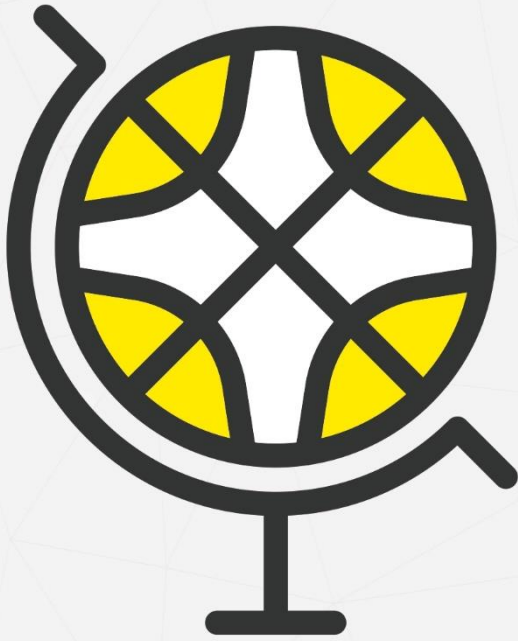


ISSN: 2995-2753



Academos Journal

International Journal
of Social Sciences and
Interdisciplinary Research

Promoting
scholarly inquiry
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across social sciences,
humanities,
and allied
scientific fields.

Volume 1
2025

Published by:



**RISTE
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editor@academosjournal.com





ACADEMOS JOURNAL

**Vol. 1, No. 1
2025**

ISSN 2955-2753 (Online)

www.academosjournal.com

IMPRESSUM

Academos Journal
Volume 1, Number 1, December 2025.

Editor in chief:

Dr.sc. Aneta STOJANOVSKA-STEFANOVA
North Macedonia

Publisher:

Academy "Riste Stefanov" – Skopje

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I acknowledge the valuable work of the authors, reviewers, and members of the Editorial Board, whose contributions ensure the quality and continuity of the Journal. Their professional engagement supports the advancement of Academos as a credible academic platform. I invite readers to examine the research included in this issue and to consider its relevance for ongoing scholarly and policy-related discussions.

Editor-in-Chief
Assoc.Prof.Dr.sc. Aneta Stojanovska-Stefanova

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The Impact of Corporate Social Responsibility on Climate Change Actions for Sustainable Performance: A Survey of Private Banks in Bangladesh Adopting Multi-Variable Analysis

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Abstract

As the world grapples with unprecedented climate change challenges, the banking sector has a unique opportunity to inspire sustainable transformation. This study reveals how climate-friendly banking practices can reshape the financial landscape in Bangladesh, presenting both risks and rewards. By integrating the natural resource-based view and stakeholder theory, we explore the dynamic relationship between corporate social responsibility (CSR) and innovative climate initiatives, revealing their effects on sustainable performance. Through an in-depth analysis of data from commercial banks in Bangladesh and utilising Structural Equation Modelling (SEM) via SmartPLS, we discover that while CSR's direct impact on sustainable performance may be limited, climate change actions emerge as vital mediators in this complex equation. Furthermore, the role of top management becomes essential in enhancing climate initiatives and organisational performance. This research does not only provide a fresh perspective for bank managers seeking sustainable strategies but also underscores the urgent need for climate-conscious approaches in emerging markets like Bangladesh. By aligning banking operations with environmental aspirations, financial institutions can mitigate climate threats while unlocking new growth avenues. This paper therefore demonstrates the critical role the banking sector can play in promoting sustainability by inspiring pro-active strategies that can lead to transformative change.

Keywords- Corporate Social Responsibility, Climate Change Actions, Natural Resource-based view theory, Stakeholders Theory, Sustainable Performance, Bangladesh.

Introduction

The banking sector stands at a pivotal crossroads as it grapples with the profound and multifaceted challenges posed by climate change (Bowman, 2010). Today, the future of financial operations depends not only on maintaining profitability but also on the sector's ability to manage climate-related risks and capitalise on emerging green opportunities. While



uncertainty persists around evolving regulatory frameworks, there is also immense potential for investment in renewable energy technologies and sustainable finance initiatives (Bowman, 2010; Allianz Group & WWF, 2005). As powerful financial intermediaries, banks could influence the direction of climate action. They can either fund projects that contribute to greenhouse gas (GHG) emissions or channel capital toward innovative, low-carbon technologies. This dual role underscores the importance of banks as risk assessors, particularly in evaluating Environmental, Social, and Governance (ESG) factors that shape corporate investment decisions and forecast long-term profitability (Buranatrakul & Swierczek, 2017).

In response to growing global urgency of climate change, financial institutions have a key role to adopt strong corporate social responsibility (CSR) frameworks. These must align with internationally recognised standards such as the United Nations Environmental Program Financial Initiative (UNEP FI) and the Equator Principles, which promote transparency, sustainability, and effective climate change mitigation (Buranatrakul & Swierczek, 2017). The Paris Agreement serves as a landmark global commitment to limit the rise in global temperatures to well below 2°C (Paris Agreement, 2015). However, the implications of climate change extend far beyond environmental degradation—they represent critical business risks that demand strategic responses from all sectors (IPCC, 2013; Mudde & Abadie, 2008). Research indicates that a company's approach to climate change can influence its CSR ethos and the expectations of its stakeholders to drive sustainable performance (Littlewood *et al.*, 2018; Abreu *et al.*, 2017; Boiral, 2012).

Since the 1990s, there has been a growing interest in the link between CSR and organisational performance. Empirical studies consistently show that CSR initiatives are positively correlated with improved business outcomes, reinforcing the need for banks to embed sustainability at the heart of their operations (Ali *et al.*, 2020). Against this backdrop, this study explores the dynamics of climate change and CSR in the context of Bangladesh's banking sector. It investigates how strategic climate actions can enhance sustainable performance and guide banks towards greater resilience and long-term impact. By focusing on the transformative role banks can play, this research seeks to spark a shift in mindset—encouraging financial institutions to fully embrace their potential as catalysts in the global fight against climate change.

The study sets out to solicit answers to the following three research questions:

- i. To what extent do CSR, stakeholders' orientations, and commitment to climate change actions affect the sustainable performance of commercial banks in Bangladesh?
- ii. To what extent does the construct climate change actions mediate the relationship between CSR, stakeholders' orientation, and sustainable performance?
- iii. To what extent does management commitment moderate the relationship between CSR, stakeholders' orientation, climate change actions, and sustainable performance?

Contextual background

In 2011, Bangladesh's central bank introduced the Green Banking Policy to promote sustainable investment practices and mitigate environmental degradation (Millat *et al.*, 2011; Rahman *et al.*, 2023). However, despite this progressive initiative, some banks still continue to fund environmentally harmful industries, such as shipbreaking and brickfields, which are often



linked to serious human rights violations (Ullah & Mia, 2019; Ullah, 2013). As a Least Developed Country, Bangladesh has maintained an impressive annual GDP growth rate of 5.8% (World Bank, 2023). However, this economic expansion has led to rising energy demands and increasing carbon emissions (Sadorsky, 2011). Rapid and unplanned urbanisation, especially in Dhaka, has exacerbated pollution levels, contributing to approximately 80,000 premature deaths in 2015 and resulting in an estimated US\$310 million in lost labour productivity (World Bank, 2018).

In 2022, Bangladesh emitted approximately 281.08 million tonnes of CO₂ equivalent representing around 0.52% of global emissions (Crippa *et al.*, 2024). As part of its Intended Nationally Determined Contributions (INDC), the country has committed to reducing greenhouse gas emissions by 20% from business-as-usual levels by 2030. Yet, meeting these targets remains a significant challenge (Hasan & Chongbo, 2020). Bangladesh's vulnerability to climate change is particularly acute. With over fifty-six million people living below the poverty line and agriculture forming the backbone of rural livelihoods, the country faces substantial threats from climate-related events (Gogoi & Kakakhel, 2014). The World Bank Group (2022) estimates annual losses from cyclones at around \$1 billion. Furthermore, climate projections suggest that agricultural GDP could decline by one-third by 2050, and cropland may shrink significantly by 2040—making the case for urgent and effective climate action even more compelling.

Literature Review & Theories and Hypotheses Development

In recent years, the pressing challenges posed by climate change have prompted a significant shift in corporate strategies, particularly within the financial sector. As organisations increasingly prioritise sustainability, the intersection of Corporate Social Responsibility (CSR), climate change actions, and sustainable performance has become a critical area of academic inquiry. This literature review aims to critically evaluate existing research and theoretical frameworks that elucidate the dynamics among these elements. We will develop a set of hypotheses guiding empirical research in this domain by synthesising the literature.

Corporate Social Responsibility (CSR)

Corporate Social Responsibility (CSR) encapsulates a company's commitment to conducting business ethically while considering its social, environmental, and economic impacts (Carroll, 1999). In banking and financial services, CSR manifests through practices that promote transparency, responsibility, and sustainability in operations. The growing recognition of the importance of CSR in financial institutions has raised awareness among stakeholders, shifting expectations, and the imperative to mitigate risks associated with environmental and social challenges (Dahlsrud, 2008). One prevalent definition of CSR by Marsden (2006) posits that a socially responsible corporation operates profitably while addressing both positive and negative effects on society. Banks, as pivotal players in the economy, have the potential to materially influence sustainability efforts by financing green initiatives, regulating their investment portfolios, and adopting environmentally responsible practices. This is particularly relevant in the face of increasing scrutiny regarding the social and environmental impacts of financing decisions.



Climate Change Actions (CC)

Climate change actions are the initiatives that organisations undertake to mitigate the effects and risks of climate change. These actions can include risk management strategies, sustainable product development, pro-active greenhouse gas reduction strategies, and comprehensive reporting and transparency measures concerning emissions (Furrer *et al.*, 2011; Weinhofer & Hoffmann, 2010). With the growing urgency of climate change, financial institutions play a crucial role in either facilitating carbon-intensive projects or supporting investments in renewable energy and sustainable technologies. Research suggests that implementing climate change actions can enhance corporate sustainability performance (Suganthi, 2019). For instance, Littlewood *et al.* (2018) argue that organisations should align their strategic actions with climate change initiatives to improve their overall performance. Moreover, effective climate change strategies often require collaboration among various organisational actors, highlighting the need for institutions to adopt integrated governance frameworks (Buranatrakul & Swierczek, 2017).

Sustainable Performance (PER)

Sustainable performance refers to an organisation's ability to fulfil stakeholder expectations over time while minimising negative environmental and social impacts (Stanciu *et al.*, 2014). This is measured using a combination of financial and non-financial indicators, including profitability, social contributions, and environmental stewardship (Morin, 1995; Lee & Saen, 2012). The increasing emphasis on sustainable performance in banking reflects both market dynamics and regulatory pressures, requiring institutions to adopt strategies that foster long-term viability and contribute positively to societal challenges. The relationship between sustainable performance and CSR has garnered considerable attention. A growing body of literature indicates that organisations committed to CSR are more likely to achieve superior sustainable performance (Ali *et al.*, 2017). However, the relationship between CSR and performance can be complex, often influenced by external factors such as stakeholder pressure and organisational practices.

The Interplay of CSR, Climate Change Actions, and Sustainable Performance

Research has consistently highlighted the intricate relationships between CSR, climate change actions, and sustainable performance. Littlewood *et al.* (2018) note that CSR's impact on climate change actions serves as a positive feedback loop; organisations that invest in CSR tend to engage more in climate initiatives, leading to enhanced sustainable performance. Furthermore, the integration of environmental considerations into business strategy is essential for banks navigating today's complexities. Despite the growing consensus around the positive influence of CSR on sustainable performance, studies emphasise the mixed nature of these relationships. For example, while CSR can drive firms toward sustainable practices, there is controversy that this will invariably translate into improved performance. Factors such as organisational culture, management commitment, and stakeholder engagement play critical roles in shaping these dynamics (Hernández *et al.*, 2020).

