections (Hustinx & Lammertyn, 2003). In contrast, in countries where voluntary service is not standard or very rare (e.g., parts of eastern Europe), the few who volunteer may face structural obstacles – lack of volunteer organizations, low confidence – limiting their benefits. Empirical research by Morawski et al. (2022) found a reverse U form in the relationship between volunteer and well-being: in countries where volunteering is widespread (such as Scandinavia) or extremely rare (post-communist environments), the difference in the quality of life between volunteers and nonvolunteers is lower, while in countries with middle-income volunteering rates, volunteering gives a greater boost to well-being. The interpretation is that in high-civil countries, even nonvolunteers benefit from many indirect advantages of living in a rich and trusted environment of civic interest (reducing the marginal gain from voluntary activity), while in low-civil countries, systemic barriers (weak civil society, limited trust) limit the potential gains from voluntary activity. This nuance helps explain why the cross-country correlation, although

positive, is not stronger: the impact of voluntary action on social well-being can be weakened or suppressed in the extreme context.

Finally, when comparing countries, it is necessary to take into account methodological factors. The volunteer fees here refer only to formal volunteering (organized activities by groups or institutions). Societies differ in their definition and reporting of volunteering; some cultures have rich traditions of informal help (care, neighbourhood assistance) that are not registered in official statistics. Therefore, the 'low' volunteer rate of a country can underestimate its true social participation, leading to apparent anomalies in the data. The reliability also varies: in the EU-SILC well-being survey, life satisfaction data (such as France, Poland, Hungary) have been identified as less reliable, allowing noise to be introduced into the correlation. However, despite these shortcomings, the broad pattern is robust enough to emerge. Collectively, empirical evidence supports the proposition that volunteerism and social well-being are positively interconnected throughout Europe, while reaffirming the importance of contextualizing this relationship. The moderate correlation observed is significant – volunteering clearly correlates with happier and more cohesive societies – but it is not deterministic, as cultural norms, economic development, and historical paths communicate how volunteering translates into improvements in the quality of life. This analysis thus strengthens the theoretical frameworks previously discussed: it demonstrates how the social capital generated by volunteering can improve the well-being of the nation, how the mechanisms of role identity and human capital can operate at a large scale, and how modernization and cultural context provide the ground for these effects. Empirical insights such as these complement qualitative theories that illustrate that volunteering can actually be a catalyst for social well-being while attracting attention to the different factors that can accelerate or restrict this catalyst in different national environments.

CONCLUSION

Volunteering plays a multifaceted role in improving social well-being. The theoretical research presented in this paper demonstrates that volunteerism can contribute to individual well-being by providing meaningful roles, fostering social connections, and developing skills and self-efficacy. At the same time, volunteerism builds social capital at the community level, strengthens community bonds, and contributes to the provision of services and support that improve the quality of life. Evidence from various studies and contexts generally supports these positive effects: societies with active volunteer sectors tend to have higher levels of trust, cohesion, and overall well-being. However, these advantages depend on contextual factors. Cultural norms, economic conditions, and historical traces determine how and to what extent volunteering leads to health outcomes. For volunteerism to function as an effective catalyst for social well-being, it is crucial to link volunteer activities to motivations and to create supportive conditions that maximize their positive impact.

Importantly, the analysis highlights that simply affirming the virtues of volunteering is not enough; practical obstacles to preventing people from volunteering must be addressed. Time constraints, lack of awareness, skill gaps, social inequalities, cultural attitudes, and organizational deficiencies can all hinder volunteer participation. The overcoming of these obstacles requires concerted efforts from policy makers, educational institutions, civil society organizations, and communities. Strategies such as promoting work-life balance, providing volunteer training and matching services, promoting inclusive and trustworthy environments, and promoting partnership in all sectors can create a more enabling ecosystem for volunteering. When more members of society are empowered to volunteer, the results are double: individuals gain personal satisfaction and growth, and communities become stronger, more connected, and more supportive.

In summary, volunteering has the potential to significantly improve the well-being of individuals and groups, but realizing this potential requires understanding and action on the complex factors that influence the participation of volunteers. By eliminating barriers to participation and actively promoting a culture of volunteerism, societies can benefit from volunteerism. Such efforts would not only improve the lives of the people directly involved but also strengthen the social fabric and create a healthier, more inclusive, and better equipped community to face shared challenges.

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EFFECT OF ADHOCRACY CULTURE AND MANAGEMENT INFLUENCE ON LOGISTICS EFFECTIVENESS IN A CONSUMER GOODS FIRMS IN OSHODI-ISOLO LOCAL GOVERNMENT AREA, LAGOS NIGERIA

ABSTRACT

This study investigates the effect of adhocracy culture and top management influence on logistics performance among consumer goods firms in Oshodi-Isolo Local Government Area, Lagos, Nigeria. The study used a quantitative methodology, with a Pearson Correlation Matrix to examine the connections between adhocracy culture and logistical effectiveness metrics, and a hierarchical

multiple regression analysis to investigate the combined impacts of the adhocracy culture and top management influence on on-time delivery performance. The results show positive relationships between adhocracy cultural characteristics and logistics effectiveness variables, such as distribution frequency, operational costs, on-time delivery, and customer satisfaction. These relationships are noted explicitly as essential elements influencing employees' commitment, innovative values, organizational adaptation, flexibility, leadership impact, and workability. The study also emphasizes the significance of socioeconomic traits in affecting on-time delivery performance, including gender, age, educational level, and years of experience. The model's predictive ability for on-time delivery is greatly improved by including these variables and the features relevant to the adhocracy culture. The study highlights the importance of fostering a healthy adhocracy culture inside firms to enhance performance outcomes across several areas, including logistics efficiency and delivery punctuality. The results highlight the significance of considering socioeconomic factors in addition to the adhocracy ethos, offering helpful information for companies looking to improve delivery performance and streamline logistical operations.

KEYWORDS: adhocracy culture, distribution frequency, operational costs, on-time delivery, customer satisfaction.

JEL: L91, M11, M14

INTRODUCTION

The competitiveness of organizations is rising (Mason, 2018; Chowdhury & Quaddus, 2017). Due to this competitive nature, organizations want to expand globally to advance their managerial expertise, capital investment, and technical improvement (Kamalahmadi et al.,

2016). Innovation is a trait seen as a strength in the consumer goods industry. The primary explanation is that creative businesses are more flexible and faster to react; they go above and beyond to develop new possibilities and capitalize on existing ones. These innovative company concepts assure superior logistics; companies require effective logistics to guarantee timely product availability and satisfy clients.

According to Oginni and Adesanya (2013), the business environment in Nigeria could have been better, resulting in a slow rate of development, a rising unemployment rate, inadequate industrial production, and low demand for services and tangible goods. Similarly, Adim et al. (2018) contend that an organization depends on its capacity for growth and adaptation in the face of unfavourable changes. Due to adverse environmental conditions, several firms have migrated, staggered, collapsed, or packed up their shops in Nigeria. Competition promotes innovation, raises the bar for quality to an international standard, and establishes reasonable pricing levels (Adesina, 2003). In the face of change, many affordable concepts about how goods and services should be supplied, made, and provided have abruptly gone out of date. Like many companies that struggle to adapt to client demands, new technology, and innovation, they either fold up or are acquired by more competitive rivals. The most reliable and long-lasting path to competitiveness in this constantly changing business environment may lie in a firm's proximity to and ability to acquire, combine, and use resources in ways that improve its marketing environment, rather than just the simple possession of personal resources (Morgan et al., 2009). According to Ateke and Didia (2017), this position foretells that dynamic marketing capabilities will drive continuous organizational learning and knowledge accumulation through ongoing intelligence collection, facilitating the creation of superior customer value.

The consumer goods sector has developed various theories and solutions to enhance logistics effectiveness. Miska et al. (2018) emphasize that fostering a culture focused on durability within the company and throughout the supply chain is the first step in improving logistics performance. However, the potential contribution of contextual elements such as organizational culture to increased logistical performance is often overlooked.

Adhocracy is an organizational culture that has garnered attention due to its potential influence on business outcomes. Adhocracy is a management philosophy that emphasizes decentralisation, innovation, and adaptability. It creates an environment where employees are encouraged to take the initiative and seek competitive advantages (Deshpande & Farley, 2019). Adhocracy culture strongly impacts product performance in dynamic environments, with leaders and advocates of this culture exhibiting creativity and a willingness to take risks (Cameron & Quinn, 2016). Adhocracy culture is driven by the need for flexibility, creativity, and adaptability in the face of uncertainty, particularly in the information age (Cameron & Quinn, 2016).

Adaptability refers to how organizations respond to changes in their environment, with an adhocracy culture assuming that firms process information and employ adaptive skills to navigate new conditions. Organizations are seen as socio-technical systems consisting of social components (people) and technical components (technologies and machines) (Skyttner, 2017).

In the organizational context, flexibility involves adapting composition, size, responsiveness, human resource inputs, and costs to achieve organizational goals and objectives. It encompasses changes in how and when work is done, requiring organizations to address dynamic shifts in the business environment (Acar, 2019; Ghoneim, 2019).

A customer is a person who makes use of paid products by purchasing or renting goods or services. This understanding is directly connected to the issue of customer satisfaction in business transactions. The importance of customer satisfaction lies in its relationship to

customer loyalty, the repurchase intention of customers, and the overall performance of organizations (Dikmen, 2017). Customer satisfaction is the ultimate criterion for assessing an organization's success because the customers pay for the goods and services such organizations offer. This is true of a very competitive business like the hospitality industry. This means that when customers are satisfied with the quality of services received in a particular hospitality industry, their loyalty (continuous patronage) will be retained, and the sector's performance will be enhanced.

In Nigeria, many businesses have packed up, staggered, collapsed, and relocated as a result of unfavourable conditions of the environment (Ogunro, 2014). Kalay and Lynn (2014) opined that innovation is essential in a highly competitive environment for a firm to obtain a dominant position and gain higher profits. Therefore, understanding innovation culture is critical to meeting lead time and meeting consumers' satisfaction. Improving the quality of logistics services is of utmost importance as it enhances the likelihood of strategic collaborations and overall corporate success. Each organization implements logistics management strategies that align with its organizational culture to meet customer demands.

The purpose of exploring the relationship between adhocracy culture and logistics effectiveness in consumer goods firms in Nigeria is to gain a deeper understanding of the benefits and challenges associated with this culture in the context of the industry.

1. STATEMENT OF THE PROBLEM

Logistics effectiveness in economic growth and development is becoming increasingly important as it enables the timely flow of goods, services, and values. A well-functioning logistics system facilitates growth and development, especially in emerging economies. The performance of distribution logistics significantly impacts an organization as it connects the organization to customers, influencing customer satisfaction and loyalty. However, many organizations struggle to meet customer expectations in this area. Organizational culture plays a significant role in shaping employees' activities (Maxwell & Chukwudi, 2018). The relationship between logistics effectiveness (cost, lead time, distribution frequency, and customer satisfaction) and methods of implementing organizational culture still needs to be clarified (Ojo, 2018).

In summary, while some studies have explored the relationship between adhocracy culture and logistics efficiency in developed countries, there is limited research in the Nigerian context. The Nigerian manufacturing industry faces challenges regarding logistics effectiveness in satisfying customer requirements, and the role of adhocracy culture in this context has yet to be thoroughly studied.

2. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK.

Unified Theory of Logistics

Holstrom and Tirole identified the firm's first theory in 1989, and as more views of the firm evolved, the need for a unified theory of logistics became necessary. Mentzer et al. (2001) developed this theory, and one of the explanations of the unified theory of logistics is that there should be a goal regarding competitive advantage.

Every business wants to be successful and efficient; thus, in terms of logistics, efficiency (cost leadership) and effectiveness (customer services) are the two that will provide businesses with a competitive edge. The components that make up the capabilities of logistics in terms of competitive advantage are information management capabilities (information sharing via

information technology and connectivity), supply chain management interface capabilities (low-cost supply and distribution), and interface capabilities (customer services and logistics quality) (Wu et al., 2017).

Transportation and Customer Satisfaction

According to Mentzer et al. (2001), logistics capabilities play a crucial role in interactions that cross functional boundaries between sections of internal operations and other supply chain partners of the company. When a company's marketing and logistics departments work together, they may offer distinctive and varied goods and services to meet client needs (Wu et al., 2017). Mentzer et al. 2001 also noted in the same study that when logistics are included in production, costs and expenses are reduced, and this reduction is coupled with high-quality customer service to produce a high level of customer satisfaction (Wu et al., 2017). The second aspect is the coordination of logistics with the company's suppliers, distributors, and other intermediaries in the supply chain. This coordination produces customer value and also results in shared advantages. The internal component of supply chain management, then, is logistics. According to a 2005 study by Samli et al. that produced "cognitive evaluation of services experience, the logistics of the retailers, which includes internal and external logistics, play a crucial role in the satisfaction of the customers, as it is the only factor acting as an intermediary between the organization and the customers. According to a study by Mentzer et al. in 2001, timely availability, product availability, and delivery conditions contribute significantly to customer satisfaction and value creation (Wu et al., 2017). These factors also play a role in the criteria used to evaluate customers. According to the same study by Mentzer et al. from 2001, logistics adds value for consumers in terms of convenience and time savings through seamless contact with retail services (Wu et al., 2017).