Stakeholder Orientation and Its Role

Stakeholder theory posits that a firm's success is contingent upon its ability to engage effectively with its stakeholders—individuals or groups that can impact or be impacted by the



organisation (Freeman, 1984). This theory positions stakeholders as central to shaping corporate strategy and performance, suggesting that organisations must recognise and respond to stakeholder interests. In the banking sector, stakeholders—including customers, employees, investors, and regulatory bodies—exert considerable influence on climate change initiatives. Research indicates that organisations driven by strong stakeholder orientation are more likely to adopt climate-friendly practices and commit to sustainability (Linh & Anh, 2017; Bukhari *et al.*, 2022). For instance, banks facing pressure from environmentally conscious stakeholders may prioritise green investments and sustainable lending practices to align with stakeholder expectations.

Management Commitment as a Critical Factor

Management commitment (MC) is a pivotal factor influencing the successful integration of CSR and climate change initiatives within organisational operations. Empirical studies underline that top management's engagement in and support for sustainability objectives significantly impacts organisational commitment to CSR and climate actions (Yusliza *et al.*, 2019). Management commitment fosters a culture of sustainability within organisations, encouraging employees to embrace and actively participate in CSR initiatives. This internal alignment is essential for translating strategic goals into actionable reality, thereby securing competitive advantages (Chadwick *et al.*, 2015). Additionally, a committed management team is more likely to allocate resources effectively, establish sustainability goals, and cultivate stakeholder relationships that reinforce the organisation's sustainability mission. Moreover, higher management commitment is correlated with enhanced organisational performance in sustainability (Fu *et al.*, 2020). By prioritising sustainability at the leadership level, banks not only achieve compliance with regulatory frameworks but also realise long-term benefits through improved stakeholder relationships and brand equity.

The Mediating Role of Climate Change Actions

Climate change actions are essential mediators in the relationships between CSR, stakeholder orientation, and sustainable performance. Existing literature supports the notion that effective climate initiatives can enhance the translation of CSR commitments into tangible performance outcomes. Specifically, firms with robust CSR frameworks implement climate change actions better compared to those with weaker frameworks, which subsequently contribute to improved sustainable performance (Long *et al.*, 2020; Hart, 1995). The Natural Resource-Based View (NRBV) theory provides a compelling framework for understanding how organisations can leverage environmental practices to achieve competitive advantages. According to Hart (1995), the integration of environmental concerns into strategic management can lead to sustainable outcomes while mitigating risks associated with ecological degradation. This perspective posits that organisations must cultivate capabilities aligned with sustainability, which can drive performance improvements and enhance resilience in the face of environmental challenges.

The Natural Resource-Based View Theory (NRBV)

The application of the NRBV theory within the context of this research emphasises the significance of integrating environmental considerations into organisational strategies. The NRBV posits that firms rely on various resources, both internal and external, to gain competitive advantages while addressing ecological and social challenges (Barney, 1991). One



critical aspect of NRBV is its recognition of the natural environment as an essential resource. By leveraging environmental capabilities, organisations can position themselves strategically to navigate sustainability challenges effectively. Hart (1995) argued that a pro-active approach towards environmental management enhances corporate performance and articulates the necessity of adopting environmentally responsible practices that contribute positively to competitive positioning. Furthermore, NRBV extends the resource-based view (RBV) by incorporating environmental dimensions, thereby allowing firms to recognise the constraints posed by ecological degradation while also identifying opportunities for innovation and sustainability (Sharma & Vredenburg, 1998). Organisations that effectively align their strategies with environmental capabilities have been shown to experience improved performance outcomes and greater market resilience (Wang *et al.*, 2024).

Formulating Hypotheses

Building upon the theoretical framework and empirical insights presented in this literature review, we propose the following hypotheses to guide our research:

Hypotheses Related to CSR and Climate Change Actions

H1: CSR has a significant impact on climate change actions adopted by banks.

H2: CSR significantly influences the sustainable performance of banks.

Hypotheses Related to Stakeholder Orientation

H3: Stakeholder orientation positively influences the adoption of climate change actions in banks.

H4: Stakeholder orientation enhances the sustainable performance of banks.

Hypothesis Related to Climate Change Actions

H5: Climate change actions have a positive influence on sustainable performance.

Hypotheses Related to Management Commitment

H6: Management commitment has a positive influence on sustainable performance.

H7: Management commitment moderates the relationship between CSR and sustainable performance.

H8: Management commitment moderates the relationship between stakeholder orientation and sustainable performance.

H9: Management commitment moderates the relationship between climate change actions and sustainable performance.

Mediating Hypotheses

H10: The relationship between CSR and sustainable performance is mediated by climate change actions.

H11: The relationship between stakeholder orientation and sustainable performance is mediated by climate change actions.



The interplay among CSR, climate change actions, and sustainable performance is becoming increasingly critical in the context of contemporary business challenges. Financial institutions, as major actors in the economy, have a critical role to influence social and environmental trajectories through their strategic choices. The growing demand for transparency and accountability necessitates that banks not only adopt ethical practices but also proactively engage in sustainability initiatives to fulfil stakeholder expectations. This literature review highlights the intricate relationships among CSR, stakeholder orientation, climate change actions, and management commitment, proposing a robust framework for understanding how these factors converge to influence sustainable performance.

By empirically evaluating the formulated hypotheses, this research aims to provide valuable insights into the mechanisms by which banks can enhance their sustainability practices and achieve superior performance outcomes. The findings of this study have implications on both scholarship and practical applications within the banking sector. A deeper understanding of the factors driving sustainable performance can empower financial institutions to respond effectively to evolving regulatory landscapes and stakeholder demands. By aligning strategic decisions with sustainability objectives, banks can navigate challenges while capitalising on emerging opportunities thereby ensuring their long-term success and contributing to global sustainability efforts.

Research Methodology & Results

Questionnaire development

To collect relevant data to evaluate the hypotheses developed above, the study has developed a questionnaire with relevant sections. The CSR section was measured using 18 items adapted from Kraus *et al.*, (2020) as well as Hu and Scholtens (2014). The eighteen items are further divided into three dimensions as follows: economic (E), social (S), and environmental (EN). The economic dimension consists of five items, the social dimension includes five items, and the environmental dimension includes eight items.

The attribute of stakeholders' orientation (STK) was measured using 10 items, and all adapted measurements from Choudhury *et al.*, (2013). Climate change actions (CC) were measured using twenty-eight items. Climate change actions consist of organisational involvement (ORG), which includes six items; climate change risks (CRISK), which consists of 6 items; disclosure (DIS), which includes seven items; and product development (PD), which comprises 7 items adapted from Kılıç and Kuzey (2019), Buranatrakul and Swierczek (2017) and Furrer *et al* (2012).

The sustainable performance (PER) consists of 10 items adapted from Kovilage (2021) and Abreu *et al* (2017). The Management Commitment (MC) includes 7 items adapted from Furrer *et al* (2012), Latan *et al* (2018), Bukhari *et al* (2022) and Wijethilake & Lama (2019).

The sampling strategy for this study was based on non-probability purposive sampling. This method involved carefully selecting participants who possess considerable experience and an in-depth understanding of the phenomenon being studied, ensuring the data gathered was both relevant and insightful. Surprisingly, senior banking officers from the selected banks were open



to offering their views on CSR, stakeholders' orientation, climate change actions, management commitment, and sustainable performance based on five-item Likert scale questionnaires.

Sampling Strategy

This study focuses on the banking sector in an emerging market in Bangladesh for two reasons. First, banks, as financial service providers, are more responsible for making a significant contribution to sustainable development in Bangladesh. Hossain (2012) contends that Bangladeshi banks extend their Corporate Social Responsibility (CSR) activities to various sectors such as education, health, and others, but they have shown little attention to sustainability issues. For example, Bangladeshi banks support industries that contribute to environmental damage, and lenders inadvertently support environmental harm and unsustainable effects brought on by their clients (Ullah & Mia, 2019; Weber et al, 2015). Second, contrary to a heterogeneous sample, a sample from one sector enables scholars to capture the context of the analysis in detail (Bhatti et al, 2022).

The survey was conducted in 2023 on private commercial banks operating in Bangladesh. The appendix shows the total population for this study was 250 bank employees working in the CSR, sustainability, and loan sanction departments from forty-four participating commercial banks operating in Bangladesh. The survey used 250 self-administered questionnaires, achieving a 60% response rate, with 150 completed and returned questionnaires.

Data Analysis and Results

In this research, five reflective constructs were examined following the established guidelines for evaluating both measurement and structural models in PLS-SEM, as outlined by Hair et al (2017). In this study, PLS-SEM was chosen over CB-SEM due to the complexity of the model and the study's predictive focus. The model includes latent variables (e.g., CSR, STK) with multiple indicators, as well as moderating effects of MC and mediating effect of CC. PLS-SEM is well-suited for handling complex models and interaction effects, which CB-SEM is more restrictive in managing. Furthermore, since the study aims to predict sustainable performance outcomes rather than simply test an existing theory, PLS-SEM is ideal as it focuses on maximising R^2 values and explaining variance in dependent variables, which is essential for prediction-based research. This makes PLS-SEM the appropriate method for addressing the exploratory and predictive nature of the study.

Table 1 in appendix 1 reveals that the lowest outer loading is 0.532 and the highest value is 0.982 which is more than the recommended threshold value by Hair et al (2014) of 0.50, indicating an adequate level of internal reliability in the measurement model (Hair et al, 2014). To test internal consistency, as per Hair et al (2014), researchers used composite reliability guided by a threshold value between 0.70 and 0.90. However, having a value of 0.95 and above indicates that the result is problematic. This, in turn, indicates that the items are redundant, which consequently reduces the construct validity, according to Drolet and Morrison (2001). The composite reliability values of 0.905 (CC), 0.884 (CSR), 0.831 (MC), 0.924 (PER), and 0.910 (STK) demonstrate that these constructs have high levels of internal consistency in this study.



Cronbach's alpha is another measure of internal consistency or reliability that uses the same thresholds as that of composite reliability, but it generates lower values. In this study, Cronbach's alpha values are well above the required threshold of 0.70, according to Hair et al (2019), as shown in Table 1 in appendix 1. The Average Variance Extracted (AVE) is used to check the level of convergence of a given individual construct in comparison to the measure of other constructs (Urbach and Ahlemann, 2010). This indicates the degree to which a latent construct elaborates the variances that exist within its indicators (Hair et al, 2017). Table 1 in appendix illustrates that AVE values for the constructs in the study are above 0.5. Hence, convergent validity is established as per Hair et al (2017).

Discriminant validity, as suggested by Fornell-Larcker (1981), is commonly used to assess the degree of shared variance between the latent variables of the model. The results in Table 2 illustrate satisfactory or sufficient discriminant validity as recommended, where the square roots of AVE (diagonal) are higher than the correlations (off diagonal) for all the reflective constructs.

Henseler et al (2015) developed a unique method for evaluating discriminant validity, namely, the heterotrait-monotrait ratio of correlations (HTMT). Based on that, the HTMT values of the study's constructs are all below the recommended value of 0.90, as shown in Table 2.

Table 2: Discriminant validity

	Fornell-Larcker Criterion					Heterotrait-Monotrait Ratio (HTMT)			
	Y1	Y2	Y3	Y4	Y5	Y1	Y2	Y3	Y4
CC (Y1)	0.897								
CSR (Y2)	0.226	0.727				0.140			
MC (Y3)	0.804	0.216	0.832			0.807	0.161		
PER (Y4)	0.533	0.124	0.423	0.841		0.550	0.169	0.463	
STK (Y5)	0.039	0.004	0.052	0.058	0.915	0.043	0.094	0.071	0.066

Note. Bold and Italics values on the diagonal show the Square of AVE.

According to the results shown in Table 3, it can be observed that the inner VIF values (i.e., Variance Inflation Factor) for each construct are within the range of 3.6-1.00 (Diamantopoulos & Siguaw, 2006); thus, it can be said that multicollinearity issues are absent in this study.

Table 3: Inner VIF, f Square, R square, Cross validated redundancy

Construct	Inner VIF		f Square		R Square	R Square Adjusted	Construct Cross validated Redundancy		
	Y1	Y4	Y1	Y4			SSO	SSE	Q ² (=1-SSE/SSO)
CC (Y1)		2.623		0.236	0.052	0.038	2340.000	2243.030	0.041
CSR (Y2)	1.000	1.054	0.054	0.000					
MC (Y3)		3.595		0.079					
PER (Y4)					0.338	0.317	650.000	514.567	0.208
STK (Y5)	1.000	1.004	0.002	0.003					



The f-square values of 0.35, 0.15, and 0.02 represent large, medium, and small effect sizes, respectively (Hair, Hult, Ringle & Sarstedt, 2016). Based on Table 3, the effect sizes of CSR and STK on CC are 0.054 (medium) and 0.002 (no effect), respectively. In the same way, the effect sizes of CC, CSR, MC, and STK on PER are 0.236 (medium), 0.000 (no effect), 0.079 (small), and 0.003 (no effect).

On the other hand, the coefficient of determination score is used to assist a given model in explaining the relationship between variables. In other words, the R square measures a given model's explanatory power. A study by Hair et al (2017) proposed a range of 0.75, 0.5, and 0.25 as typically substantial, moderate, and weak levels of explanation, respectively. Table 3 suggests that CC and PER indices of 0.052 (5.2%) and 0.338 (33.8%) explain the relationship between CC and PER, indicating a moderate effect. An additional criterion for evaluating the quality of the model is the blindfolding procedure to assess a model's capability to explain factors (Hossan et al, 2020; Hair et al, 2011). Hair et al (2011) recommended using cross-validated redundancy where the use of PLS-SEM is required to estimate both the structural model and the measurement model. Cross-validated redundancy is perfectly suitable for the PLS-SEM approach. Fornell & Cha (1994) suggested that if the Q square value is greater than zero, then the model has explanatory relevance. From Table 3, the values of Q square for CC and PER show that they are greater than 0.00; hence, explanatory relevance is attained.

Hypothesis Test

The structural model analysis was conducted using Smart-PLS 3.1.1 with 5,000 subsamples in a bootstrapping procedure. The results of the structural model analysis are shown in Table 4 and Figure 2, which show that there is a positive significant effect of CSR on CC ($\beta = 0.226$, $t = 2.095$, $p < 0.05$). As such, H1 is accepted. While there is a positive significant effect of CC on PER ($\beta = 1.030$, $t = 5.703$, $p < 0.05$) and accordingly, the H5 is supported. However, there is no significant effect of CSR on PER ($\beta = 0.115$, $t = 0.954$, $p > 0.05$); MC on PER ($\beta = 0.173$, $t = 0.891$, $p > 0.05$); STK on CC ($\beta = 0.040$, $t = 0.402$, $p > 0.05$); and STK on PER ($\beta = 0.051$, $t = 0.629$, $p > 0.05$). Therefore, H2, H3, H4, and H6 are not supported.

Table 4: Path coefficient (direct effect)

	Beta	Sample Mean (M)	Standard Deviation	T Statistics	P Values
CSR -> CC	0.226	0.255	0.108	2.095	0.037
CSR -> PER	0.115	0.140	0.120	0.954	0.340
STK -> CC	0.040	0.037	0.099	0.402	0.688
STK -> PER	0.051	0.047	0.082	0.629	0.530
CC -> PER	1.030	0.995	0.181	5.703	0.000
MC -> PER	0.173	0.148	0.194	0.891	0.373

Moderating effect

Table 5 below shows that MC moderates the relationship between CC and PER ($\beta = 0.482$, $t = 5.272$, $p < 0.05$), while there is no moderating effect of MC on the relationship between STK and PER ($\beta = 0.004$, $t = 0.056$, $p > 0.05$); and CSR and PER ($\beta = 0.054$, $t = 0.264$, $p > 0.05$). Therefore, H9 is supported, whilst H7 and H8 are not supported.



Table 5: Path coefficient (Moderating effect)

	Beta	Sample (M)	Mean	Standard (STDEV)	Deviation	T ((O/STDEV))	Statistics	P Values
MC *STK -> PER	0.004	0.009		0.075		0.056		0.955
MC*CC -> PER	0.482	0.489		0.092		5.272		0.000
MC*CSR -> PER	0.054	0.099		0.204		0.264		0.792

The simple slope analysis shown in Figure 1 indicates that MC moderates the relationship between CC and PER. When MC is high (+1 SD), the effect of CC on PER is stronger (steeper red line). When MC is low (-1 SD), the effect is weaker (flatter blue line). This confirms that MC enhances the impact of CC on PER at higher levels but reduces it at lower levels.

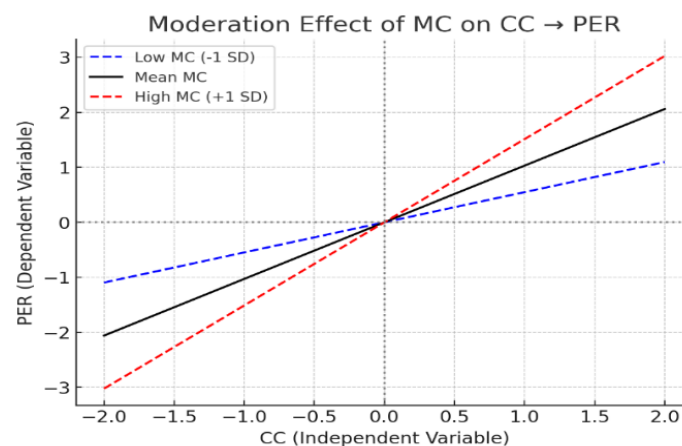


Figure1: Moderation slope plot for MC moderating the relationship between CC and PER

Mediating effect

Table 6 shows that there is a significant mediating effect of CC on the relationship between CSR and PER ($\beta = 0.232$, $t = 1.980$, $p < 0.05$) and that CC does not mediate the relationship between STK and PER ($\beta = 0.041$, $t = 0.404$, $p > 0.05$). So, H10 is supported, whereas H11 is not supported.

Table 6: Path coefficient (Mediating/ indirect effect)

	Beta	Sample (M)	Mean	Standard (STDEV)	Deviation	T ((O/STDEV))	Statistics	P Values
CSR -> CC -> PER	0.232	0.257		0.129		1.980		0.032
STK -> CC -> PER	0.041	0.038		0.102		0.404		0.686



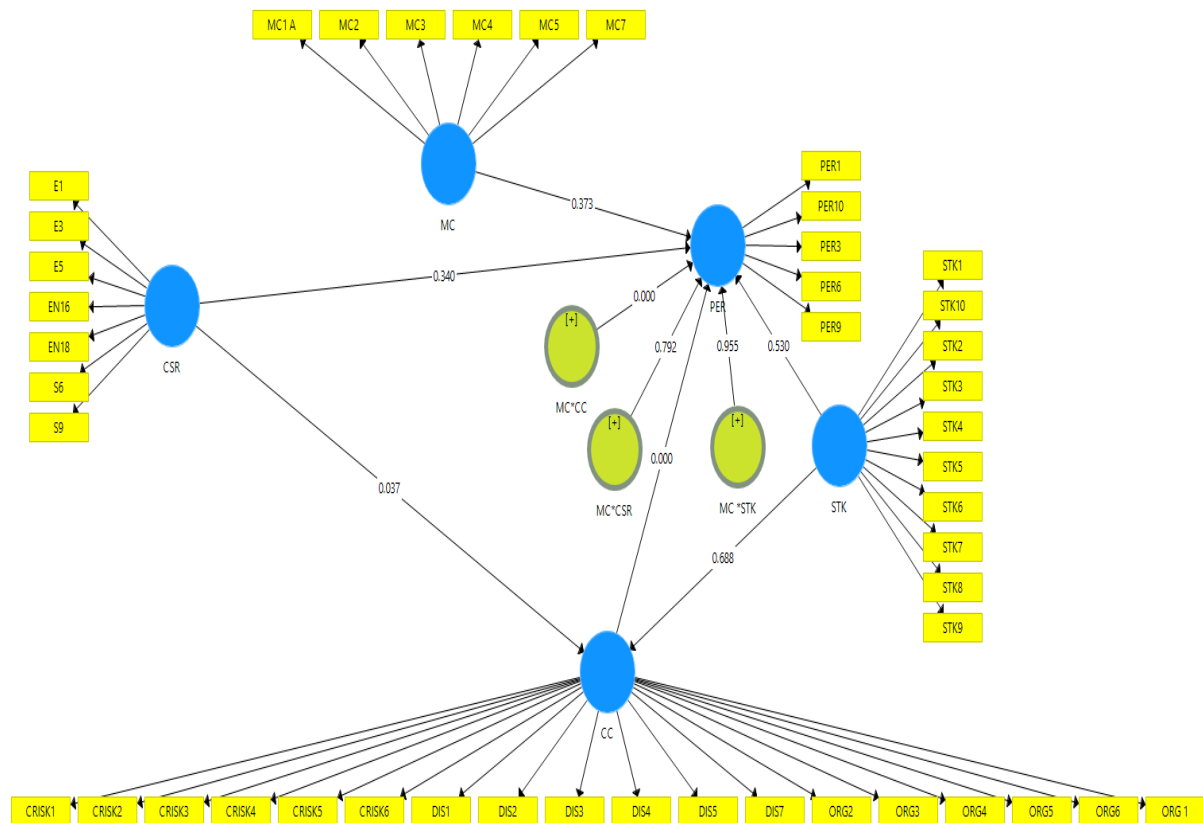


Figure 2: Structural model

Discussion

As previously stated, this study investigates the relationship between corporate social responsibility (CSR) and sustainable performance in private commercial banks in Bangladesh, with a particular focus on the moderating role of management commitment. The findings reveal that CSR does not directly influence sustainable performance. However, there is a significant indirect relationship between CSR and performance, mediated by climate change actions. This suggests that while CSR alone may not lead to improved sustainable performance, it can have a meaningful impact when coupled with pro-active environmental strategies. These results differ from those of Bacinello et al (2020) and Orazalin (2020), who found a direct positive relationship between CSR and organisational performance. Their studies concluded that CSR initiatives enhance financial outcomes, employee satisfaction, and corporate reputation. Similarly, Hernández et al (2020) reported that CSR—particularly in social, economic, and environmental dimensions—positively impacts the profitability, market share, and long-term viability of Spanish micro, small, and medium-sized enterprises. In contrast, the current study suggests that the influence of CSR on sustainable performance may be conditional on other factors such as environmental action and leadership engagement.