Conceptual Framework

Researcher's Concept (2023)

The conceptual framework illustrated above describes a model of the relationship between adhocracy culture, top management influence, logistics effectiveness, and socioeconomic characteristics. The framework suggests that adhocracy culture, which is a type of organizational culture that is characterized by flexibility, innovation, and risk-taking, can lead to improved logistics effectiveness. This is because adhocracy cultures promote a climate of creativity and experimentation, which can lead to developing new and innovative logistics solutions. Additionally, adhocracy cultures are often characterized by a strong focus on customer service, which can lead to improved customer satisfaction and loyalty.

The framework also suggests that socioeconomic characteristics can influence the relationship between adhocracy culture and logistics effectiveness, for example, in countries with high levels of economic development and well-committed, motivated, and well-trained employees. An adhocracy culture may lead to improved logistics effectiveness. This is because these countries have the resources and infrastructure that support innovation and risk-taking.

Several recent studies support the framework. For example, a study (Chen & Paulraj, 2018) found that adhocracy culture was positively associated with logistics effectiveness in a sample of manufacturing firms. Additionally, a study (Zhang & Swink, 2017) found that socioeconomic characteristics, such as economic development and education level, were positively associated with logistics effectiveness.

The framework has several implications for managers. First, managers should consider the role of adhocracy culture in their organizations. Creating an adhocracy culture that promotes creativity, innovation, and risk-taking may benefit an organization's logistics effectiveness. Second, managers should consider the socioeconomic characteristics of their environment. An

organization in a country with high economic development and a well-educated workforce may be more likely to benefit from an adhocracy culture.

Methodology

Measurement development

This cross-sectional survey used a questionnaire to collect primary data. The Competing Values Framework of Cameron and Quinn (2006) was used to determine the adhocracy culture of the focal organizations. We measured three aspects of logistics effectiveness from the critical performance indicators adopted by Paddeu (2016): quality, logistics costs, productivity, timeliness, and capacity. The questions regarding logistics effectiveness between the focal organization are based on the questionnaire developed by Cai et al. (2009). All of the performance scales were measured with a 5-point Likert scale, including Strongly Agreed (SA), Agreed (A), Disagreed (D), Strongly Disagreed (SD), and Undecided (UD). An initial draft of the questionnaire was pre-tested through a review process by five scholars in the field to ensure content validity, simplicity, clarity, and understandability of the measurement. Subsequently, the improved draft was sent to practitioners from five large, discrete process manufacturers to clarify the comprehensiveness and clarity of the questionnaire. Their feedback was then used for further improvement.

Sample and data collection

The data were collected from prominent manufacturers in Oshodi/Isolo Local Government of Lagos state, Nigeria, which were selected based on their existence in the Nigerian Stock Exchange (NSE). The chosen companies were first telephoned to confirm their availability and time for a likely visit. A preliminary survey reveals that the firms have a total staff strength working in the Logistics, Transport, Procurement, and supply chain distributors department, consisting of 305 respondents. A representative of each organization at the top managerial level was also interviewed.

The study adopted the total enumeration method for sample size determination. This was considered suitable by the researcher because the size of the sampling frame from the list of staff in various departments (logistics, warehouse, transport, sales, and procurement) of the selected consumer goods firms was not large enough for sample selection. Previous studies in supply chain and distribution channels have also used the total enumeration method to justify the relevance of research (Oko, 2013). Given this method, the sample size for the study was 305.

Table 1 Sample Size for the Study

Companies	Total number of questionnaires distributed to employees	The total number of Questionnaires retrieved
PZ Cussons	143	141
Nestle	162	153
Total	305	294

Source: Researcher's Survey (2023)

Validity of Research Instrument

10% of the 294-person sample size was used for the pilot research. The transport, warehousing, supply chain, procurement, and sales departments of consumer products companies in Osun State, Nigeria (Abebi Foods Limited), who were not the target demographic for the primary research, were given thirty (30) questionnaires. To analyse the survey instrument's idea, instruction clarity, and readability, and to remove any areas of ambiguity, a pre-test of the

survey instrument with a smaller group was made possible (Terpend & Krause, 2015). Before beginning fieldwork, this helped the researcher identify any potential issues and revise the proposed questionnaire (Belaya & Hanf, 2014). The degree of validity and reliability of the study instrument was also established through this method.

Using exploratory factor analysis, validation procedures on the questionnaire were carried out to ensure the construct validity of the research instrument. Exploratory factor analysis (EFA) was used to demonstrate the construct's validity statistically. The exploratory component analysis is a construct validity method used to evaluate the calibre of a questionnaire, according to Duodu and Amankwah (2011). In exploratory factor analysis, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy, Extraction of Commonalities, and Bartlett's Test of Sphericity are the primary methods used to assess an instrument's validity. A statistic that shows the percentage of variance in the variables that potential contributing factors can generate is known as the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy.

According to Kaiser (1974), KMO values larger than 0.5 should be accepted. The factor analysis results are generally not helpful if the value is less than 0.50. The hypothesis that the correlation matrix is an identity matrix, which would suggest that the variables are unrelated and, therefore, inappropriate for structure discovery, is tested by Bartlett's test of sphericity. Small values (less than 0.05) of the significance threshold suggest that the data may benefit from factor analysis. Factor analysis has been utilized in several kinds of research to assess the validity of questionnaires (Kim et al., 2011; Ogunrin & Inegbenebor, 2015).

Table 2 Result of Factor Analysis Test

Variables	Number of Items	KMO	Bartlett's Test	Sig.
Innovation	7	0.757	1369.796	0.000
Adaptability	7	0.533	475.727	0.000
Flexibility	7	0.802	1247.49	0.000
Cost	7	0.548	14.46	0.050
Lead Time	5	0.624	315.19	0.000
Customer Satisfaction	5	0.716	42.705	0.000
Distribution Frequency	5	0.689	865.67	0.000

Source: Researcher's Computation (2023)

The Keiser-Meyer-Olkin (KMO) value for every variable surpasses the required threshold of 0.5, according to the factor analysis results shown in the table above (Kaiser, 1974). Bartlett's Test of Sphericity was statistically significant for all variables at 0.000. The instrument on the variables of the investigation was therefore valid. This demonstrated the tool's suitability for measuring the survey constructs.

Reliability of Research Instrument

The data gathered from the questionnaires sent for the pilot research was used to assess the reliability of the survey instrument. It was essential to determine the questionnaire's internal consistency in repeatedly assessing what it was intended to evaluate to determine the research instrument's dependability (Newstron, 2011).

Cronbach's alpha was used in this study to check each variable's internal consistency and establish dependability. According to Bhatnagar et al. (2014), a reliability coefficient of 0.70 or above is appropriate. The importance of Cronbach's alpha in research has already been shown by several studies using it to assess the reliability of questionnaires (Kalubanga et al., 2012; Mehta et al., 2000; Veljkovic et al., 2015; Vinhas & Gibbs, 2012).

Table 3. Cronbach's Alpha calculations

Variables	Number of Items	Cronbach's Alpha
Innovation	5	0.950
Adaptability	5	0.927
Flexibility	5	0.925
Cost	5	0.931
Lead Time	5	0.932
Customer Satisfaction	5	0.926
Distribution Frequency	5	0.938

Source: Own

Ho1: No significant relationship exists between adhocracy culture, leadership influence, and logistics effectiveness in some selected consumer goods firms in Lagos.

This hypothesis is based on several options. Firstly, adhocracy culture and leadership influence are independent (Yuki, 2006). Secondly, the influence of adhocracy culture and leadership is independent of logistics effectiveness. Logistics effectiveness is not affected by adhocracy culture or leadership influence (Yuki, 2006).

These research findings suggest that the hypothesis that there is no significant relationship between adhocracy culture, leadership influence, and logistics effectiveness is supported by the evidence. However, it is essential to note that these studies were conducted in different settings and with diverse populations. Therefore, the results of these studies may not be generalisable to all organisations.

In addition, a growing body of research suggests that adhocracy culture and leadership influence can be complementary. For example, a study by Jenkins (2015) found that an adhocracy culture can help to create a more supportive environment for leadership influence.

Chand and Gupta (2022) found that an adhocracy culture positively impacts workability, mediated by leadership influence. The study of Gupta and Chand (2021) found that the relationship between adhocracy culture and workability is moderated by leadership influence. When top management is supportive and empowering, an adhocracy culture positively impacts workability. However, when top management is controlling and directing, an adhocracy culture has a negative impact on workability. Rai and Gupta's (2020) study found that adhocracy culture positively impacts workability at both the individual and organizational levels. At the personal level, adhocracy culture is associated with increased job satisfaction, motivation, and creativity, contributing to improved workability. At the organizational level, adhocracy culture is associated with a more flexible and adaptable workforce, which helps organizations respond better to change and uncertainty.

These studies prove that adhocracy culture, top management influence, and workability are not independent. Instead, they are all interconnected and can significantly impact each other.

Overall, the research on adhocracy culture and leadership influence is mixed. Some studies suggest that these two factors are independent, while others suggest they can be complementary. More research is needed to understand the relationship between adhocracy culture and top management influence.

H02: Adhocracy culture and top management influence (employees' commitment, values, and motivational strategies) and working ability will not jointly influence the firm's on-time delivery.

The hypothesis was formulated by scholars such as Alagaraja and Aryee (2014), whose study found that adhocracy culture positively impacts employee work outcomes, such as job satisfaction, commitment, and work performance. This effect is mediated by psychological

empowerment, which is how employees feel capable of controlling their work environment and making a difference in their organization.

Chand and Gupta's (2020) results also suggested that adhocracy culture positively impacts workability at both the individual and organizational levels. At the personal level, adhocracy culture is associated with increased job satisfaction, motivation, and creativity, contributing to improved workability. At the organizational level, an adhocracy culture is associated with a more flexible and adaptable workforce, which helps organizations respond better to change and uncertainty.

In addition, it is essential to note that the relationship between these variables is complex and may not be linear. For example, adhocracy culture may positively impact on-time delivery only up to a certain point. After that point, adhocracy culture may have a negative impact on on-time delivery.

Overall, the evidence suggests that adhocracy culture, leadership influence, and working ability can all positively impact on-time delivery. However, the relationship between these variables is complex and may not be linear. More research is needed to fully understand the relationship between these variables and on-time delivery.

Results

Demographic Data of Respondents

This section delves into the respondents' background information regarding gender, age, highest academic qualification, marital status, working experience, and position in the organization. Descriptive statistics were used to provide data on the distribution of research variables. Table 4 displays a summary of the demographic profile of the respondents.

Table 4. Summary of the demographic profile of the respondents

Characteristics	Categories	Frequency	Percentage (%)
Gender	Male	226	76.9%
	Female	68	23.1%
Age	16-25yrs	23	7.8%
	26-45 yrs	212	72.1%
	46-55 yrs	59	20.1%
Highest Academic Qualification	SSCE	15	5.1%
	B.Sc/BA/HND	117	39.8%
	PGD/MBA/MSc/MA	158	53.74%
	PhD	4	1.4%
Career Sector	Logistics/ Supply chain	190	64.6%
	Procurement	32	10.9%
	Transport	44	15.1%
	Others	28	9.5%
Working Experience	≤ 5 years	93	31.6%
	5 – 10 years	107	36.4%
	11 -15 years	46	15.6%
	16-20 years	36	12.2%
	≥ 20 years	12	4.1%
Position	Director	12	4.1%
	Manager	135	45.9%
	Officers	127	43.2%
	Others	18	6.1%

Source: Field Survey (2023)

Results presented in Table 4 show that most % of the respondents, represented by 76.9%, were males, while 23.1% were females. This result enabled the researcher to obtain information from both genders, hence more appropriate and reliable information. The findings show that the

majority of the respondents who participated in this study, 53.7%, were aged between 26-45 years, followed by 20.1% aged between 46-55 years, while 7.8% were aged 61-65 years. This indicates that respondents were well distributed in terms of their age. In addition, the result of Academic Qualification revealed that most respondents (53.74%) were PGD/MBA/MSc/MA holders, while 39.8% were B. Sc/BA/HND, and 15% were holders of SSCE, while 1.4% were PhD holders. The career sector showed that most of the respondents (64.6%) were in the logistics/supply chain sector, 15.1% in the transport sector, 10.9% in the procurement sector, and 9.5% were categorized as in the other segment.

The findings further revealed that the majority of the respondents, 36.4%, have worked at their organizations for a period between 5-10 years, while 31.6% have worked between periods lesser than or equal to 5 years, 15.6% have worked for periods 11-15 years, 12.2% have worked between 16-20 years, and 4.1% have worked for 20 years and above. The study showed that 4.1% of the respondents worked as Directors of a particular department, 45.9% as Managers, 43.2% were Officers in various departments, and 6.1% occupied other positions not listed in the questionnaire. The result showed that all the respondents were qualified to respond to this survey.

Hypothesis testing

Hypothesis one

Ho1: No significant relationship exists between adhocracy culture, leadership influence, and logistics effectiveness in some selected consumer goods firms in Lagos.