The study's findings align with those of Kraus et al (2020), who argued that CSR's environmental, economic, and social dimensions serve as drivers for aligning with broader environmental strategies. While CSR may not have a direct impact on organisational performance, it plays a critical role in shaping climate change actions—an essential aspect of



environmental strategy. This further reinforces the idea that CSR should not be overlooked by management, as it can indirectly influence organisational outcomes through environmental engagement. Climate change actions, in turn, significantly enhance sustainable performance. This aligns with Boiral et al (2012), who noted that organisations' climate commitments are driven mainly by social and environmental concerns—core pillars of CSR. However, this finding contrasts with Littlewood et al (2018), who argued that sustainability practices do not necessarily increase climate change commitment. Nonetheless, the current study supports the Natural Resource-Based View (NRBV) theory, which posits that environmental considerations and resource management can drive sustainable performance (Hart & Dowell, 2011; Hart, 1995).

The study also examined the role of stakeholders' orientation in shaping climate action. It found that stakeholders' orientation does not influence the adoption of climate change actions within Bangladesh's banking sector. This supports Bukhari et al (2022), who similarly found that community pressure had negligible effect on the adoption of green banking practices. These findings challenge stakeholder theory, which posits that strong relationships with stakeholders contribute to organisational success (Barnett & Salomon, 2012; Harrison & Freeman, 1999). Additionally, the study found no significant relationship between stakeholders' orientation and sustainable performance. This is consistent with Boiral et al (2012), who acknowledged that stakeholder pressure is often insufficient to drive meaningful reductions in GHG emissions. The lack of impact in the current study may be attributed to the low levels of climate awareness and engagement within local communities in Bangladesh. As noted by Nurunnabi (2015), a lack of regulation, interest, and stakeholder awareness significantly hinders climate-related action among firms in the country.

Another key finding is that management commitment does not directly influence sustainable performance. This contrasts with prior studies such as Appiah et al (2020), which showed that managerial engagement significantly boosts environmental performance in Chinese manufacturing firms. Similarly, Latan et al (2018), using NRBV theory, demonstrated that top management positively influences environmental outcomes in Indonesian firms certified under ISO 14001. Furthermore, the study found no moderating effect of management commitment on the relationship between CSR and sustainable performance, echoing the findings of Tandoh et al (2022). However, it did find that management commitment significantly moderates the relationship between climate change actions and sustainable performance. This supports Ar (2012), who observed that management commitment enhances the effectiveness of green initiatives on firm performance. It also aligns with Wijethilake et al (2017), who emphasized that without top-level commitment, sustainability initiatives are unlikely to succeed. These insights underscore the critical role of leadership in translating environmental strategies into measurable outcomes in the banking sector. The study also explored whether climate change actions mediate the relationship between stakeholders' orientation and sustainable performance. This hypothesis was not supported, mirroring findings by Guerci et al (2016), who found that green hiring practices did not mediate the relationship between stakeholder engagement and environmental outcomes.



Conclusion

The study concludes that CSR does not directly influence sustainable performance. However, CSR significantly impacts climate change actions, which in turn enhance sustainable outcomes by reducing greenhouse gas emissions, energy consumption, and waste. Importantly, management commitment plays a key moderating role in the link between climate change actions and sustainable performance. These findings confirm the mediating role of climate change initiatives in the relationship between CSR and sustainability, in line with the natural RBV theory. This research offers an original insight based on the empirical data on CSR, stakeholders' orientation, climate change actions, and sustainable performance for the benefit of researchers, managers, and policymakers. The study contributes to the body of knowledge by determining the association between CSR and sustainable performance with the moderating role of management commitment and the mediating role of climate change actions. Therefore, this research makes a significant contribution to these areas as it incorporates CSR (i.e., economic, social, and environmental aspects), climate change actions (i.e., organisational involvement, climate change risk management, product development, and disclosure), stakeholders' orientation and sustainable performance in a single integrative research model framework within the context of the banking sector of Bangladesh.

Acknowledgements

We thank Prof Don Harper and Prof Eleri Jones both of blessed memories for their support and guidance during the research. May their souls rest in peace.

Conflict of interests

We the authors declare that there is no conflict of interest that affect the objectivity of this paper.

References

- Aarseth, W., Romstads, A., & Andersen, B. (2011). Key factors for the management of global projects: a case study. *International Journal of Transitions and Innovation Systems*, 1(4), 326. <https://doi.org/10.1504/ijtis.2011.044905>
- Abreu et al (2017). Conceptual model for corporate climate change strategy development: Empirical evidence from the energy sector. *Journal of Cleaner Production*, 165, 382–392. <https://doi.org/10.1016/j.jclepro.2017.07.133>
- Ali, H. Y., Danish, R. Q., & Asrar-ul-Haq, M. (2020). How corporate social responsibility boosts firm financial performance: The mediating role of corporate image and customer satisfaction. *Corporate Social Responsibility and Environmental Management*, 27(1), 166–177. <https://doi.org/10.1002/csr.1781>
- Appiah, B. K., Donghui, Z., Majumder, S. C., & Monaheng, M. P. (2020). Effects of environmental strategy, uncertainty and top management commitment on the environmental performance: Role of environmental management accounting and environmental management control system. *International Journal of Energy Economics and Policy*, 10(1), 360–370. <https://doi.org/10.32479/ijeep.8697>
- Ar, I. M. (2012). The Impact of Green Product Innovation on Firm Performance and Competitive Capability: The Moderating Role of Managerial Environmental Concern. *Procedia - Social and Behavioral Sciences*, 62, 854–864. <https://doi.org/10.1016/j.sbspro.2012.09.144>
- Bacinello, E., Tontini, G., & Alberton, A. (2020). Influence of maturity on corporate social responsibility and sustainable innovation in business performance. *Corporate Social Responsibility and Environmental Management*, 27(2), 749–759. <https://doi.org/10.1002/csr.1841>
- Barnett, M. L., & Salomon, R. M. (2012). Does it pay to be really good? addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, 33(11), 1304–1320. <https://doi.org/10.1002/smj.1980>
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–



120. <https://doi.org/10.1177/014920639101700108>
- Bhattacharyya, A., & Cummings, L. (2015). Measuring Corporate Environmental Performance - Stakeholder Engagement Evaluation. *Business Strategy and the Environment*, 24(5), 309–325. <https://doi.org/10.1002/bse.1819>
- Bhatti, S. H., Iqbal, K., Santoro, G., & Rizzato, F. (2022). The impact of corporate social responsibility directed toward employees on contextual performance in the banking sector: A serial model of perceived organisational support and affective organisational commitment. *Corporate Social Responsibility and Environmental Management*, 29(6), 1980–1994. <https://doi.org/10.1002/csr.2295>
- Boiral, O., Henri, J. F., & Talbot, D. (2012). Modelling the Impacts of Corporate Commitment on Climate Change. *Business Strategy and the Environment*, 21(8), 495–516. <https://doi.org/10.1002/bse.723>
- Bowman, M. (2010). The role of the banking industry in facilitating climate change mitigation and the transition to a low-carbon global economy. *Environment and Planning Law Journal*, 2(22), 1–21.
- Branco, M. C., & Rodrigues, L. L. (2006). Corporate Social Responsibility and Resource-Based Perspectives. *Journal of Business Ethics*, 69(2), 111–132. <https://doi.org/10.1007/s10551-006-9071-z>
- Brandão, I. D. F., Diógenes, A. S. M., & De Abreu, M. C. S. (2017). Value allocation to stakeholder employees and its effect on the competitiveness of the banking sector. *Review of Business Management*, 19(64), 161–179. <https://doi.org/10.7819/rbgn.v0i0.3199>
- Bukhari, S. A. A., Hashim, F., & Amran, A. (2022). Pathways towards Green Banking adoption: the moderating role of top management commitment. *International Journal of Ethics and Systems*, 38(2), 286–315. <https://doi.org/10.1108/IJOES-05-2021-0110>
- Buranatrakul, T., & Swierczek, F. W. (2017). Climate Change Strategic Actions in the International Banking Industry. *Global Business Review*, 19(1), 32–47. <https://doi.org/10.1177/0972150917713371>
- Carroll, A. B. (1999). Evolution of a Definitional Construct. *Business & Society*, 38(3), 268–295.
- Clint Chadwick et al (2015). Resource orchestration in practice: CEO emphasis on SHRM, commitment-based HR systems, and firm performance. *Strategic Management Journal*, 36, 360–376. <https://doi.org/10.1002/smj>
- Crant, J. M. (2000). Proactive behavior in organizations. *Journal of management*, 26(3), 435–462.
- Crippa, M., Guizzardi, D., Pagani, F., Banja, M., Muntean, M., Schaaf, E., ... & Vignati, E. (2023). GHG emissions of all world countries. *Publications Office of the European Union, Luxembourg*, 10, 953322.
- Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management*, 15(1), 1–13. <https://doi.org/10.1002/csr.132>
- Dlugolecki, A., & Lafeld, S. (2005). Climate change and the financial sector. an agenda for action. http://www.wwf.org.uk/filelibrary/pdf/allianz_rep_0605.pdf
- Firm, A. N.-R.-B. V. of the. (1995). A Natural-Resource-Based View of the Firm. *The Academy of Management Review*, 20(4), 986. <https://doi.org/10.2307/258963>
- Fornell, C. and Cha, J. (1994) 'Partial least squares', in Bagozzi, R.P. (ed.) *Advanced Methods of Marketing Research*. Oxford: Blackwell Publishers, pp. 52–78
- Freeman, R. E. (1994). The Politics of Stakeholder Theory: Some Future Directions. *Business Ethics Quarterly*, 4(04), 409–421. <https://doi.org/10.2307/3857340>
- Freeman, R.E. (1984) *Strategic Management: A Stakeholder Approach*. Boston, MA: Pitman.
- Fu, R., Tang, Y., & Chen, G. (2020). Chief sustainability officers and corporate social (Ir)responsibility. *Strategic Management Journal*, 41(4), 656–680. <https://doi.org/10.1002/smj.3113>
- Furrer B., Hamprecht, J., & Hoffman, V. H. (2012). Much ado about nothing? How banks respond to climate change. *Business and Society*, 51(1), 62–88. <https://doi.org/10.1177/0007650311427428>
- Gallego-Álvarez, I., García-Sánchez, I. M., & da Silva Vieira, C. (2014). Climate Change and Financial Performance in Times of Crisis. *Business Strategy and the Environment*, 23(6), 361–374. <https://doi.org/10.1002/bse.1786>
- Gogoi and Kakakhel. (2014). Climate and Development Knowledge Network (CDKN), climate and development outlook: Bangladesh special edition. <https://doi.org/10.1029/eo066i008p00076>
- Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance – the mediating role of green HRM practices. *International Journal of Human Resource Management*, 27(2), 262–289. <https://doi.org/10.1080/09585192.2015.1065431>
- Harrison, J. S., & Freeman, R. E. (1999). Stakeholders, social responsibility, and performance: Empirical evidence and theoretical perspectives. *Academy of Management Journal*, 42(5), 479–485. <https://doi.org/10.2307/256971>



- Hart, S. L. (1995). A Natural-Resource-Based View of the Firm: Fifteen Years After. *Academy of Management Review*, 20(4), 986–1014. <https://doi.org/10.1177/0149206310390219>
- Hart, S. L., & Dowell, G. (2011). A natural-resource-based view of the firm: Fifteen years after. *Journal of Management*, 37(5), 1464–1479. <https://doi.org/10.1177/0149206310390219>
- Hasan, M. M., & Chongbo, W. (2020). Estimating energy-related CO2 emission growth in Bangladesh: The LMDI decomposition method approach. *Energy Strategy Reviews*, 32, 100565. <https://doi.org/10.1016/j.esr.2020.100565>
- Hernández et al (2020). Moderating effect of firm size on the influence of corporate social responsibility in the economic performance of micro-, small and medium-sized enterprises. *Technological Forecasting and Social Change*, 151(October 2019), 119774. <https://doi.org/10.1016/j.techfore.2019.119774>
- Hörsch, J., Freeman, R. E., & Schaltegger, S. (2014). Applying Stakeholder Theory in Sustainability Management: Links, Similarities, Dissimilarities, and a Conceptual Framework. *Organization and Environment*, 27(4), 328–346. <https://doi.org/10.1177/1086026614535786>
- Hossain, S. F. (2012). Corporate Social Responsibility of Private Banks in Bangladesh: Expectations, Achievements and Challenges. *Journal of Public Administration and Governance*, 2(1), 176. <https://doi.org/10.5296/jpag.v2i1.1583>
- IPCC, 2013: Summary for Policymakers. (2013). *Climate Change 2013: The Physical Science Basis. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. <https://doi.org/10.1260/095830507781076194>
- Javed, M., Rashid, M. A., Hussain, G., & Ali, H. Y. (2020). The effects of corporate social responsibility on corporate reputation and firm financial performance: Moderating role of responsible leadership. *Corporate Social Responsibility and Environmental Management*, 27(3), 1395–1409. <https://doi.org/10.1002/csr.1892>
- Jeswani et al (2008). How Warm Is the Corporate Response to Climate Change? Evidence from Pakistan and the UK. *Business Strategy and the Environment*, 18, 46–60.
- Jones, C. A., & Levy, D. L. (2007). North American Business Strategies Towards Climate Change. *European Management Journal*, 25(6), 428–440. <https://doi.org/10.1016/j.emj.2007.07.001>
- Jones, M. J. (2010). Accounting for the environment: Towards a theoretical perspective for environmental accounting and reporting. *Accounting Forum*, 34(2), 123–138. <https://doi.org/10.1016/j.accfor.2010.03.001>
- Klassen, R. D., & McLaughlin, C. P. (1996). The impact of environmental management on firm performance. *Management Science*, 42(8), 1199–1214. <https://doi.org/10.1287/mnsc.42.8.1199>
- Kraus, S., Rehman, S. U., & García, F. J. S. (2020). Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. *Technological Forecasting and Social Change*, 160(July), 120262. <https://doi.org/10.1016/j.techfore.2020.120262>
- Latan, H., Chiappetta Jabbour, C. J., Lopes de Sousa Jabbour, A. B., Wamba, S. F., & Shahbaz, M. (2018). Effects of environmental strategy, environmental uncertainty and top management's commitment on corporate environmental performance: The role of environmental management accounting. *Journal of Cleaner Production*, 180, 297–306. <https://doi.org/10.1016/j.jclepro.2018.01.106>
- Latif, K. F., Sajjad, A., Bashir, R., Shaukat, M. B., Khan, M. B., & Sahibzada, U. F. (2020). Revisiting the relationship between corporate social responsibility and organisational performance: The mediating role of team outcomes. *Corporate Social Responsibility and Environmental Management*, 27(4), 1630–1641. <https://doi.org/10.1002/csr.1911>
- Lee, K. H., & Farzipoor Saen, R. (2012). Measuring corporate sustainability management: A data envelopment analysis approach. *International Journal of Production Economics*, 140(1), 219–226. <https://doi.org/10.1016/j.ijpe.2011.08.024>
- Lee, S. Y. (2012). Corporate climate change strategies in responding to climate change. *Business Strategy and the Environment*, 21(April 2011), 33–48. <https://doi.org/10.1002/bse.711>
- Linh, D. H., & Anh, T. Van. (2017). Impact of stakeholders on the performance of green banking products and services: The case of Vietnamese banks. *Economic Annals-XXI*, 165(5–6), 143–151. <https://doi.org/10.21003/ea.V165-29>
- Littlewood et al (2018). Examining the drivers and outcomes of corporate commitment to climate change action in European high emitting industry. *Business Strategy and the Environment*, 27(8), 1437–1449. <https://doi.org/10.1002/bse.2194>



- Fofanah, S. A., Jesmin, N.-E.-M. S., Hossan, D., & Thapa, P. (2025). The Impact of Corporate Social Responsibility on Climate Change Actions for Sustainable Performance: A Survey of Private Banks in Bangladesh Adopting Multi-Variable Analysis. *Academos Journal*, Vol. 1, No. 1, 2025, 9-30
- Long, W., Li, S., Wu, H., & Song, X. (2020). Corporate social responsibility and financial performance: The roles of government intervention and market competition. *Corporate Social Responsibility and Environmental Management*, 27(2), 525–541. <https://doi.org/10.1002/csr.1817>
- Makhloufi, L., Laghouag, A. A., Meirun, T., & Belaid, F. (2022). Impact of green entrepreneurship orientation on environmental performance: The natural resource-based view and environmental policy perspective. *Business Strategy and the Environment*, 31(1), 425–444. <https://doi.org/10.1002/bse.2902>
- Maplecroft. (2015). *Climate Change Vulnerability Index*.
- Marsden, C. (2006) 'In Defence of Corporate Responsibility', *Corporate Social Responsibility*. London: Palgrave Macmillan. Available at: https://doi.org/10.1057/9780230599574_3.
- Mensah, I. (2014). Stakeholder pressure and hotel environmental performance in Accra, Ghana. *Management of Environmental Quality: An International Journal*, 25(2), 227–243. <https://doi.org/10.1108/MEQ-01-2013-0009>
- Morin, E.M. (1995) 'Organisational effectiveness and the meaning of work', in Pauchant, T.C. et al (eds.) *In Search of Meaning: Managing for the Health of Our Organisations, Our Communities, and the Natural World*. San Francisco: Jossey-Bass, pp. 29–64.
- Mudde and Abadie. (2008). "From Principle to Action" *An Analysis of the Financial Sector's Approach to Addressing Climate Change*.
- Nurunnabi, M. (2015). Who cares about climate change reporting in developing countries? The market response to, and corporate accountability for, climate change in Bangladesh. *Environment, Development and Sustainability*, 18(1), 157–186. <https://doi.org/10.1007/s10668-015-9632-3>
- Orazalin, N. (2020). Do board sustainability committees contribute to corporate environmental and social performance? The mediating role of corporate social responsibility strategy. *Business Strategy and the Environment*, 29(1), 140–153. <https://doi.org/10.1002/bse.2354>
- Pérez, A., Martínez, P., & Rodríguez del Bosque, I. (2013). The development of a stakeholder-based scale for measuring corporate social responsibility in the banking industry. *Service Business*, 7(3), 459–481. <https://doi.org/10.1007/s11628-012-0171-9>
- Pinkse and Busch. (2013). The emergence of corporate carbon norms: Strategic directions and managerial implications. *Thunderbird International Business Review*, 55(6), 633–645. <https://doi.org/10.1002/tie>
- Pondeville, S., Swaen, V., & De Rongé, Y. (2013). Environmental management control systems: The role of contextual and strategic factors. *Management Accounting Research*, 24(4), 317–332. <https://doi.org/10.1016/j.mar.2013.06.007>
- Roetzel, P. G., Pedell, B., Stehle, A., & Hummel, K. (2018). Integrating Environmental Management Control Systems - Boosting the Translation of Environmental Strategy into Environmental Managerial Performance. *SSRN Electronic Journal*, (October). <https://doi.org/10.2139/ssrn.3237376>
- Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organisational capabilities. *Strategic Management Journal*, 19(8), 729–753. [https://doi.org/10.1002/\(sici\)1097-0266\(199808\)19:8<729::aid-smj967>3.0.co;2-4](https://doi.org/10.1002/(sici)1097-0266(199808)19:8<729::aid-smj967>3.0.co;2-4)
- Smith, M., Yahya, K., & Marzuki Amiruddin, A. (2007). Environmental disclosure and performance reporting in Malaysia. *Asian Review of Accounting*, 15(2), 185–199. <https://doi.org/10.1108/13217340710823387>
- Spencer, S. Y., Adams, C., & Yapa, P. W. S. (2013). The mediating effects of the adoption of an environmental information system on top management's commitment and environmental performance. *Sustainability Accounting, Management and Policy Journal*, 4(1), 75–102. <https://doi.org/10.1108/SAMPJ-10-2011-0030>
- Stanciu, A.-C., Constandache, M., & Condrea, E. (2014). Concerns about the Sustainable Performance of Firm in the Context of Quality Management Systems Implementation. *Procedia - Social and Behavioral Sciences*, 131, 340–344. <https://doi.org/10.1016/j.sbspro.2014.04.127>
- Steuere, R., Langer, M. E., Konrad, A., & Martinuzzi, A. (2005). Corporations, stakeholders and sustainable development I: A theoretical exploration of business-society relations. *Journal of Business Ethics*, 61(3), 263–281. <https://doi.org/10.1007/s10551-005-7054-0>
- Suganthi, L. (2019). Examining the relationship between corporate social responsibility, performance, employees' pro-environmental behavior at work with green practices as mediator. *Journal of Cleaner Production*, 232, 739–750. <https://doi.org/10.1016/j.jclepro.2019.05.295>
- Tandoh, I., Duffour, K. A., Essandoh, M., & Amoako, R. N. (2022). Corporate Governance, Corporate Social Responsibility and Corporate Sustainability: The moderating role of top management commitment. *International Journal of Professional Business Review*, 7(2), 1–27.



Fofanah, S. A., Jesmin, N.-E.-M. S., Hossan, D., & Thapa, P. (2025). The Impact of Corporate Social Responsibility on Climate Change Actions for Sustainable Performance: A Survey of Private Banks in Bangladesh Adopting Multi-Variable Analysis. *Academos Journal*, Vol. 1, No. 1, 2025, 9-30

<https://doi.org/10.26668/businessreview/2022.v7i2.309>

- Torugsa, N. A., O'Donohue, W., & Hecker, R. (2012). Capabilities, proactive CSR and financial performance in SMEs: Empirical evidence from an Australian manufacturing industry sector. *Journal of Business Ethics*, 109(4), 483–500. <https://doi.org/10.1007/s10551-011-1141-1>
- Ullah, M. H., & Mia, P. (2019). How green is the green banking investment in Bangladesh? In *Global Approaches to Sustainability Through Learning and Education* (pp. 270–280). <https://doi.org/10.4018/978-1-7998-0062-0.ch018>
- Ullah, M. M. (2013). World review of business research green banking in Bangladesh- A comparative analysis. *World Review of Business Research*, 3(4), 74–83.
- Weinhofer and, & Hoffmann. (2010). Mitigating climate change – How do corporate strategies differ? *Business Strategy and the Environment*, 89(September 2008), 77–89.
- Wijethilake, C., Munir, R., & Appuhami, R. (2017). Strategic responses to institutional pressures for sustainability: The role of management control systems. *Accounting, Auditing and Accountability Journal*, 30(8), 1677–1710. <https://doi.org/10.1108/AAAJ-07-2015-2144>
- World Bank Group. (2022). *Country Climate and Development Report*. World Bank Group. 1818 H Street NW, Washington, DC 20433. <https://doi.org/10.1111/fcre.12664>
- World Bank Group. (2023). *World Bank National Accounts Data and OECD National Accounts data files*. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=BD-XM>
- Yigitbasioglu, O. M. (2015). The role of institutional pressures and top management support in the intention to adopt cloud computing solutions. *Journal of Enterprise Information Management*, 28(4), 579–594. <https://doi.org/10.1108/JEIM-09-2014-0087>
- Yusliza, M.Y., Norazmi, N.A., Jabbour, C.J.C., Fernando, Y., Fawehinmi, O. and Seles, B.M.R.P., 2019. Top management commitment, corporate social responsibility and green human resource management: A Malaysian study. *Benchmarking: An International Journal*, 26(6), pp.2051-2078.