Table 5. Pearson`s Correlation results Ho1

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Employees' Commitment Values	1										
2. Innovation Values	.37**	1									
3. Organization Adaptability	.38**	.83**	1								
4. Organizational Flexibility	.46**	.66**	.69**	1							
5. Motivational Strategies	.30**	.55**	.68**	.30**	1						
6. Leadership Influence	.86**	.50**	.55**	.36**	.51**	1					
7. Working Ability	.54**	.48**	.67**	.64**	.50**	.46**	1				
8. Firm's Frequency of Distribution	.56**	.44**	.48**	.25**	.30**	.72**	.44**	1			
9. Operating Cost	.50**	.41**	.38**	.60**	.11	.45**	.48**	.35**	1		
10. Firm's On-time Delivery	.58**	.70**	.71**	.41**	.60**	.71**	.48**	.68**	.28**	1	
11. Customers Satisfaction	.42**	.81**	.86**	.58**	.60**	.65**	.60**	.64**	.47**	.81*	1
Mean	26.02	30.07	21.22	21.28	29.88	29.77	22.17	6.14	4.47	5.79	16.15
SD	3.04	3.69	2.36	3.36	3.21	3.38	2.28	1.08	.65	.79	2.05

Researcher's Result (2023)

In the context of leadership impact, innovation, adaptability, flexibility, distribution frequency, on-time delivery, operational cost, and customer satisfaction, this table illustrates a correlation matrix that demonstrates the correlations between numerous factors. The means and standard deviations of the variables are shown in the table, along with the correlation coefficients between each pair of variables.

Using the Pearson Correlation Matrix, which shows the relationships among the study variables and in what direction they are related. It was indicated that all the aspects of adhocracy culture observed in this study had a significant positive relationship with the firm's frequency of distribution of goods. This means that the more adhocracy culture tilts towards favourability, the higher and better the firm's frequency with the distribution of goods. More specifically, the adhocracy culture is employees' commitment [$r(292) = .56, p < .01$], innovation values [$r(292) = .44, p < .01$], organization adaptability [$r(292) = .48, p < .01$], organizational flexibility [$r(292) = .25, p < .01$], motivational strategies in the organization [$r(292) = .30, p < .01$], leadership influence [$r(292) = .72, p < .01$], and working ability [$r(292) = .44, p < .01$].

To Test the relationship between adhocracy culture and operational cost, the researcher indicated that employees' commitment [$r(292) = .50, p < .01$], innovation values [$r(292) = .41, p < .01$], organization adaptability [$r(292) = .38, p < .01$], organizational flexibility [$r(292) = .60, p < .01$], leadership influence [$r(292) = .45, p < .01$], and working ability [$r(292) = .48, p < .01$] all had a positive relationship with operational cost. However, motivational strategies were not significantly related to operating costs [$r(292) = .11, p > .05$].

The result also indicated that the firm's on-time delivery had a significant positive relationship with all aspects of the adhocracy culture observed in the study. This implied that as employees' commitment [$r(292) = .58, p < .01$], innovation values [$r(292) = .70, p < .01$], organization adaptability [$r(292) = .71, p < .01$], organizational flexibility [$r(292) = .41, p < .01$], motivational strategies in the organization [$r(292) = .60, p < .01$], leadership influence [$r(292) = .71, p < .01$], and working ability [$r(292) = .48, p < .01$] increases, there also tends to be an increase in firm's on-time delivery.

Lastly, customer satisfaction had a significant positive relationship with all aspects of adhocracy culture. This was such that as employees' commitment [$r(292) = .42, p < .01$], innovation values [$r(292) = .81, p < .01$], organization adaptability [$r(292) = .86, p < .01$], organizational flexibility [$r(292) = .58, p < .01$], motivational strategies in the organization [$r(292) = .60, p < .01$], leadership influence [$r(292) = .65, p < .01$], and working ability [$r(292) = .60, p < .01$] increases, the satisfaction level of customers also tend to increase. Based on the result, hypothesis 1 (no significant relationship between adhocracy culture and distribution logistics performance) was not supported.

3. DISCUSSION

This implies that organizations embracing an adhocracy culture tend to perform better regarding logistics effectiveness. This is because adhocracy culture promotes flexibility. According to Noe et al. (2017), an adhocracy culture promotes organizational learning, improving the acquisition of knowledge, skills, competencies, and other capabilities that enable organizational innovativeness. Several recent studies support the assertion that leaders can increase their influence by increasing employee commitment. For example, a study by (wang & Howell, 2013) found that employees who were more committed to their work and the company were likelier to see their leaders as credible and trustworthy. This made them more receptive to their leaders' influence.

Companies operate in a highly competitive and dynamic global environment that calls for innovation and better products, processes, and procedures as a consumer-based approach to achieving competitive advantage (Wei et al., 2014).

Jigjiddorj et al. (2020) found a strong positive correlation between each trait of adhocracy and the overall employees' commitment. For instance, in Nongo and Ikyanyon (2012) and Rastegar and Aghayan (2012), there was a significant correlation between employees' commitment and

adaptability but not with consistency and mission, implying that the latter two types of culture could not induce employees' level of commitment.

Several studies have investigated the relationship between Adhocracy Culture and logistics effectiveness. For instance, Zhang and Zhu (2017) examined four kinds of cultures in 9 states of China. The study sampled 25 business enterprises to determine the link between clan culture, adhocracy culture, market culture, and hierarchy culture and firms' distribution productivity. The empirical findings evidenced that adhocracy culture significantly positively affected the firms in terms of performance and turnover. A study by Omukaga (2016) also examined the impact of adhocracy culture on the distribution performance of public water firms in Kenya. Correlation coefficient results showed an affirmative effect on outcomes. Regression analysis also showed that adhocratic culture improved productivity by 0.189 units. The study concluded a significant positive relationship between adhocratic culture and the effectiveness of an organization. Suleiman et al. (2017) found a positive correlation between Adhocracy Culture and Distribution Logistics Performance in Nigerian manufacturing firms. The study used the Pearson Correlation Matrix to analyze the data and found that the correlation coefficient between Adhocracy Culture and logistics effectiveness was 0.658, which indicates a strong positive correlation.

Similarly, a study by Cheng and Hsu (2014) also found a positive relationship between Adhocracy Culture and Supply Chain Performance. The study used the Pearson Correlation Matrix to analyze the data and found that the correlation coefficient between Adhocracy Culture and Supply Chain Performance was 0.492, which indicates a moderate positive correlation.

This implies that organisations embracing an adhocracy culture tend to perform better in terms of logistics effectiveness. This is because adhocracy culture promotes flexibility. According to Noe et al. (2017), an adhocracy culture promotes organisational learning, improving the acquisition of knowledge, skills, competencies, and other capabilities that enable organizational innovativeness.

In conclusion, organizations adopting an adhocracy culture will likely have better logistics effectiveness, improved customer satisfaction, and increased profitability.

H02: Adhocracy culture and leadership influence (employees' commitment values, motivational strategies, and working ability) will not jointly influence the firm's on-time delivery.

Table 6 Pearson`s Correlation results Ho2

Variables	B	T	P	R ²	Adjusted R ²	ΔR ²	Df	F	p	ΔF
Step 1				.15	.14	-	4, 289	12.44	< .01	-
Gender	.15	2.83	< .01							
Age	- .34	- 5.05	< .01							
Educational Qualification	- .20	- 3.56	< .01							
Years of Experience	.25 3.65	< .01								
Step2				.75	.74	.60	11, 282	75.52	< .01	95.33**
Gender	.02	.74	> .05							
Age	- .23	- 4.79	< .01							
Educational Qualification	- .11	- 2.53	< .05							
Years of Experience	.06 1.18	> .05								
Employees' Commitment Values	.48 4.05	< .01								
Innovation Values	.42 6.30	< .01								
Organisation Adaptability	.37 3.54	< .01								
Organizational Flexibility	- .28	- 4.44	< .01							
Motivational Strategies in Organisation	.14 2.87	< .01								
Leadership Influence	- .11	- .911	> .05							
Working Ability	- .09	- 1.28	> .05							

Researcher's Result (2023)

The firm's on-time delivery is the dependent variable in a hierarchical regression analysis, and numerous independent factors are looked at for their potential impact on this outcome. The results are shown in the table below. The examination consists of two phases, the second phase introducing new variables.

The first phase involves examining the characteristics of gender, age, educational background, and years of experience. According to the findings, these factors account for a substantial variation in on-time delivery ($R^2 = 0.14$, adjusted $R^2 = 0.14$).

Gender ($= 0.15$, $p .01$), age ($= -0.34$, $p .01$), educational background ($= -0.20$, $p .01$), and years of experience ($= 0.25$, $p .01$) all exhibit significant associations with on-time delivery among the individual factors. These findings imply that these elements impact the company's capacity to complete projects on schedule.

Along with the variables from stage 1, additional factors relevant to the Adhocracy culture are incorporated in the second stage. Among the factors considered are employees' commitment,

innovation, organizational adaptability, flexibility, internal motivating tactics, leadership impact, and working capacity.

$R^2 = 0.74$, adjusted $R^2 = 0.60$, which shows that adding these factors will dramatically increase the model's predictive ability. This indicates that the entire model in Step 2 explains a considerable portion of the variance in on-time delivery.

Employee commitment values ($= 0.48$, $p .01$), innovation values ($= 0.42$, $p .01$), organizational adaptability ($= 0.37$, $p .01$), and organizational motivational strategies ($= 0.14$, $p .01$) all exhibit significant positive relationships with on-time delivery among the individual variables in Step 2. Organizational flexibility ($= -0.28$, $p .01$), top management influence ($= -0.11$, $p >.05$), and working ability ($= -0.09$, $p >.05$) do not significantly affect on-time delivery, on the other hand.

The results imply that the adhocracy culture, defined by workers' commitment values, innovation values, organizational adaptability, and motivating techniques, significantly influences the firm's on-time delivery. These elements favourably affect the company's capacity to complete projects on schedule.

DISCUSSION

The analysis's findings align with other studies on the connection between organizational culture and on-time delivery. For instance, research by Zhang et al. (2017) showed that companies with a strong Adhocracy culture were more likely to execute projects on schedule than those with a poor Adhocracy culture. The study also discovered that staff engagement and creativity mediated the link between the Adhocracy culture and on-time delivery.

One study that supports the current research finding is by Kuo et al. (2020), which found that organizational culture significantly influences on-time delivery performance. Another study by Huang and Lin (2021) found that innovation culture positively influences on-time delivery performance. These studies support the finding of the current research that adhocracy culture has a significant influence on the firm's on-time delivery.

The analysis's conclusions have many ramifications for businesses hoping to boost their performance regarding on-time delivery. The dedication and innovative values of workers should be emphasized by corporations first.

This may be accomplished by fostering an environment at work that encourages creativity and invention and by recognizing staff members for their dedication to the company. Second, businesses need to promote organizational agility. This may be accomplished by designing a flexible workplace that is simple to adjust to change and giving workers the tools and resources they require to succeed in a dynamic setting. Third, businesses have to use powerful motivating techniques. This may be achieved by setting clear goals and objectives for staff and rewarding them for their successes.

These suggestions help firms develop a culture that supports on-time delivery. They will perform better and have a competitive edge as a result.

CONCLUSION

The study found significant correlations between the adhocracy culture and various performance metrics. The adhocracy culture was positively correlated with the frequency of product distribution, operational costs (except for motivational tactics), on-time delivery, and customer satisfaction. The results indicate that aspects of the adhocracy culture, such as

employee dedication, innovative values, organizational adaptability, flexibility, leadership influence, and working capacity, significantly impact these performance measures.

Furthermore, the study revealed that factors such as gender, age, educational level, and years of experience also influence on-time delivery. Including adhocracy culture-related elements significantly enhanced the model's predictive power for on-time delivery. Specifically, employee commitment values, innovation values, organizational flexibility, and motivational techniques were positively associated with on-time delivery.

However, organizational flexibility, Top Management influence, and workability did not significantly impact on-time delivery. These findings suggest that while these factors may still be necessary for overall organizational performance, they do not significantly affect a company's ability to distribute goods to distributors on schedule.

In conclusion, the study highlights the importance of gender, age, educational attainment, years of experience, and the adhocracy culture in determining on-time delivery. Focusing on these factors and promoting an adhocracy culture can help businesses improve their performance in terms of distribution logistics, operational costs, on-time delivery, and customer satisfaction.