Appendices

Appendix 1: Table 1: Outer loadings, Construct Reliability and Validity

	Outer loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
CC		0.985	0.905	0.520
CRISK1	0.855			
CRISK2	0.875			
CRISK3	0.945			
CRISK4	0.894			
CRISK5	0.632			
CRISK6	0.885			
DIS1	0.936			
DIS2	0.898			
DIS3	0.938			
DIS4	0.959			
DIS5	0.925			
DIS7	0.773			
ORG 1	0.982			
ORG2	0.974			
ORG3	0.968			
ORG4	0.904			
ORG5	0.866			
ORG6	0.869			
CSR		0.894	0.884	0.529
E1	0.793			
E3	0.773			
E5	0.882			
EN16	0.810			
EN18	0.552			
S6	0.532			
S9	0.676			
MC		0.911	0.831	0.623
MC1 A	0.856			
MC2	0.848			
MC3	0.858			
MC4	0.849			
MC5	0.834			
MC7	0.744			
PER		0.897	0.924	0.570
PER1	0.819			
PER10	0.870			
PER3	0.839			
PER6	0.807			
PER9	0.870			
STK		0.979	0.910	0.595
STK1	0.842			



STK10	0.892
STK2	0.942
STK3	0.965
STK4	0.965
STK5	0.953
STK6	0.959
STK7	0.920
STK8	0.848
STK9	0.850



Appendix 2: Table 2: Demographic profile of banks

No	Bank Name	n	%
	AB Bank Limited	5	1.7
	Bangladesh Commerce Bank Limited	5	1.7
	BRAC Bank Limited	5	1.7
	City Bank Limited	5	1.7
	Dutch-Bangla Bank Limited	5	1.7
	Eastern Bank Limited	5	1.7
	IFIC Bank Limited	5	1.7
	Meghna Bank Limited	5	1.7
	Mercantile Bank Limited	5	1.7
	Midland Bank Limited	5	1.7
	Modhumoti Bank Limited	5	1.7
	Mutual Trust Bank Limited	5	1.7
	National Bank Limited	6	2.1
	National Credit & Commerce Bank Limited	6	2.1
	NRB Commercial Bank Ltd	6	2.1
	One Bank Limited	6	2.1
	Padma Bank Limited	6	2.1
	Premier Bank Limited	6	2.1
	Prime Bank Limited	6	2.1
	Pubali Bank Limited	5	1.7
	Southeast Bank Limited	5	1.7
	South Bangla and Commerce Bank	6	2.1
	United Commercial Bank Ltd	6	2.1
	Uttara Bank Limited	6	2.1
	Al-Arafah Islami Bank	6	2.1
	Bank Asia Limited	6	2.1
	Dhaka Bank Limited	6	2.1
	Exim bank	6	2.1
	First Security Islami Bank Limited	6	2.1
	ICB Islamic Bank Limited	6	2.1
	Islami Bank Bangladesh Limited	6	2.1
	Jamuna Bank Limited	6	2.1
	Shahjalal Islami Bank Ltd	6	2.1
	Social Islami Bank Limited	6	2.1
	Standard Bank Limited	5	1.7
	Union bank	5	1.7
	Agrani Bank	6	2.1
	Basic Bank	6	2.1
	Bangladesh development banks	6	2.1
	Bangladesh Krishi bank	6	2.1
	Janata Bank	6	2.1
	Rupali Bank	6	2.1
	Sonali Bank	7	2.4
	Rajshahi Krishi bank	7	2.4
	Bank Age		
	0-10	22	7.5
	10-20	34	11.6
	20-30	101	34.6
	30-40	45	15.4
	40-50	48	16.4



50 and above	20	6.8
Branches		
0-100	22	7.5
100-200	198	67.8
200-300	12	4.1
300-400	6	2.1
400-500	5	1.7
500 and above	27	9.2



Original scientific paper

UDC: 004-043.7:334.012.61-022.51/.55

doi: 10.65921/dj22tr75

Received: 19.11.2025.

Revised: 30.11.2025.

Accepted: 1.12.2025.

Digital transformation in Small and Medium-sized enterprises – The case of North Macedonia

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Abstract: Digital transformation represents a key factor for enhancing competitiveness and introducing innovation in the global environment. To increase efficiency, productivity, and market performance, small and medium-sized enterprises (SMEs), as drivers of economic development, face the need to adapt their working conditions and transform existing processes toward new digital technologies.

The subject of this research focuses on analyzing the state of digital transformation among small and medium-sized enterprises in the Republic of North Macedonia, through the identification of key challenges, opportunities, and strategies applied by these companies.

In the practical part of this paper, by the questionnaire method, an empirical study was conducted aimed at analyzing the support measures and the level of awareness among SMEs regarding digital transformation policies. The goal of the research is to determine the extent to which state institutions provide support for the introduction of transformational changes that contribute to the digitalization of SME operations.

The results of the conducted research confirm the main hypothesis that there is insufficient support in the process of implementing digital practices and solutions in business operations.

Keywords: digital enterprises, digital transformation, policies, small and medium-sized enterprises, sustainability.

Introduction

Small and medium-sized enterprises (SMEs) represent a main factor in economic growth and innovation. Therefore, they play a particularly important role in the process of digital transformation. The rapid technological development and significant changes in business operations make digital transformation an essential process that contributes to changes in the way organization's function, regardless of their size or sector of activity. Digital transformation



can be analyzed as a highly dynamic field through a wide range of implications and considerations (Tsou & Chen, 2021).

In modern business conditions, SMEs are challenged by notable challenges arising from the accelerated process of digitalization. In combination with these challenges, the integration of digital technologies in business operations simultaneously creates new opportunities for increasing efficiency and competitiveness among companies. The digital transformation of enterprises may be analyzed as, on one hand, from the aspect of applying digital technologies and techniques in daily operations, and on the other hand, from the perspective of creating new products and services (Marija Magdincheva-Shopova, Aneta Stojanovska-Stefanova, 2024).

Innovative approaches to SME development are closely linked to the integration of digitalization into all aspects of business operations. However, this process is often limited by financial constraints and underdeveloped organizational capacities, which act as barriers to implementing digital tools in business processes. A fundamental prerequisite for improving the position and long-term sustainability of SMEs, in terms of implementing digital tools, is facilitated by institutional support and the creation of appropriate policies to encourage digitalization.

The purpose of this paper is to analyze the state of digital transformation among small and medium-sized enterprises in the Republic of N. Macedonia, through the identification of the main challenges, opportunities, and strategies applied by these companies. Emphasis is placed on assessing institutional support and the level of awareness among companies regarding national digitalization policies.

To achieve the research objectives in this paper has approached an appropriate methodological approach. The selected approach is based on the use of classical research methods through which relevant insights into the studied phenomenon have been obtained. The expected benefits for the broader economy from the implementation of digital transformation policies and the development referred to as “digital enterprises” include advancing the digitalization process, increasing operational efficiency, and fostering innovation and competitiveness. The active role of entrepreneurs and employees is crucial for achieving a higher level of digitalization and ensuring long-term economic development.

Materials and methods

To achieve the objectives set in this research, an appropriate methodological approach was applied, enabling a systematic study of the focus of this study. Using classical scientific methods, relevant insights and conclusions pertaining to the research topic were obtained.

While formulating the questionnaire for the study, multiple scientific methods were employed including the methods of analysis and synthesis, as well as other specific methods categorized into specialized, quantitative, and interrelated research techniques.

The application of analysis and synthesis methods facilitated a comprehensive review of relevant professional and scientific literature in the field of digitalization and the transformation



of organizational work practices into small and medium-sized enterprises (SMEs) toward a sustainable digital work model. Through empirical research methods, an analysis was conducted of the measures implemented by SMEs to adopt digital work practices.

The processing and presentation of the obtained results were carried out using methods of analysis, induction, and deduction, providing an overview of the conditions and trends associated with the introduction of sustainable digitalization practices in business operations.

To assess the awareness of entrepreneurs and their readiness to implement digital work practices, which would facilitate the transformation process in companies identified as “digital enterprises,” a practical study was conducted. A survey questionnaire was utilized to conduct an online study between January 1, 2025, and June 30, 2025, involving 100 respondents, of whom 52 expressed interest in answering the questions posed.

Results

Based on the research conducted and the analysis of the collected data, it was determined that the survey questionnaire used for the study was completed by a total of 52 companies (small and medium-sized enterprises) that participated in the research and expressed interest in responding to the questions.

The organizational characteristics of the companies (general information regarding company size, sector of operation, location, and years of operation) included in the study are presented in Table 1, Table 2, Table 3, and Table 4.

Table 1: Structure of companies in terms of number of employees

Number of employees	Number of companies	Structure
0-9 employees	29	56%
10-49 employees	18	35%
50 до 249 employees	5	9%

Source: Own research

Table 2: Structure of companies by the industry in which the companies operate

Sector	Number of employees	Structure
Production	4	8%
Trade	18	35%
Services	23	44%
IT Sector	7	13%

Source: Own research

Table 3: Geographical distribution of the companies across different regions

Geographical region	Number of companies	Structure
Skopje	29	56%
Eastern Region	6	11%
Southeastern Region	15	29%
Western Region	2	4%

Source: Own research

Table 4: Structure of companies by years of operation

Years of operation	Number of companies	Structure
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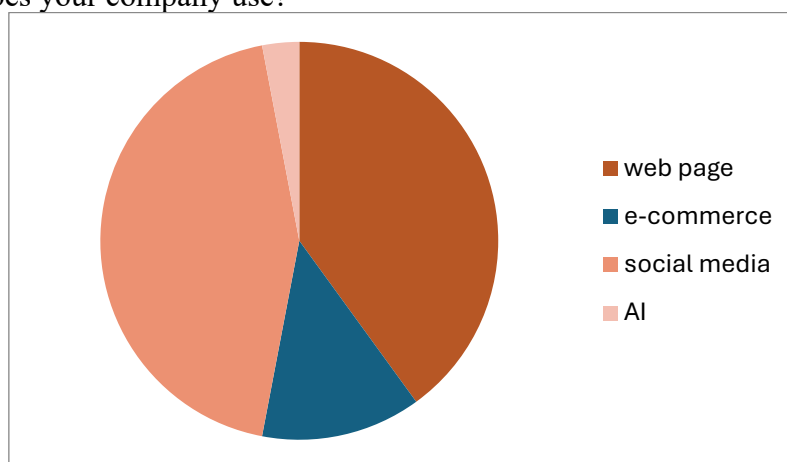


Up to 5 years	25	48%
5–10 years	18	35%
More than 10 years	9	17%

Source: Own research

Analysis of the responses indicates that, for the first question “Which digital technologies does your company use?”—many of companies employ social media for marketing (23 companies, 44%). A company website is maintained by 21 companies (40%), online sales are implemented by 7 companies (13%), and only 1 company (3%) utilizes artificial intelligence.

Figure 1: Graphical representation of the responses to the question – “Which digital technologies does your company use?”



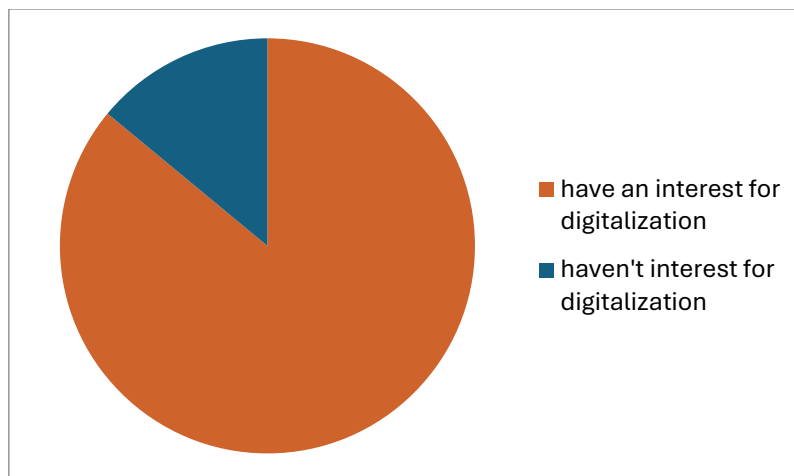
Source: Own research

For the next question-“Would you initiate a digital transformation process in your company?”—the majority of participating companies, 45 companies (86%), indicated that they would undertake a digital transformation process, whereas only 7 companies (14%) stated that they would not.

The results obtained are presented in Figure 2.

Figure 2: Graphical representation of the responses to the question – Would you initiate the process of digital transformation in your company?

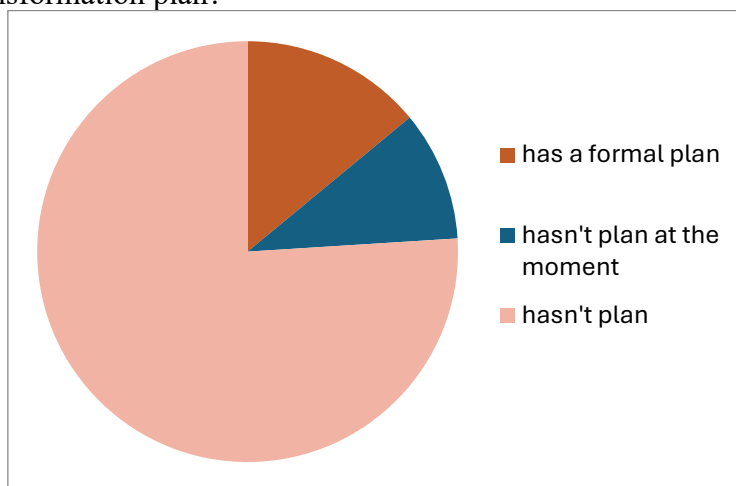




Source: Own research

In response to the question—“*Does your company have a digital transformation plan?*”—with the possible answers being: formally adopted plan, currently no plan but planned, and no formal plan, the following results were obtained: the majority of participating companies, 40 companies (76%), reported that they do not have a digital transformation plan. Five companies (10%) currently do not have a plan but intend to adopt one in the future, and 7 companies (14%) stated that they do not have a formal plan. The results obtained are presented in Figure 3.

Figure 3: Graphical representation of the responses to the question – “Does your company have a digital transformation plan?”



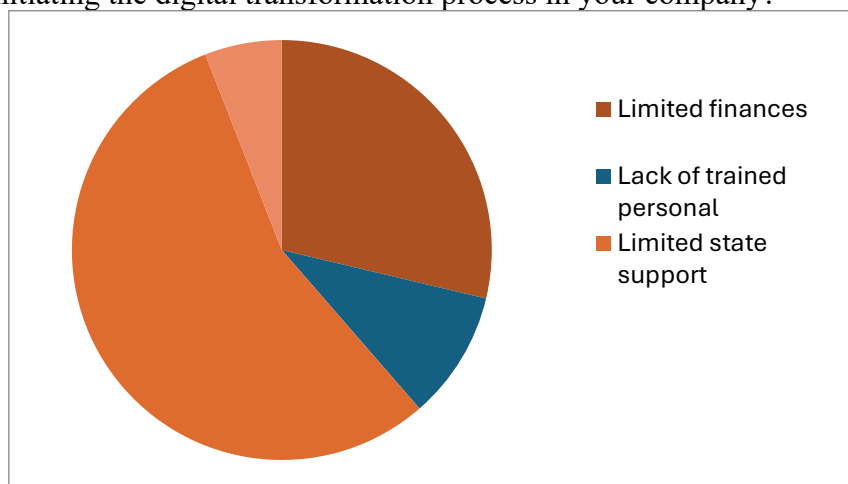
Source: Own research

In response to the question—“*What are the main reasons for initiating the digital transformation process in your company?*”—with the possible answers being: insufficient financial resources, lack of skilled employees, resistance to organizational changes, limited

technological knowledge, and weak support from government institutions, the results were as follows: the majority of companies, 29 companies (56%), indicated that weak support from government institutions is the primary reason. Fifteen companies (29%) identified insufficient financial resources as a limiting factor, 5 companies (10%) reported that the lack of skilled employees hinders the initiation of the digital transformation process, and 3 companies (6%) considered limited technological knowledge to be the main reason preventing the implementation of this process in their company.

The results are presented graphically in Figure 4.

Figure 4: Graphical representation of the responses to the question – “What are the main reasons for initiating the digital transformation process in your company?”



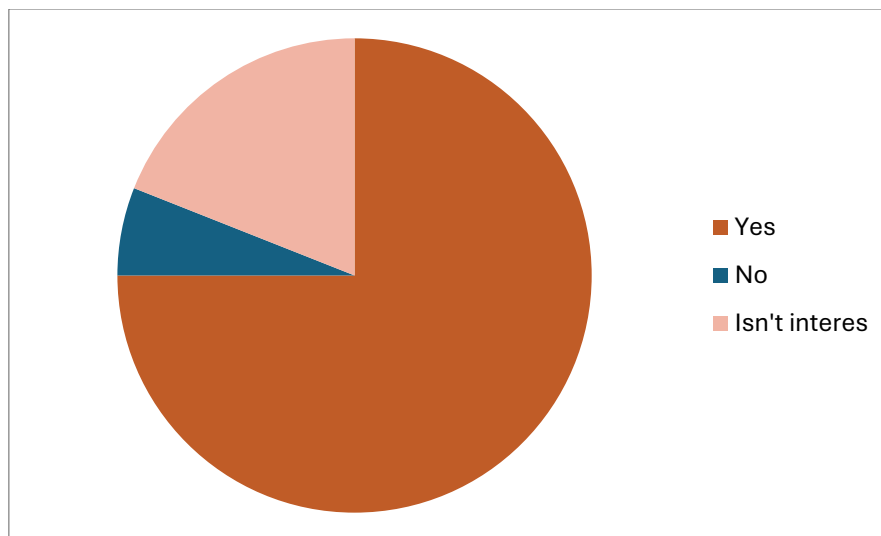
Source: Own research

The final question focused on the use of support programs for implementing the digitalization process, specifically: “Will your company use government support programs for the digitalization process?” with the possible answers being will use, will not use, and no interest in using support programs. The results indicate that many of respondents, 39 companies (75%), stated that they would use support programs. Ten companies (19%) reported having no interest in this type of support, while only 3 companies (6%) indicated that they would not use government support programs for the digitalization process.

The results are presented graphically in Figure 5.

Figure 4: Graphical representation of the responses to the question – “Will your company use government support programs for the digitalization process?”





Source: Own research

Discussions

The results of the study indicate the level of digitalization and the readiness for digital transformation among the companies included in the survey. Based on the responses, it can be concluded that companies most commonly use digital technologies in the form of social media for marketing (44%) and websites (40%), whereas innovative technologies such as online sales and artificial intelligence are relatively less represented, at 13% and 3%, respectively.

This suggests that companies are primarily focused on basic digital tools that provide direct visibility and marketing impact, while more advanced digital solutions are still weakly implemented.

Regarding the readiness of companies to initiate the digital transformation process, it is noted that a large proportion of companies (86%) are open to such processes, which represents a positive indicator of their willingness to adopt more advanced digital work practices. Digital transformation enhances operational efficiency and accelerates business processes. Increasing the level of digitalization not only contributes to job creation but also positively affects the well-being and social prosperity of individuals (Janevski, 2024).

However, in terms of the planning process and the existence of a formal digital transformation plan, there is a significant discrepancy. Specifically, 76% of companies do not have a plan, while only a small proportion either possess a formal plan or are planning to initiate the planning process. The initial phases of this transformation often begin with assessment and planning, during which the company establishes a digital vision and strategic objectives (Strohmeier, 2020).

The responses obtained indicate a gap between the interest in digital transformation and the actual preparedness of companies to implement it. In other words, while companies recognize the need for transformation, they lack concrete strategies for its execution.



Weak support from government institutions (56%) represents the primary obstacle to initiating the digital transformation process, confirming the importance and role of state institutions in promoting digitalization among companies. To highlight the key role played by employees, organizational leaders, managers, and human resources departments in this transformation process, the significant factors in digital transformation are classified into three distinct levels: individual, group, and company (Trenerry et al., 2021).

Financial constraints (29%) are also identified as a major barrier in this process, indicating the need for a combined approach of financial and educational support. Developing skills and providing appropriate training is an urgent imperative, as companies undergo digital transformation (Јаневски и др., 2025).

The data obtained from the study indicates that many companies (75%) are interested in utilizing government support programs, suggesting that, if appropriate state programs exist, companies are willing to use them. However, 19% of companies expressed no interest, which may indicate a lack of information, trust, or relevance of existing programs, and could be a subject for further research.

Conclusions

Digital transformation represents a fundamental prerequisite for enhancing competitiveness and promoting the sustainable development of small and medium-sized enterprises (SMEs) in the Republic of North Macedonia. The adoption of digital technologies by companies is driven not only by the pursuit of improved performance outcomes (Nusantara et al., 2024), the strengthening of process and data security (Danilyan & Dzeban, 2024), or alignment with broader digital transformation imperatives (Priyanjani et al., 2024), but also by the need to maintain competitiveness in the evolving digital economy.

The obtained results indicate that companies are prepared to implement digital changes; however, a significant gap remains between interest in digitalization and the actual application of digital technologies. Most enterprises use basic digital tools, such as social media and websites, while advanced solutions, including online sales and artificial intelligence, remain underutilized.

The primary obstacles to digital transformation are identified as insufficient institutional support, limited financial resources, and a shortage of skilled human resources. The study of the human factor plays a central role in the development of knowledge networks (Reagans & Zuckerman, 2001) and entrepreneurial processes (Camelo et al., 2000; Li et al., 2006; Becerra & Álvarez, 2011).

The promotion of digital skills development and the creation of an enabling regulatory and market environment can be achieved through the establishment of more effective mechanisms for financial and educational support by state institutions. A successful digital transformation process, which contributes to increased productivity, innovation, and competitiveness of Macedonian small and medium-sized enterprises (SMEs), is facilitated through coordinated action between public institutions and private companies. Digital transformation fosters the emergence of new companies that base their business models on innovative approaches, while



simultaneously compelling existing companies to reassess their operations and adopt digital practices. For the successful implementation of digital transformation, companies require concrete strategies, enhanced support from state institutions, and investment in human capital.

Conflict of interests

I declare no conflict of interest.