Recommendations

Here are some possible recommendations based on the findings:

- **Prioritize increasing and building leadership impact:** Given the significant positive relationships between leadership influence and several other factors, businesses should prioritize effective leadership practices and skills. Investing in coaching, mentoring, and leadership development programs may enhance leadership influence and positively impact creativity, adaptability, motivational techniques, and working capacity.
- **Encourage a culture of innovation:** According to the favourable links between innovation values and several factors, businesses should promote and support an innovative culture. This may be done by encouraging innovation, funding research and development, and setting up systems for developing and implementing ideas. Improvements in adaptability, flexibility, productivity, and customer happiness can result from placing a strong emphasis on innovation.
- **Increase organizational adaptation and flexibility:** Positive relationships between organizational adaptability/flexibility and several other factors show how important it is to be responsive to changing conditions. Building agility and the capacity to change to meet customer wants, market dynamics, and emerging trends should be a top priority for organizations. Processes, structures, and systems need reevaluation to adapt to new possibilities and problems swiftly.
- **Put effective motivational strategies into practice:** Organizations should invest in learning about and putting effective motivational tactics into practice, since effective motivational strategies demonstrate good relationships with innovative values and working capacity. This may entail fostering a positive work atmosphere, appreciating and rewarding employee efforts, offering chances for professional advancement, and guaranteeing open lines of communication and feedback.
- **Give customer satisfaction and on-time delivery top priority:** Due to the strong relationship between customer satisfaction and elements like innovative values, leadership impact, and on-time delivery, businesses should give this goal a top priority. This might entail boosting supply chain management, optimizing distribution procedures, raising the quality of the product/service, and guaranteeing on-time delivery.
- **Constantly track and control operational costs:** Even if they are not highly associated with the other factors, operating costs impact the entire business's performance.

Companies should periodically examine and assess their cost structures, pinpoint possibilities to increase efficiency, and look for ways to cut costs without sacrificing satisfaction or quality.

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ANALYSIS OF BUSINESS COMMUNICATIONS IN WINEMAKING ENTERPRISES

ABSTRACT

The purpose of the study is to analyze the main environmental factors that determine the effectiveness of communications in the winemaking enterprises. The survey of individuals was conducted on-site, and in case of force majeure circumstances, by interviewing by telephone and/or e-mail. The priority method for data collection was the personal interview. The main source of information are the completed questionnaires. In addition to the questionnaires, other sources of information are the reporting reports of the enterprises, which are visible in the Commercial Register of the Republic of Bulgaria, other related surveys or expert analyses; publications of results of other analyses on the selected topic.

KEYWORDS: communications, efficiency, management style, leadership

JEL: D83, L66, M12

INTRODUCTION

In a turbulent business environment, today's business enterprise is faced with many challenges that it must overcome. In order to achieve effective management of the enterprise, one of the main factors is to establish effective communications between the individual departments, teams and company associates in the business organization. Efficiency requires that managers have sufficient volume and quality of information to be able to make logically justified management decisions (Borisov & Radev, 2020). This is only the first part of the "equation" called "effective communication". It is necessary for the manager to be able to communicate correctly with his colleagues in order to be able to delegate individual tasks and responsibilities to the other members of the work team in a timely and appropriate manner. The ability and skills of the manager to communicate also determine the degree of influence that he can exert on the other people in the organization (Borisov & Petkov, 2024). The accumulated experience in the communication process of the manager also determines his ability to manage conflicts and crises in the organization. In the current work, communication is considered as a continuous process in the business organization, as well as an element of the environment that generates conflicts and the need for negotiation skills to deal with these conflicts. Communication requires a number of skills such as - the ability to listen and filter important information (Nikolov et al., 2013); the ability to negotiate and reveal interests among hostile environments in the business organization (Borisov et al., 2023); the ability to recognize both verbal and non-verbal gestures that people use in the organization when performing their daily tasks (Apostolopoulos et al., 2023)

The purpose of the study is to analyze the main environmental factors that determine the effectiveness of communications in the winemaking enterprises.

Methodology for organizing the survey

Once the main parameters of the environment in which the communication process takes place have been determined, it is necessary to plan and adapt an approach to collecting data on the state of these parameters. The main method used in the research is the questionnaire survey. The main persons surveyed are the managers and company employees in the wine-growing enterprises.

Structure of the questionnaire. The questionnaire is structured in two modules as follows:

- *Module A.* The purpose of this module of questions is to collect information about the main characteristics of the surveyed enterprise. These questions collect information about the ownership of the enterprise, the legal form of the enterprise, the main activities it performs as a market unit.
- *Module B.* The purpose of this module of questions is to collect information about the state of the internal factors determining the communication process. The collected data aims to identify the critical factors and carry out an objective internal audit and formulate reasoned findings and conclusions that are used in validating the strengths and weaknesses in the communication process.
- *Module C.* The purpose of this module of questions is to collect information about the status of the external factors in which the communication process takes place. The collected data aims to define the main opportunities and obstacles for the effective conduct of the communication process in the external environment.

To form the general population of surveyed wine-growing enterprises, the register of the Viticulture and Winemaking Chamber of Sofia, updated as of 21.07.2023, is used. All registered enterprises at this time form the general population. When forming the statistical sample, the method of the pre-selected principle is used. This principle is the following - the representative sample includes all enterprises that fall as the location in the South-Central Planning Region of the Republic of Bulgaria. These enterprises must have their own vineyards and produce and offer wine on the domestic market.

The formation of the sample. The simple random sampling method was used, with the constituent units being selected through non-returnable selection. The sample size was 52 wine-growing enterprises.

Organization of the survey. The survey was conducted in the period 21.07.2023 – 21.07.2024. The survey of individuals will be conducted on-site, and in case of force majeure circumstances, by interviewing by telephone and/or e-mail. The priority method for data collection will be the personal interview.

Sources of information. The main source of information are the completed questionnaires. In addition to the questionnaires, other sources of information are the reporting reports of the enterprises, which are visible in the Commercial Register of the Republic of Bulgaria, other related surveys or expert analyses; publications of results of other analyses on the selected topic.

Analysis of the Results

Analysis of the organizational and management structure of enterprises. The organizational and management structure (OMS) is one of the elements that determines the effectiveness of communications in a business organization. As a structure that represents a set of units, departments, connections, hierarchy and a system for delegating tasks, it largely determines the way communications flow in the enterprise. The choice of the OMS by the enterprise management is extremely important, because it determines the future development of

relationships between people in the organization, as well as their motivation to participate in the communication process without distorting it.

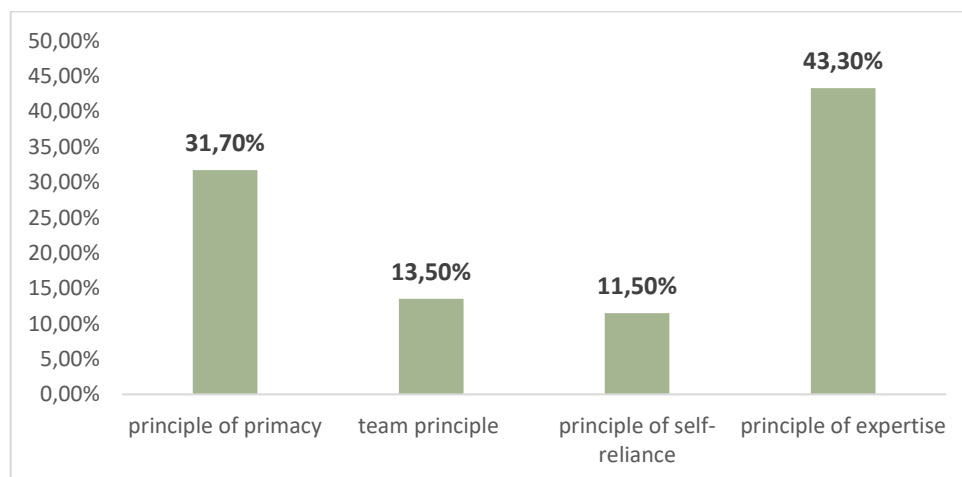
The information collected from the responses received in the questionnaire shows that the owners of wine-growing enterprises most often choose a hybrid form of management system, which allows them to be flexible about changes in the business environment (this is proven by the figure above, 42.3% of the surveyed enterprises state that they use another form that is not mentioned as an option in the questionnaire). The data indicate that the functional structure is also preferred among wine-growing enterprises - 28.8% of the surveyed enterprises state that they use exactly such a management system. These are mainly enterprises that are joint-stock companies and as such have the opportunity to specialize management work in departments and units directly responsible for the implementation of delegated tasks.

Next is the share of enterprises that have chosen the linear structure for managing their activities – 19.2% of the total surveyed enterprises. These are mainly small wine-growing enterprises that do not have a large number of employed personnel. In their case, narrow specialization of management is not possible and necessary, and they strive to take advantage of the advantages of the linear management system.

The choice of a management system also implies a subsequent communication strategy in the studied enterprises. The principles according to which a management system is designed and organized determine, at a later stage, the way of organizing communications in the organization, as well as their effectiveness. Therefore, the next element of analysis is the leading principle for forming a management system in wine-growing enterprises.

Figure 1 presents information on the preferences of wine-growing enterprises when choosing a principle for organizing communications in their departments. It should be noted that only the leading principle is indicated in the graph below.

Figure 1. Guiding principle in organizing communications in wine-growing enterprises.



Source: Own survey among 52 enterprises, 2023-2024.

The data show that in the majority of the surveyed enterprises, managers have chosen the principle of expertise when organizing communications among their subordinate colleagues in individual units, departments, and teams – 43.3% of all respondents. The next most important principle according to the surveyed enterprises is the principle of single leadership – 31.7% of all respondents indicated this answer in the questionnaire. It can be summarized that communications are organized in a way that allows experts to be involved to the maximum extent in business communications in enterprises by following the “top-down” approach. In this way, efficiency is achieved both in terms of participation in the communication process and in

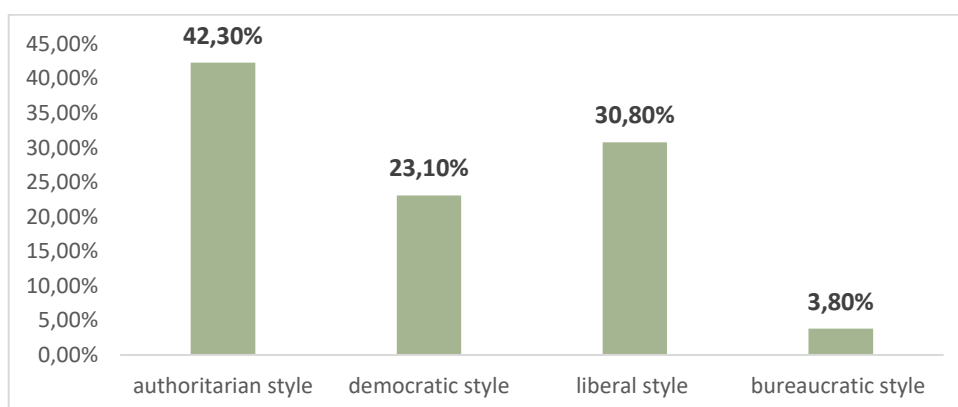
terms of control over the communication process in order to avoid communication distortion and the appearance of noise.

When organizing communications in The principle of independence is also important for wine-growing enterprises – 11.5% of all surveyed enterprises, and the principle of teamwork – 13.5% of all.

The data collected from the field study prove that managers use and apply appropriate principles for organizing communication processes. These principles create conditions for communications to reach their recipients, as well as reduce noise in the communication process.

Analysis of leadership style and leadership type. Another important factor determining the way communications flow in a business organization is the leadership style. Leadership style is defined as a set of personal qualities of the leader that determine the way of communicating with him, as well as the way of communicating with his other colleagues.

Figure 2. Preferred leadership style in the surveyed enterprises.



Source: Own survey among 52 enterprises, 2023-2024.

The survey collected information on the characteristics of the leadership style in wine-growing enterprises. The data presented in Figure 2 show that the most preferred leadership style is the authoritarian style – 42.3% of all respondents indicated this style as being practically imposed in their organizations.

The authoritarian leadership style has its advantages, which are highly appreciated in the industry, as evidenced by the fact that almost half of the companies surveyed rely on this style to organize their communications. The main advantages of this style are:

- Decisions are made quickly and easily delegated along the hierarchical ladder of power;
- Costs are saved by not duplicating management functions by different functional managers;
- Control over the communication process is easily formalized, mainly using the principle of single command, which states that the communication process proceeds from top to bottom, i.e. without requesting or exerting communication pressure from the direct superior, the subordinate does not participate in the internal communication flow.

The main disadvantages of implementing the communication process within the authoritarian style are:

- Not all colleagues participate in communications within the organization, which does not provide an opportunity for discussion and obtaining good ideas when solving routine problems;

- Communication can be easily manipulated, especially if there is a "mirror image" effect, namely, the company employee shares an opinion and reports only results that will please his direct supervisor, who is a supporter of the authoritarian style;
- Feedback is not effective and does not reflect completeness if there is a problem in the communication flow.

The next preferred style of communication management is the liberal style. This is evidenced by the graph presented in Figure 2. Of all surveyed enterprises, 30.8% stated that the liberal style is the preferred style for organizing and managing communications in their enterprises. The liberal style was chosen (according to the surveyed managers) because of the advantages it provides when organizing communications in the enterprise, namely:

- Freedom of choice - whether the company employee should join the communication flow. This freedom provides good conditions for motivated participation in communications only if the person considers it important and necessary in performing his routine tasks;
- Ability to share the communication flow with individuals the manager considers important for completing daily tasks.

The lowest share is observed in enterprises that prefer the bureaucratic style of managing communications in the enterprise – 3.8% of the total surveyed enterprises indicate this style as de facto imposed in their structures. The main advantage of this style is that it allows the manager to impose formal control and easily track the information flow in their organization.

Leadership is another factor that has a systematic impact on the communication process in a business organization. Unlike management, which is formalized within the management hierarchy of a business organization, leadership is a phenomenon that is more closely related to the social element in a business organization. Leadership is perceived more as an emotion, a socio-psychological interaction of people in the organization. That is why I believe that leadership is of crucial importance in shaping the communication process in a wine-growing enterprise.

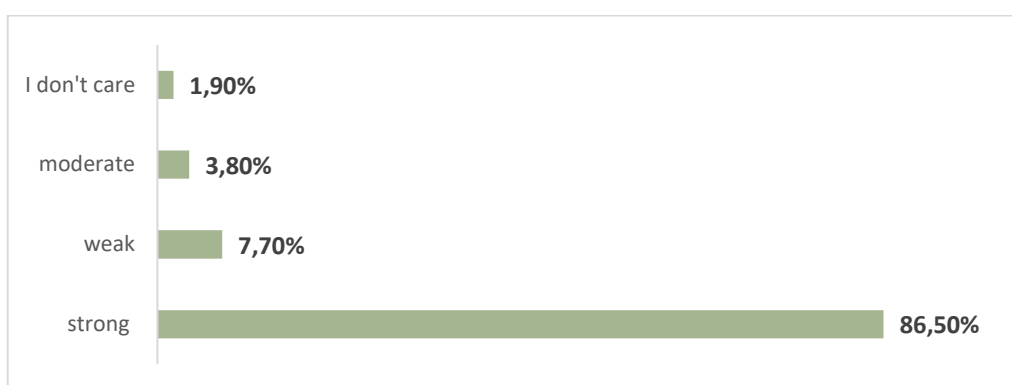
The data show that expert leadership is present and valued in wine-growing enterprises. Of all surveyed enterprises, 75% point out that expert leadership is the factor that determines the motivation of the staff. In 13.46% of the surveyed enterprises, the presence of emotional leadership is observed as a tool for motivating company employees, and in 11.54% charismatic leadership is present. These data prove that company employees and managers who are experts in their field enjoy the greatest trust, and they directly create and participate in the communication process in order to achieve efficiency in pursuing company goals. Winemaking is an activity that requires in-depth and complex knowledge, which also determines the leading role of expert leadership in organizing communications in the wine-growing enterprise.

Leadership, unlike management, is based on the trust and sympathy that the company employee feels and they are the main motivational factors determining the follow-up of the leader's behavior. That is why it is important for the formal leader, who is the manager, to have leadership qualities and skills that guarantee him full motivation to pursue the company's goals by his colleagues. The assessment of the leader's effectiveness is determined by how much he cares about the people in the organization. Of course, leaders who fully focus their attention and efforts on being in good relations with their colleagues can easily lose the trust of the company's owners, since the latter are interested in the profits and returns that the leader can achieve in his management. This requires the leader to also focus on the production and financial results of the company's activities. Very often, in practice, the leader is between a rock and a hard place and must balance the interests of the company's owners and those of the

company's employees as well as loyal customers. This creates conditions to distort the communication process and again create conditions for noise in the communication environment. The next question in the questionnaire aims to collect information about the leader's concern for the staff and for achieving the organization's goals.

Figure 3 presents information on the concern of managers for people in the organization. The trend is clearly outlined that managers are very concerned about the personnel in the enterprise. According to them, experienced and qualified personnel are the most valuable asset of the company, and the future development of the business model depends on it. According to 86.5% of the surveyed managers, their concern for personnel is very pronounced and they use a wide range of means to satisfy the needs of their subordinates. Only 7.7% of the surveyed managers show little concern for personnel. Managers emphasize that it is not people who are the most important in the production process, but the wishes of the company's owners, as well as the ability to demonstrate good management of personnel costs.

Figure 3. Managers' concern about their relationships with other colleagues in the company.



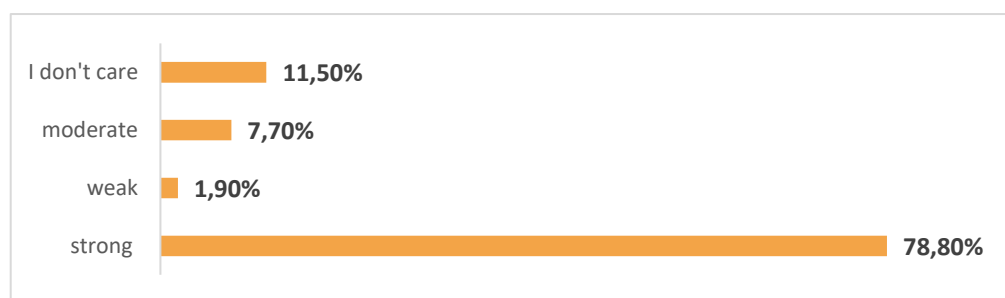
Source: Own survey among 52 companies, 2023-2024.

1.9% of the surveyed managers show a lack of attention to the condition and needs of the staff. These managers point out that the staff is one of the least important priorities for the development of the company's business. They are mainly concerned about the overall development of the business, relying on an external company to monitor and systematically exercise concern for the staff in the enterprise.

Of course, the answers to the question reflect the managers' opinions very subjectively. The doctoral student is perceived as an external factor; whose presence distorts the results obtained from the survey. Therefore, the next question aims to control the opportunism displayed by the respondents by measuring their concern for the goals and development of the organization.

Figure 4 presents information on managers' concern for the development of the organization. From the information presented in this way, it is clear that the majority of managers (78.8% of all surveyed managers) are highly concerned about the development of the organization. The high share of responses received here proves that the respondents are either "cheating" or have not properly understood the question included in the survey. Nevertheless, it can be summarized and concluded that managers make an effort and diligence in their daily work to be concerned both about the people in the organization and about the results of the functioning of the organization itself.

Figure 4. Managers' concern for the development of the organization.



Source: Own survey among 52 enterprises, 2023-2024.

A higher proportion of responses marked as “not interested” is noted – 11.5% of the total responses received to the survey question. This may be a good indicator of honesty and directness in sharing opinions on the researched problem in the survey.

The survey itself can be considered an experiment that proves how effective communication is within and outside the researched wine-growing enterprises. From the personal interviews with managers and company associates, as well as discussions, the following conclusions are drawn regarding the barriers to effective communication:

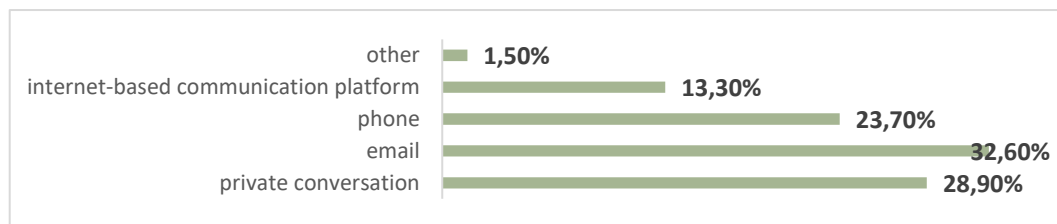
- Very often, managers find themselves in situations that do not allow them to be very concerned about their company employees, which is why they prefer not to enter into direct communication with other colleagues very often. This is explained by the fact that these individuals prefer to avoid conflict by postponing a business meeting or avoiding the problematic topic;
- The communication flow is filtered (or prioritized) by different individuals who are placed in a position to be responsible for incoming and outgoing communication to save the manager's time in the communication process or to completely relieve him of it to perform other more important tasks;
- The communication flow is deliberately distorted by interested parties to achieve their personal goals - different from those of the company.

Analysis of communication tools and barriers to overcome. The next series of questions in the questionnaire aims to collect information about the preferred type of communication tools used in wine-growing enterprises, as well as to analyze the main barriers to achieving effective communication.

Information on the means of communication used in the 52 surveyed wine-growing enterprises is shown in the figure below. The data show that the most frequent and preferred means of official communication in enterprises is email correspondence – 32.6% of respondents indicate this means of communication.

Next comes personal conversation as the preferred communication tool in the surveyed companies – 28.9% of total respondents (see fig. 5).

Figure 5. Means of communication in the surveyed enterprises.



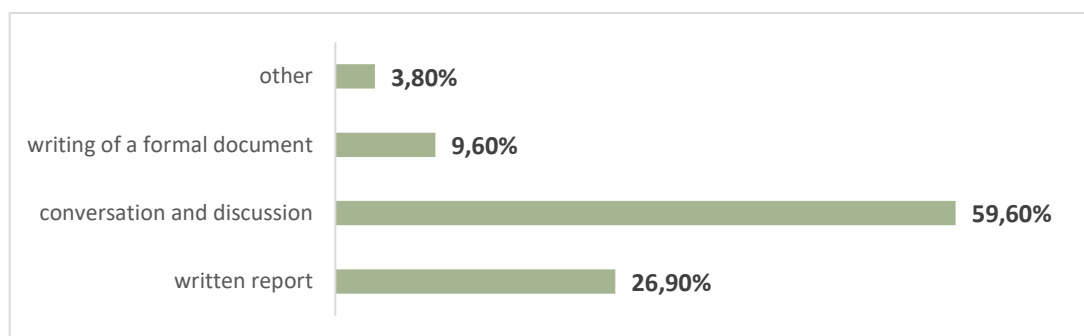
Source: Own survey among 52 enterprises, 2023-2024.

In third place is the telephone conversation as the preferred means of communication - 23.7% of all respondents.

The internet-based communication platform is next, as the preferred means of business communication – 13.3% of the total managers surveyed stated that they prefer it. After the end of the Covid pandemic, these platforms became established and continue to be used, saving both costs and time for communication. Very often, the surveyed managers stated that these platforms and their use enable them to communicate without going on long business trips and wasting time when conducting business transactions with international partners. Of all the respondents, several stated that they use a different means than those mentioned in the questionnaire – 1.5% of the total respondents.

Providing feedback to colleagues who are included in a team for the performance of a specific assigned task is the subject of analysis with the next question included in the survey. The following figure 6 presents the information received regarding the method of providing feedback.

Figure 6. Ways to provide feedback to others on the team.



Source: Own survey among 52 companies, 2023-2024.

The data show that most often feedback is provided through a conversation or inclusion in a certain discussion (operation, meeting, council, etc.), more than half of the respondents share this opinion - 59.6%. Next in preference is the preparation of a written report/account as a means of receiving feedback - 26.9% of the total respondents use this means in their daily work.

Based on the data presented, it can be concluded that live contact is important in communicating in wine-growing enterprises!

The assessment of the effectiveness of feedback was measured with the next question included in the survey. According to the data, managers are satisfied with the way feedback is implemented, and they believe that it is effective – 61.5% of the total respondents indicate this as a fact. Next is the group of managers who do not agree that the effectiveness of feedback is a fact in their organization – 34.6% indicate this.

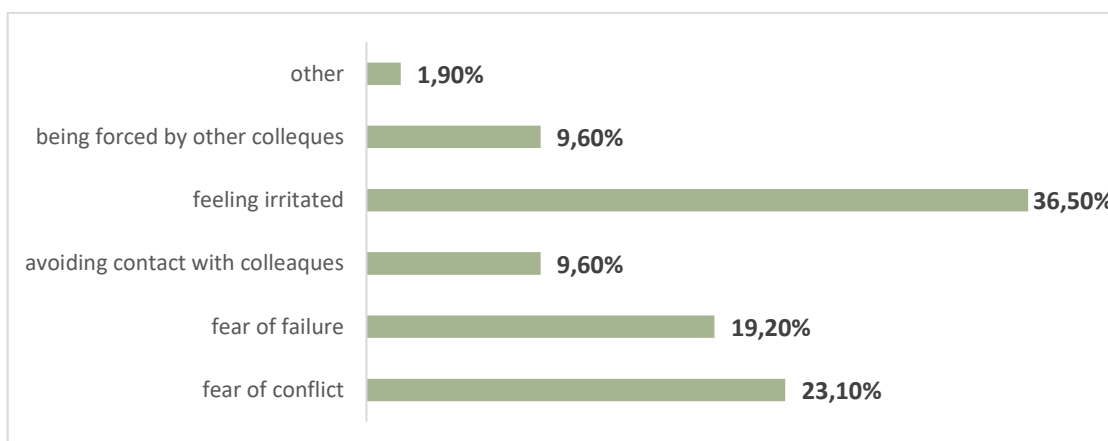
And only 3.8% of surveyed managers declare that they cannot assess whether feedback in their companies is effective.

The next question in the survey aims to collect information about the reasons in the organization that underlie the filtering of information in the communication process from the perspective of executive staff.

According to the data presented in Figure 7, the main reasons for information filtering and feedback distortion in the wine-growing enterprises are:

- Feelings of irritation and fear of punishment from their immediate supervisor. Of all 52 company employees interviewed, 36.5% stated that fear was a primary motivator for filtering information or presenting it incorrectly to their immediate supervisor;
- The fear of conflicts is also one of the significant factors that causes company employees to filter information in the process of communication with other colleagues – 23.1% of total respondents;
- The fear of failure in performing delegated tasks is also a tangible factor causing information filtering in enterprises – 19.2% of respondents share this as a reason;
- Avoiding conflicts, as well as pressure from colleagues, are also factors that prompt employees to filter information and distort the feedback that the manager receives in the winemaking enterprise, respectively, according to the data obtained, 9.6% of respondents indicated these reasons.

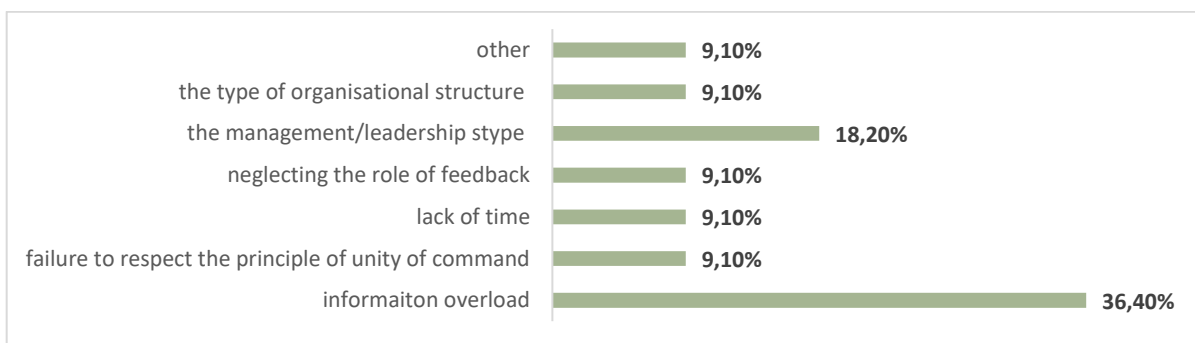
Figure 7. Reasons for filtering information in the communication process.



Source: Own survey among 52 companies, 2023-2024.

Many factors can prevent the communication process in an organization from being effective. The following question aims to gather information on what exactly these are when wine-growing enterprises.

Figure 8. Factors that are barriers to effectiveness in the communication process.



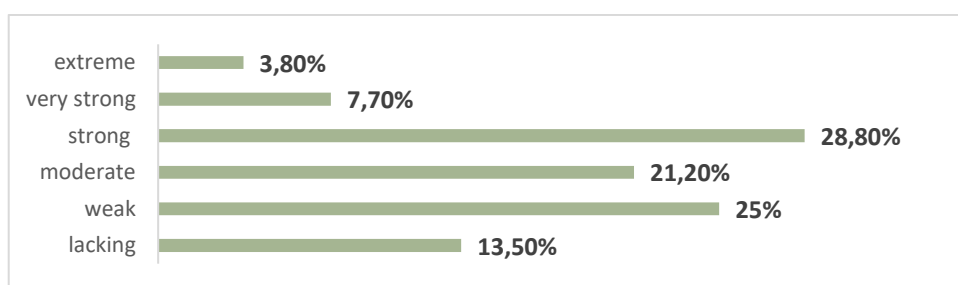
Source: Own study among 52 companies, 2023-2024.

Figure 8 provides information on the main factors that are barriers to the communication process in the 52 companies surveyed. The data show that the main reason for inefficiency in the communication process is the factor - "information overload" - 36.4% of all surveyed managers stated that they suffer from this factor, it is the main reason for inefficiency. The next most important factor is the factor - "leadership style" - 18.2% of all surveyed identified this factor as a reason for inefficiency in the communication process. If we return to the results of the analysis of managers' preferences regarding the imposed leadership style, we will see that the most preferred was the one based on the authoritarian principle. Therefore, it can be concluded that **authoritarianism in management and information overload are the main obstacles to the effectiveness of communications in winemaking enterprises.**

Considering the above finding, the attitude and assessment of the staff regarding the information overload to which they are exposed in the wine-growing enterprise was studied.

Information regarding the studied element is presented in Figure 9. The data show that staff assess that information overload is highly pronounced and significantly affects the communication process and its effectiveness – 28.8% of all respondents state this as a fact in their organizations.

Figure 9. Assessment of staff regarding their exposure to information overload.



Source: Own survey among 52 companies, 2023-2024.

There is also a significant proportion of those who say that information overload is a mild phenomenon in their organizations – 25% of the total respondents. Of all respondents, 21.2% indicate that information overload is moderate, another 3.8% indicate that the overload is extreme. Another 13.5% state that there is no information overload in their organizations.

Analysis of the effectiveness of the communication process. The effectiveness of the ongoing communication process needs to be measured through the effectiveness of the outcome of this process. Of course, it should be noted that the communication process is primarily a socio-psychological interaction between company employees, and as such a process it is necessary to measure the assessment of the staff, to what extent they are satisfied with the communications in the enterprise. This assessment should be integrated with the assessment of the effectiveness of the communication process in the enterprise.

This approach was used in the development of the next series of questions included in the questionnaire. Through them, we aim to assess the effects that arise from the communication process as well as to subjectively measure the degree of communication satisfaction of the staff.

The effectiveness expressed as staff satisfaction in the communication process is primarily determined by the type of communication network that is implemented in the organization, which is why the following graph presents information about the types of communication networks in the surveyed enterprises. According to the data presented in Figure 10, enterprises mainly prefer to use a hybrid communication network in their departments and structures – 55.8% of respondents indicated this type.

Figure 10. Types of communication networks in wine-growing enterprises.



Source: Own study among 52 enterprises, 2023-2024.

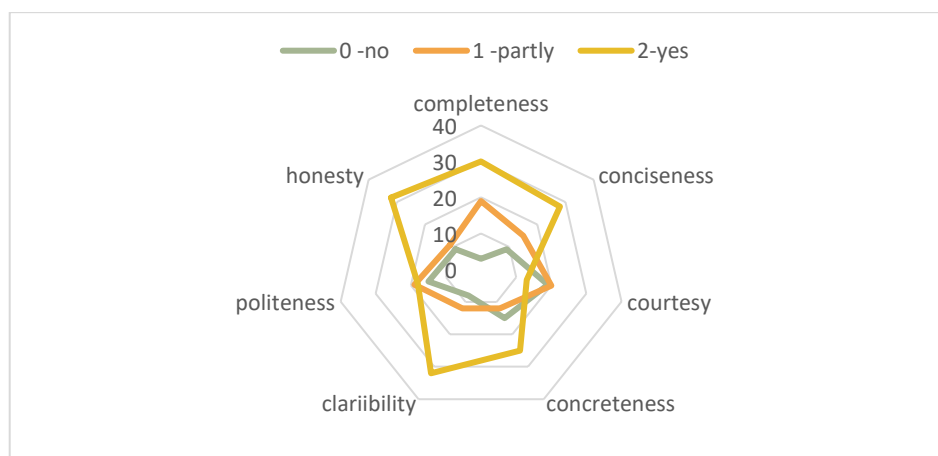
The next most preferred type is the chain communication network – 36.5% of all surveyed managers stated that it is available in their companies. With these two types of communication networks, there is an opportunity to involve a larger part of the available staff in the communication process. This allows for broad involvement in the performance of daily tasks, as well as the pursuit of company goals. The main disadvantage is that this type of communication network can easily expose staff to information overload, as was found in the course of the analysis.

The next question in the survey reflected the opinion of the staff on how effective the chosen communication network is in their company. **The data indicate that the majority of respondents are of the opinion that the communication network is effective – 63.5% of the total respondents.** There is a significant proportion of those who cannot assess how effective the network is – 23.10%.

Communications in wine-growing enterprises directly affect both the effectiveness of delegation and the motivational process. That is why the study of the basic principles underlying the organization of the communication process is the subject of analysis in the next stage of the dissertation research. According to the data obtained, the following principles are most widely used in the studied enterprises:

- **Clarity** according to the information received, more than half of the enterprises strive to comply with this principle of organization (see Fig. 11);
- **Brevity** of the communication message sent, managers in the surveyed companies follow this principle in order to achieve efficiency in the communication flow;
- **Correctness** of the submitted message/message in the communication channel. The majority of enterprises observe this principle.

Figure 11. Principles governing the communication process in enterprises.



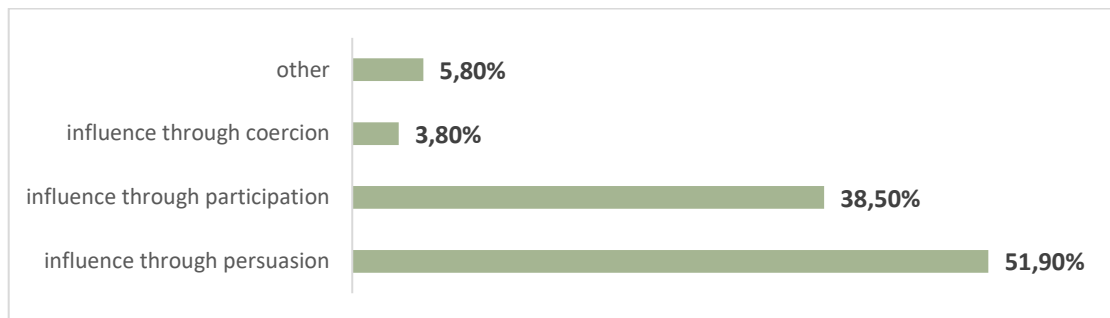
Source: Own study among 52 enterprises, 2023-2024.

The following principles for organizing communications in the surveyed enterprises are the least popular:

- Showing respect /confidentiality/ when employees participate in the communication process;
- Courtesy when participating in company communications.

The next element, subject to analysis, is the influence of managers in enterprises and the ways they use to include staff in the communication process. The following figure 12 presents the data from the conducted study.

Figure 12. Influence of managers on staff to be included in the communication process.



Source: Own study among 52 enterprises, 2023-2024.

From the data shown in Figure 12, it is clear that more than half of the respondents – 51.9% – are included in the communication process as a result of a conversation with their immediate supervisor, who has convinced them that it is vital for them to be included in the communication process and to follow the information received in order to perform their daily tasks. Another 38.5% state that their inclusion in the communication process is carried out through direct participation, as they are in positions whose job descriptions require them to communicate with their colleagues at all times.

CONCLUSIONS

Regarding the analysis of the main factors determining the way of organizing business communications in wine-growing enterprises, the following conclusions can be formulated:

- Owners of wine-growing enterprises most often choose a hybrid form of management, which allows them to be flexible in relation to changes in the business environment. The data show that the functional structure is also preferred among wine-growing enterprises. These are mainly enterprises that are joint-stock companies and as such have the opportunity to specialize management work in departments and units directly responsible for the implementation of delegated tasks;
- In the majority of the surveyed companies, managers have chosen the principle of expertise when organizing communications among their subordinate colleagues in individual units, departments and teams. The next most important principle according to the surveyed companies is the principle of unity of command.
- It can be summarized that communications are organized in a way that allows experts to be maximally involved in business communications in enterprises by following a "top-down" approach. In this way, efficiency is achieved both in terms of participation in the communication process and in terms of control over the communication process in order to avoid communication distortion and the appearance of noise.

- Managers use and apply appropriate principles to organize communication processes in their enterprises. These principles create conditions for communications to reach the addressees, as well as to reduce noise in the communication process.
- The most preferred leadership style is the authoritarian style. This leadership style has its advantages that are highly appreciated in the industry, as evidenced by the fact that almost half of the surveyed companies rely on this style to organize their communications.
- Expert leadership is present and valued in wine-growing enterprises. Of all surveyed enterprises, 75% point out that expert leadership is the factor that determines staff motivation.
- It can be summarized and concluded that managers make an effort and diligence in their daily work to be concerned both about the people in the organization and about the results of the functioning of the organization itself.

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TRUMP'S TRADE WAR AGAINST EUROPE – JUST A THREAT OR REAL INTENTION?

ABSTRACT

The purpose of the study is to prove the following thesis – Trump's statements about a trade war are more of a threat than a real intention. Through this threat, he aims to achieve other, political goals. It reveals how economic goals are achieved through political pressure. And – conversely, how political goals are achieved through economic pressure. The authors' opinion is that through the threat of a trade war, the Trump administration aims for Europe to wage war against Russia without the participation of the United States. It is shown how dangerous this strategy of the Trump administration is for us, the Bulgarians.

KEYWORDS: trade war, economic goals, political goals, world war, US military budget, Kondratiev waves

JEL: A14, C22, E32, F21, F44

INTRODUCTION

The accession of the new US President Donald Trump has created conditions for a change in the international situation and trade agreements. As a result of the change in US policy, we are witnessing a review of trade relations between the US and the EU. In this direction, the authors set themselves the goal of establishing to what extent the new US course will turn into official targeted actions and will violate the established system of rules of international trade. The authors apply statistical methods with which they try to prove the influence of US policy on the economic indicators of the US and European countries. The study and analysis of economic indicators is carried out through the prism of the Kondratieff long wave concept, with the authors criticizing the theory and the extent to which it can explain the changes taking

place. The results of the study show a direct relationship between the long-term economic development of countries and the world economy, and on the other hand, the economic indicators of the US and European countries. In the first months after taking office, Donald Trump set about fulfilling his campaign promises, the most important of which was to make America great again. Part of his actions was to make territorial claims to other countries – Canada, Panama, Denmark. But another part of his actions was to introduce economic measures, mainly increasing import tariffs for many countries in the world. This action of his directly affected the economic interests of the European Union. This is a natural continuation of the trade war that the US has been waging against the EU for years.

1. LITERATURE REVIEW

After Trump's inauguration and his threats of a trade war in many directions, including with Europe, a discussion immediately began in the public sphere about where this trade war could lead. The prevailing opinion is that a trade war will bring harm to everyone involved in it.

In his article “Who will win in the USA-EU trade war?”, Arthur Sullivan refers to the opinion of the Swede Cecilia Malmström, the European Commissioner for Trade in the period 2014-2019. She notes that anyone who thinks that one of the countries participating in the trade war can win is mistaken. “In this game, only both sides can lose.” And that ordinary citizens lose the most due to price increases, inflation, job losses and reduced economic growth. (Sullivan, 2025)

In his article “The USA-Europe Trade War Threatens \$9.5 Trillion in Economic Ties” Alexander Pikalo reports extremely worrying facts about the expected consequences of the trade war, as the two economies are strongly intertwined. The volume of trade between the USA and Europe is \$1.3 trillion, and services – \$750 billion. European subsidiaries in the USA have sales there of \$3.5 trillion. And subsidiaries of American companies in Europe – sales worth \$4 trillion. (Pikalo, 2025) The trade war will harm mutual investments, significantly hinder the supply of components for industry from Europe to the USA and vice versa, etc.

European politicians are also joining the discussion. They are trying to “tame” Trump. At the informal summit in Brussels, EU High Representative for Foreign Affairs and Security Policy, Kaja Kallas, calls on both sides to show restraint: “We need America and America needs us,” she says. Polish Prime Minister Donald Tusk has said that trade wars are always a mistake. “Poland will certainly be the country that calls for prudence and caution. But we must also make it clear that any plans to impose tariffs and wage trade wars are a complete mistake.” Finnish Prime Minister Petteri Orpo is more accommodating: “We are prepared for this. I am against starting a (trade) war. Instead, we should negotiate.” German Chancellor Olaf Scholz has been the most forceful: “As a strong economic zone, we can respond to customs policies with customs policies. This is what we have to do and we will do it”. (Lilov, 2025) Germany's willingness to retaliate is understandable. Trump is making threats to Europe, using the large deficit that the US has with Germany as an excuse. By presenting this deficit as an “unfair” trade practice.

2. RESULTS

In our opinion, Trump's statements are more of a **threat** than a real intention. Through this threat, he aims to achieve other, **political** goals.

2.1. Why do we think so?

a) Because historical practice has proven for centuries that trade wars inevitably lead to losses for both sides. Let us recall, for example, the “Great Depression” of 1929-1933. One of the reasons for its outbreak was the trade war that Great Britain started against the United States.¹ Does Donald Trump need to pull the devil by the tail?

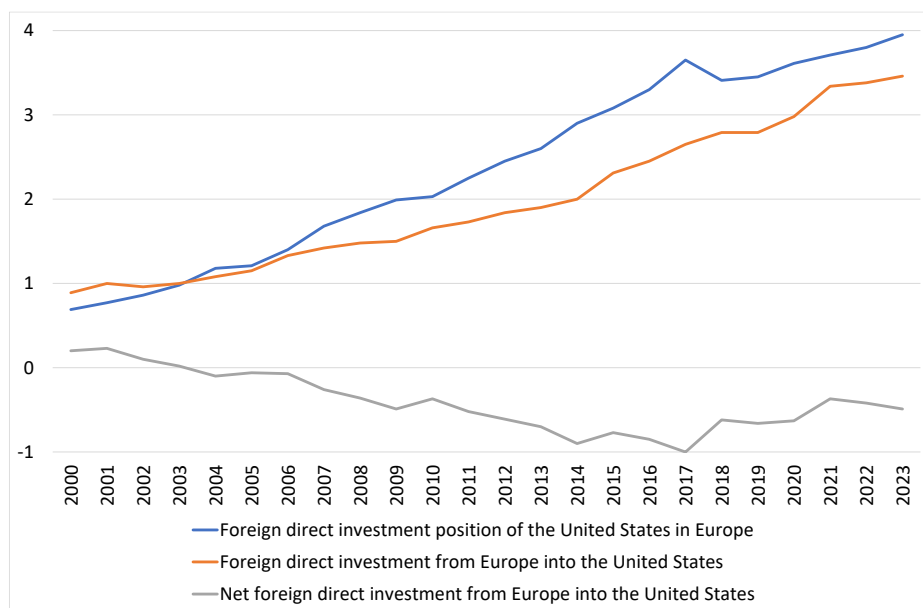
b) American elites are “fakirs” in using **politics** to achieve **economic** goals. And vice versa – using economic pressure to achieve political goals. For example, after the accession of Crimea to the Russian Federation, through political pressure, the United States forced European countries to introduce a sanctions regime against Russia. This regime “intensified” after the start of Russia's Special Military Operation to liberate the nationalist-occupied territories of the former Ukrainian regions of the Donetsk and Luhansk People's Republics that joined the

federation. The result of the political pressure of the Americans is that currently, European countries are buying oil and gas from the United States at prices many times higher than the prices at which they bought from Russia. Further on – in the third part of the article, we will show what political goals we believe the United States wants to achieve through its threats of a trade war against Europe.

c) The American elite is well aware that the deficits of the United States with other major economies are a **natural consequence** of its position as the center of world trade. Accordingly, of the position of its currency – the dollar, as the currency with which world financial transactions are carried out. Which gives it the opportunity to “exhaust” a significant part of the Gross Domestic Product of other major economies. The American economy is parasitic on the world economy. The deficit is only a consequence of this fact. The deficit cannot be overcome through trade wars. And from the point of view of the American elite, this is not desirable. Through threats in a purely economic sense, only better conditions for parasitism can be achieved. That is, for an increase in the deficit. By the way, these processes – the transformation of the old center of world trade into a **parasite** – have been observed since the 14th century with the movement of the center of world trade to the West.

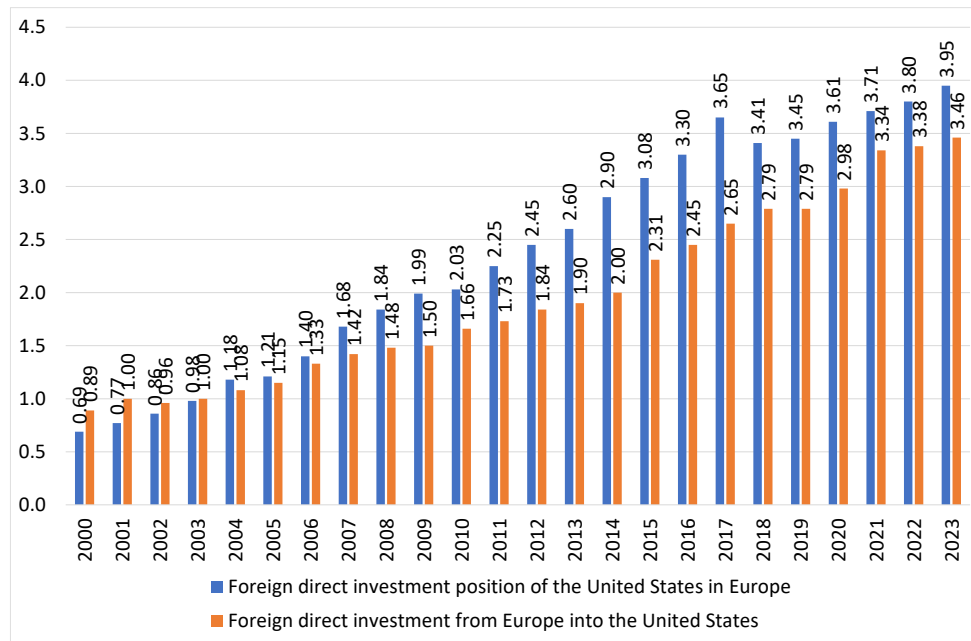
d) The threat of, and the actual waging of, a trade war after 2014 has already had a positive result for the US. See Fig. 1, 2, and 3. They show the dynamics of “Foreign Direct Investment (in trillion US dollars, on a historical-cost basis)” between the US and Europe.

Figure 1. Foreign direct investment (in trillion US dollars, on a historical-cost basis)



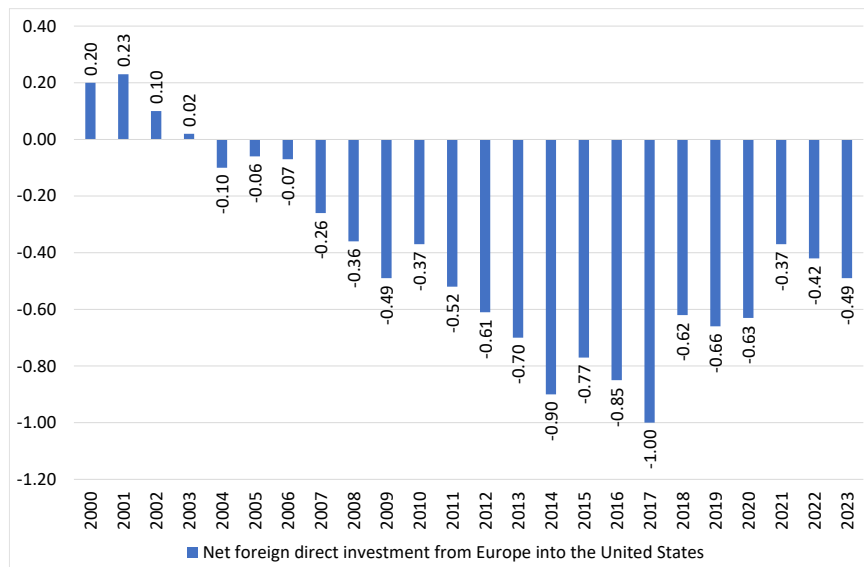
Source: own, based on data from Statista

Figure 2. Foreign direct investment (in trillion US dollars, on a historical-cost basis)



Source: own, based on data from Statista

Figure 3. Net foreign direct investment from Europe into the United States (in trillion US dollars, on a historical-cost basis)

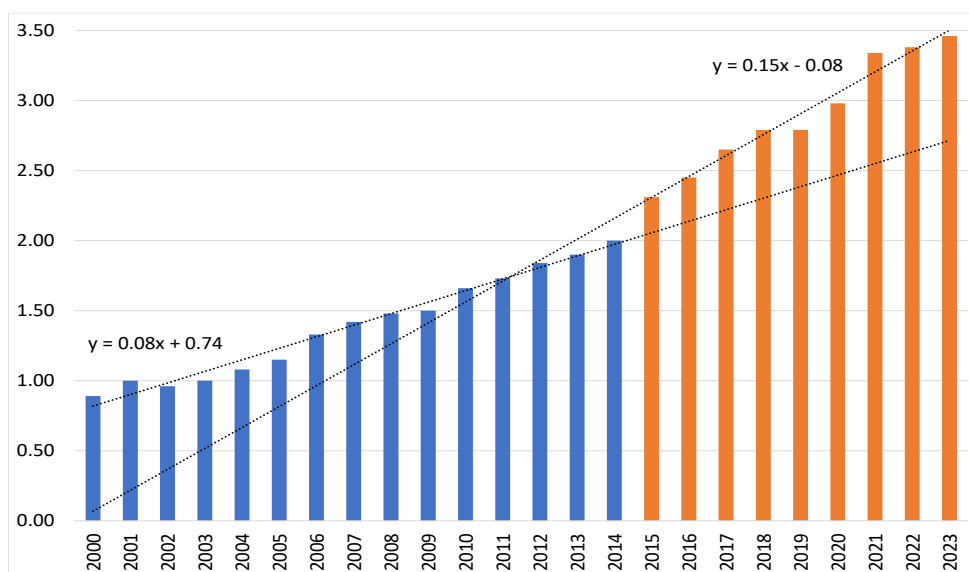


Source: own

It is evident that in 2000, Europe's foreign direct investment in the United States was greater than that of the United States in Europe. But even in the first years, a trend was observed for a faster increase in American investment in Europe than in European investment in the United States. This trend continued until 2014. After 2014, when Crimea became Russian, the trend reversed. The difference in the rate of increase in investment changed in favor of European investment in the United States. This is generally the case. However, during the two presidential terms of the Democratic Party – Barack Obama and Joe Biden – attempts were observed to continue the policy of deindustrialization of the United States. However, the Republicans systematically campaigned and propagated for the reindustrialization of the country. And they

succeeded! The rate at which European investment in the United States increased significantly compared to before 2014. See Fig. 4.

Figure 4. Foreign direct investment from Europe into the United States (in trillion US dollars, on a historical-cost basis)



Source: own, based on data from Statista

It is evident that in the period 2000-2014, foreign direct investment from Europe to the United States grew by an average of \$0.08 trillion annually. In the period 2015-2023, foreign direct investment from Europe to the United States grew by an average of \$0.15 trillion annually.

The problem is, however, that this is not the result of any objective economic processes; It is not the result of any “rethought state policy of the Republicans”, although such a moment undoubtedly exists. The more important factor is that after 2014, through **political pressure**, the USA forced European economies to abandon cheap gas and oil from Russia and buy their expensive hydrocarbons. Accordingly, the production costs of corporations located in Europe increased significantly. American corporations began to return to the USA. European corporations themselves also began to do this.

What is the situation now, at the beginning of Trump’s second term?

2.2. What is happening now?

The fact of Trump’s election, and by such a large margin, caused **stress** among European leaders. After his inauguration, the “bad” became even “worse”. As expected, he did not “deign” to go to the “signature” meeting for the elites in Davos at the “World Economic Forum”. But he told them via video conference what he thought of them, in particular the European elites. Which shocked them. He accused European governments of complicating imports from the US, through high tariffs and interest rates; That tax levels in the European Union are high; That their defense spending is low and should soon reach 5% of Gross Domestic Product; That the war between Ukraine and Russia is an internal European affair, and it must be stopped, while in the meantime, European countries must cover its costs. That he personally will do everything possible, through negotiations with Russia, to end “this absolute field of death”, this “slaughter”.

Elites are shocked to hear that Trump is planning to annex Canada, Greenland, and the Panama Canal to the United States.ⁱⁱ

They were in even greater “shock” after US Secretary of Defense Pete Hegseth declared that Ukraine could not return to its borders before the start of the Russian invasion. And also, that it is impossible for it to join NATO.

A week later, US Vice President JD Vance gave a speech in Munich at a security conference. He “thickens the dark colors” even more. Instead of talking about US solidarity with Ukraine, as European leaders expected, JD Vance harshly criticized European elites. He accused them of not following the will of their people, cancelling elections, ignoring religious freedoms, and not taking measures to stop illegal migration. He also blamed them for Britain’s abortion laws, the cancellation of elections in Romania, and the restriction of freedom of speech, etc. After the speech, Kaja Kallas said on the sidelines: “As I listened to the speech, I had the feeling that they wanted to fight with us, and we don’t want to fight with our friends.” Former senior officials in the Biden administration also assessed JD Vance’s speech in the same – extremely negative – way. At the opposite pole are Donald Trump and Elon Musk, who publicly support the speech.

The appearances of Pete Hegseth, JD Vance, and also many appearances by Elon Musk show that there is currently a strong core of like-minded people around Donald Trump. They are young, energetic, fearless, and ambitious. They are committed to the idea of making “America great again”, to returning **normality** to the world. But is this possible?

2.3. What are the prospects?

On the one hand, it is a fact that **normality** is already returning. Trump is cutting multibillion-dollar programs for US intervention in the development of other countries, for supporting the LGBT community (lesbian, gay, bisexual, transgender people), and is resolutely moving towards improving relations with Russia. He is clearly stating to Ukraine and the EU that the uncontrolled spending of American money on the war is over. A top-level meeting between the US and Russian delegations is taking place in Saudi Arabia to end the war. A meeting between Trump and Putin is being prepared. Representatives of the EU and Ukraine are demonstratively not invited to the meeting in Saudi Arabia. Which is causing their “anger.”

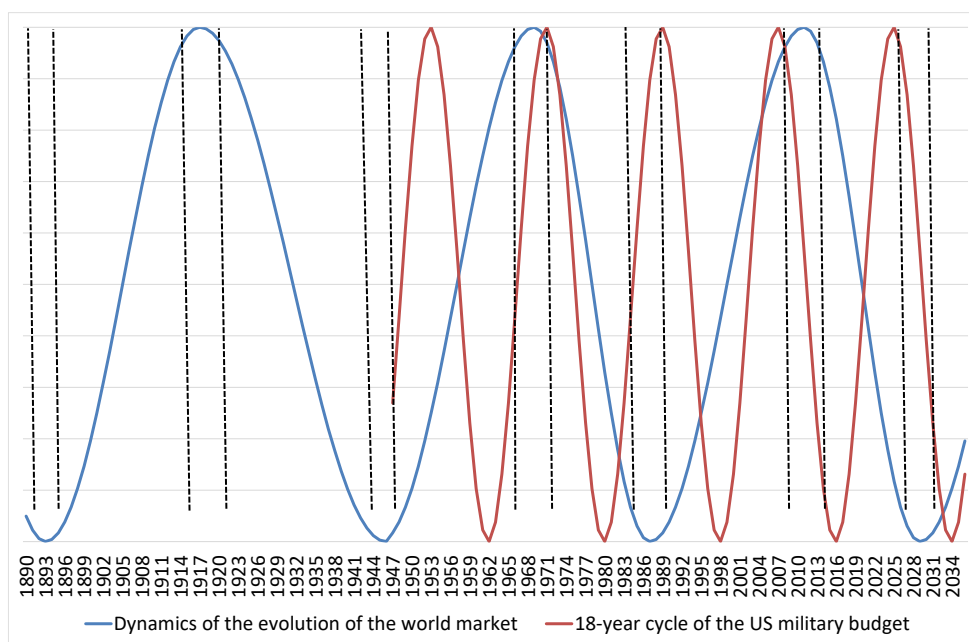
It is obvious that Trump will not allow the current World War III to move to the nuclear phase during his term.

On the other hand, however, expectations for “normality” and the prevention of nuclear war should not be excessively high. Why?

Because the world is currently in the phase of world wars. After the industrial revolution in Britain at the end of the 18th century, always in the first half of each century, two world wars decide the clash between the old center of world trade and the new contender. In the 21st century, the old center of world trade is the USA. The new contender is China. Russia is once again assigned, as in the 19th and 20th centuries, the role of arbiter in this battle (Petrov, Tsonkov, 2025; Tsonkov, 2023).

Our studies of the dynamics of the world economy and the US military budget show that in the next ten years our optimism should be moderate. See Fig. 5.

Figure 5. The long waves of the world economy and the dynamics of the US military budget



Source: own

It is evident that during this period, there are two trends with contradictory impacts on the probability of nuclear war:

- There is no doubt that during this period, when the US military budget is in its downward phase, there is a tendency to reduce the probability of nuclear war. As we have repeatedly said, during the downward phase of the dynamics of the US military budget, the American elite does not start major wars. It starts wars, but not major ones.
- At the same time, it is evident that during at least half of this period (for example, 2026-2030), there is the bottom of the transition from the first to the second Kondratiev waves (Malešević, 2022; Hecht, 2023; Wang & Chu, 2025) in the current cycle of evolution of the world market. Namely, when there is the bottom of the transition from the first to the second Kondratiev waves in each cycle of evolution of the world market, there is a world war that is **decisive** in the battle between the old center of the world market and the new contender. In the first cycle – the national liberation revolutions that swept Europe in 1848, and in the second cycle – the Second World War 1939-1945. So, the dynamics in the evolution of the world market increase the probability of the nuclear phase of the current world war.

The contradictory impact of the two trends will determine the course of the currently hot phase of World War III. Even if it does not reach a nuclear phase, in any case, the period 2026-2035 will not be calm.

We believe that the unfolding “battle” between the new Trump administration and the European elites will most likely lead to a deal between them. The two global power centers behind them will most likely agree on a **limited nuclear war** between Europe and Russia.ⁱⁱⁱ

A number of statements by European leaders holding senior positions in the governance of the European Union and NATO suggest the presence of a similar attitude. Initially, the EU has a negative attitude towards Donald Trump. It was so during his first term. It is so now. But it is clear that after his convincing victory, they are beginning to “come to terms” with his “inevitability”, and with his policies.

Kaja Kallas, the EU's High Representative for Foreign Affairs and Security Policy, stated: "The European Union must increase its defense spending to 'prepare for the worst' and to be able to defend itself 'alone if necessary' against a belligerent Russia."

The opinion of the new European Commissioner for Defense and Space, Lithuanian Andrius Kubilius, is no different. "The European Commission should help prolong the conflict in Ukraine to restrain Russia while it (the EU) prepares for war in the next five years!"

These two senior EU officials are "inventing" a **non-existent** "danger" from Russia for the EU. Why would Russia attack the EU? For territory? No! Russia is the largest country in the world by territory! To place its overpopulation in the conquered territories? No! Because Russia's population is decreasing and it is a sparsely populated country! To seize natural resources? No! Because Russia is the richest country in natural resources!

No less aggressive is Mark Rutte, Secretary General of NATO. Even before Trump's inauguration, he told security experts in Brussels that "Russia has long been waging not a covert but an open war against NATO countries." And that "... it is necessary to change the approach and move to a military mindset to be prepared for possible attacks, including, for example, the use of drones in Europe."

After Trump's inauguration, at the Davos economic forum, he openly stated that the US should continue to support Ukraine, and that Europe **should pay a greater share of the price for military aid**. "The alliance is in crisis," Rutte declared. "We need to invest more in defense. I expect significantly more than 2%. And we need to increase military production and take on a greater share of the costs of supporting Ukraine." He also stated that Ukraine's full membership in NATO is the easiest way for Ukraine to establish a sustainable peace.

From the quoted statements, it is clear that senior European officials accept Trump's strategy. And it is entirely to the **benefit** of the United States. And to the **detriment** of Europe, as it hides numerous **risks** for the European future:

- What does it mean that the US continues to arm Ukraine, and Europe pays the price? It only means one thing – that the American military-industrial complex is being stimulated with the money of European taxpayers. At the same time, the purchasing power of the European peoples is being reduced, and the European economy is being pushed into recession. Apart from that, this means the continuation of the extermination of the Slavic population in the Ukrainian and Russian lands.
- What does it mean for the EU to increase its defense spending to be able to defend itself "if necessary"? It means the same as the above – stimulation of the American military-industrial complex and poverty and misery for the European peoples. And one more thing! The leaders of Europe are ready to start a war against Russia, without the participation of the USA. This is terrifying! Because it is obvious that the two main warring camps of the Anglo-Saxon and Jewish elites are moving towards a **consensus** – to sacrifice Europe in the horror of nuclear war. Putin has repeatedly stated that Russia cannot defend itself in a conventional war against the economic and military power of Europe, which surpasses Russia's many times. "But we, he says, have nuclear weapons. And when Russia's existence is threatened – we will use them!"

It is unnecessary to explain why senior European officials intend to plunge Europe into the horror of nuclear war and to please the American Anglo-Saxon and American Jewish elites, and also to please the British Anglo-Saxon and British Jewish elites. We are witnesses to the venality of the Bulgarian political elite. So, the venality of the European elites cannot surprise us. More important is the other thing! Namely, why are the British Anglo-Saxon and British Jewish elites integrated with the Han elite ready to make a deal with Trump? And why is the

aggressive part of the American elite – the so-called “deep state” – also ready to accept this deal? Because if these two factions of world capital did not agree with the deal, then senior European officials would not have made the above statements. And how much can this deal postpone in time the war between China and the USA? Because it is this war that can determine which of them will be the center of world trade during the next cycle of evolution of the world market.

- The British Anglo-Saxon and British Jewish elites integrated with the Han elite, the so-called Rothschilds, are ready to make a deal with Trump, since China’s nuclear power is currently many times smaller than that of the United States. They failed to ignite a nuclear war between Russia and the United States. And postponing the nuclear war increases the likelihood that the war will be between China and Russia. This is an absolutely **unacceptable** option for them. So, a nuclear war between NATO and Russia on European territory is an acceptable option for them. Moreover, the “dismemberment” of Russia is a centuries-old dream for them. At the very least, the gold of Europe and Russia will flow to their banks. Not to mention that part of Siberia will also go to China.
- The aggressive part of the American elite – their military-industrial complex, the oil and financial businesses, the so-called Rockefellers, will also benefit from a war between Europe and Russia. The gold of Europe and Russia will also flow to them. By the way, as happened in the First and Second World Wars. In addition, the nuclear bombs will fall on a territory very far from the territory of the United States. So, for them, this option, in which the nuclear bombs do not fall on the territory of the United States, is also acceptable.
- The question remains to be answered – how much this **deal** can postpone in time the war between China and the USA. It seems to us that this question can be answered only after the results of the nuclear war between Europe and Russia are seen. It will take place in five years at the earliest. This is the period that the new European Commissioner for Defense and Space, Andrius Kubilius, announced as necessary for Europe’s preparation for the war with Russia.

CONCLUSION

About ten years ago, in articles and reports, I expressed the thesis that Trump is not a jester, but a chance in world politics. Currently, this thesis of mine has already been confirmed. Alas, the chance that is given with Trump’s victory does not concern us, the inhabitants of Europe. And specifically, us, the Bulgarians! Because, unlike the Serbs, Hungarians, Slovaks, Turks and many other European peoples, we are actively participating in the war against Russia. The only way for the young working-age generation to save themselves and their children is to oppose our participation in the war against Russia. The American people succeeded. Many European peoples also do not participate in the war against Russia. Hopefully, young Bulgarians will also succeed in extricating us from this horrific war!

And the answer to the question in the title is – a **threat** that has already worked. The British Anglo-Saxon and British Jewish elites, under whose control the European elites are, are already ready for a deal with Trump. But the deal is yet to come. So, the threat could turn into a real policy of trade war if the European elites start to “run away” from the deal.

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Endnotes

i Of course, the trade war between the UK and the US is only one of the reasons. But it is still an important reason to note.

ii In our opinion, Canada's accession is a "false alarm", but the accession of Greenland and the Panama Canal may be Trump's very real intentions.

iii The two global centers of power are: a) the British Anglo-Saxon and British Jewish factions integrated with the Han elite, invested in the economies of East, Southeast, and South Asia; b) the American Anglo-Saxon and American Jewish elites invested in the United States.