References

1. Andriole, S.J., Cox, T. and Khin, K.M. (2017). *The Innovator's Imperative: Rapid Technology Adoption for Digital Transformation* (1st ed.). Taylor & Francis Group, LLC.
2. Becerra, F., & Álvarez, M. (2011). El talento humano y la innovación empresarial en el contexto de las redes empresariales. *Estudios Gerenciales*, 27(119), 209–232.
3. Camelo, C., Martín, F., Romero, P., & Valle, R. (2000). Relación entre el tipo y el grado de innovación y el rendimiento de la empresa. *Economía Industrial*, 333, 149–160.
4. Danilyan, O., & Dzeban, O. (2024, February 16–18). Security in the context of digitization and virtualization. In *15th International Scientific and Practical Conference "Scientific Research in XXI Century"*, Ottawa, ON, Canada.
5. Јаневски З. и др.,(2025), Дигитална трансформација на човечки ресурси, Економски институт Скопје, стр.44
6. Јаневски З.(2024), Дигитална економија, Економски институт Скопје, стр.26
7. Magdinceva Sopova, Marija and Stojanovska-Stefanova, Aneta (2024) *Polices and challenges in the transformation of green enterprises*. Tourism and green investments -Conference Proceedings, 8 (1). pp. 225-233.
8. Priyanjani, A. R., Fadillah, F., Ghalib, A., Sutrisno, E., & Permana, D. Y. (2024). Legal protection for personal data in the world of work in the era of digitalization of technology and information. *Journal of Social Science (JoSS)*, 3(6), 1405–1411. <https://doi.org/10.46799/jss.v3i6.1010>
9. Reagans, R., & Zuckerman, E. W. (2001). Networks, diversity, and productivity: The social capital of corporate R&D teams. *Organization Science*, 12(4), 502–517.
10. Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German Journal of Human Resource Management: Zeitschrift für Personalforschung*, 34(3), <http://dx.doi.org/10.1177/2397002220921131>
11. Trenerry B., Chang S., Wang Y., Shah Suhalia Z., Lim S.S., Yu Lu H., Ho Oh P., (2021), Preparing Workplaces for Digital Transformation: An Integrative Review and Framework of Multi-Level Factors, *Front. Psychol*, Vol.12
12. Tsou, T. H. & Chen, J. S. (2021). How does digital technology usage benefit firm performance? Digital transformation strategy and organisational innovation as mediators. *Technology Analysis & Strategic Management*.
13. Voigt, K.I., and Muller, J.M. (2021). *Digital Business Models in Industrial Ecosystems: Lessons Learned from Industry 4.0 Across Europe*, Springer



Between Innovations and Over-Reliance: Impact of Digital Technology on Guest Perceptions and Expectations in Hotels

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Abstract: This research aims to examine the influence of digital technology on guests' experiences in hotels, with more targeted focus on the risks associated with over-reliance on automatic systems. For the purpose of this paper, quantitative research was employed, using an online questionnaire in which 400 respondents with recent hotel experience participated. The questionnaire addressed several key dimensions: perceptions of digital technology efficiency, experiences with technical failures, attitudes regarding the balance between human interaction and digital technology, expectations and preparedness for potential technical failures, and views on the future development of digital technology in hotels. The analysis involved several statistical methods, including exploratory factor analysis, correlations, multiple regression, and mediation analysis. Results indicate that guests recognize the value of digital technology, with the over-reliance on automation without proper human support leading to increased service vulnerability and decreased trust. In addition, the preparedness of hotels to react to failures mitigates the negative impact on attitudes about future digital technology. Findings further indicate the need to carefully maintain the balance between digital technological efficiency and the human element.

Keywords: digital technology, guest experience, over-reliance on digital technology, human-technology balance.

Introduction

Digital technology plays a complex and multi-layered role in the hotel industry, impacting its success in many areas of hotel operations and guest experiences (Anwar et al., 2024; Bilgihan & Ricci, 2024). Mass investments in automation solutions such as mobile check-in or self-service check-in kiosks, mobile keys, and smart systems for room control and communication through applications (Mandić et al., 2023; Ivanov, 2023; Stringam & Gerdes, 2021; Gupta & Sharma, 2021) promise more personalized services (García-López et al., 2025), operational efficiency (Mavitha & Kushe Shekhar, 2025), and ultimately improvement of the guest experience, as well as a sense of modernity that positively influences the perception of the guests. Existing research indicates that digital technology can significantly improve and optimize the quality of hotel services and increase the perceived value of the stay (Albeshier et al., 2025; Mavitha & Kushe Shekhar, 2025; Dianawati et al., 2024).

However, several studies indicate that excessive automation has led to the disruption of the human dimension of hospitality (Nanu, 2025; Roy & Pagaldiviti, 2025; Mandić & Savić, 2025; Zahidi et al., 2024; Kattara & El-Said, 2013), which traditionally rests on personal communication, warmth, and emotional support (Park, 2018). In situations when automation and digital technology take over many hospitality workflows by becoming the only source of access to hotel services, guests become vulnerable to technical failures (Wynn & Jones, 2022). But digital systems, beside their advantages, are fallible: internet connections can be disrupted, errors can occur in the property management system, and digital keys can be non-functional, or mobile applications can fail. Any disruption of such nature, if not managed quickly by a



competent human intervention, can have a negative impact on the guest experience, particularly in moments of distress or confusion, therefore losing trust in the hotel (Das, 2023; Mandić et al., 2023).

Although it is well supported that digital technology is revolutionizing the industry, little is known about how guests react in situations when technology is failing and what support the human has in those moments. This represents a significant research gap in hotel management: much research focuses on the effectiveness and acceptance of technology, but few focus on the guest experience in conditions of dependence on digital technology and its failure.

Because of this, this research has an objective to examine the guest experience in the context of the growing digitalization of hotel services and further explores how over-reliance on technology influences trust, perception of service, and attitude toward future technology development. Additionally, this research analyzes the role of human support and readiness in the event of system failures.

Which leads to the following research question:

1. How do the use and experiences with technical failures in digital hotel services influence guests' perceptions, trust, and expectations of future technology developments in hotels, and do readiness/expectations play a mediating role in this relationship?

Thus, the research contributes to a better understanding of the boundary between digital technological innovation and maintaining the core values of hospitality.

Materials and Methods

Research aim and design

This paper uses a quantitative design in approaching the objective of the research to examine how guests perceive the use of digital technology in hotel operations and how technical failures influence their trust and perception, and it asks whether preparedness and expectations of guests change (mediate) the relationship between the negative experience and views on future development of digital technology in hotel services. The structured questionnaire collected suitable numerical data amenable to statistical analysis to identify trends and relationships between primary variables. As an exploratory design, the research seeks to examine relationships among theories posed by the hypotheses.

In accordance with the purpose of this research, the following hypotheses were formulated:

1. H₁: There is a positive relationship between the perception of the effectiveness of digital technology and attitudes towards the future development of technology in hotels.
2. H₂: There is a negative relationship between experiences with technical failures and attitudes towards the balance between technology and human interaction.
3. H₃: Perceptions of efficiency, attitudes toward technology versus human interaction, and preparedness for technical failures significantly predict attitudes toward future technology development.
4. H₄: Experiences with technical failures and attitudes about human-technology balance significantly predict preparedness for technical failures.



5. H₅: There are significant differences in perceptions and attitudes towards digital technology across different age groups.
6. H₆: There are significant differences in perceptions and attitudes towards digital technology across genders.
7. H₇: Technical failure readiness mediates the relationship between experiences with technical failures and attitudes about future technology development.

Data collection methods

Data was collected through a structured questionnaire consisting of 22 close-ended questions using the Likert scale, among which demographic data such as age and gender was included. The questionnaire was distributed online from July 2025 to October 2025 to a convenience sample of hotel guests who stayed in hotels offering digital services through technology within the past 12 months. A total of 400 respondents were gathered.

Data analysis methods

Data was analyzed using SPSS. The following statistical analysis methods were used:

1. *Exploratory factor analysis*: to identify dimensions/factors in guests' perception and expectations of digital technology in hotels.
2. *Pearson correlation analysis*: to examine whether there are statistically significant relationships between factors that represent different aspects of the digital technology guest experience.
3. *Multiple regression analysis*: to model dependent variables and understand which aspects influence the future development of digital technology in hotels the most.
4. *One-way ANOVA* and *Independent sample t-test*: to analyze if the identified factors vary by age and gender.
5. *Mediation analysis*: to determine if one variable mediates the relationship between two others. The purpose of this analysis is to examine whether someone who experiences technological problems values more preparedness, which leads to a different perception of future digital technology usage in hotels.

Justification of methods

The selection of statistical analysis methods corresponds with the objective of the research and provides thorough testing of the proposed hypotheses. Using Likert-scale questions delivers reliable quantitative data, thus enabling SPSS to employ the proper statistical methods for hypotheses testing. PROCESS Macro was chosen for its capacity to evaluate mediation and estimate indirect effects, both of which are crucial for understanding how preparedness influences guests' perceptions of future digital technology usage.

Ethical consideration

The participation of respondents was voluntary and anonymous. No personal data was collected, and all respondents provided online informed consent prior to completing the questionnaire.

Limitations

Several methodological limitations have to be acknowledged:

1. Because of the convenience sample, the generalizability of the results is restricted.



2. Reliance on self-reported data raises the risk of bias and social-desirability bias.

However, despite these limitations, this research is able to provide statistical and theoretical analysis on guests' perceptions and expectations of digital technology in hotels.

Results and Discussions

In line with the research objective, this section presents the results from demographic frequency statistics, exploratory factor analysis, correlation analysis, regression models, independent sample t-test, ANOVA test, and mediation analysis, which examines guests' experience by their perceptions and expectations related to digital technology usage in hotels.

Table 1: Demographic profile of respondents

Age group				
	Frequency	Percent	Valid Percent	Cumulative Percent
Under 18	44	11.0	11.0	11.0
18–24	93	23.3	23.3	34.3
25-34	98	24.5	24.5	58.8
35-44	68	17.0	17.0	75.8
45-54	57	14.2	14.2	90.0
55+	40	10.0	10.0	100.0
<i>Total</i>	<i>400</i>	<i>100.0</i>	<i>100.0</i>	
Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Male	187	46.8	46.8	46.8
Female	213	53.3	53.3	100.0
<i>Total</i>	<i>400</i>	<i>100.0</i>	<i>100.0</i>	

Based on the results from Table 1, the sample consisted of 400 respondents. In terms of age distribution, the largest group of respondents (24.5%) were between ages 25 to 34 years old, followed by those between the ages of 18 to 24 years old (23.3%) and 35 to 44 years old (17%). Age groups from 45 to 54 years old (14.2%), under the age of 18 (11%), and 55 and above (10%) had lower percentages. As for gender, 46.8% of the respondents were men, while 53.5% were female.

Table 2: Exploratory factor analysis and reliability statistics

FAC1 Perception of efficiency of digital technology				
Cronbach's Alpha = 0.802				
Questions/Topics: Digital technology enhances experience, Comfort using digital systems in hotels, Tech-heavy hotels are more modern and efficient, Technology enhances efficiency even if there are failures				
Eigenvalue	% of Variance	KMO	Bartlett's Sig.	Rotated loadings
2.237	55.914%	0.751	.000	.763, .741, .835, .801
FAC2 Impact of technical failures on guest experience				
Cronbach's Alpha = 0.719				
Questions/Topics: Experienced service failure due to digital technology, Frequency of technology issues (Wi-Fi, apps), Negative impact of technology failures, Experienced service failure due to system error, Digital check-in lowers guest experience quality				
Eigenvalue	% of Variance	KMO	Bartlett's Sig.	Rotated loadings
2.786	55.91%	0.744	.000	.758, .765, .551, .751, .804
FAC3 Preparedness and expectations for technology failure				
Cronbach's Alpha = 0.778				



Questions/Topics: *How quickly should hotels resolve technology issues, Frustration due to lack of assistance (technology dependence), Staff should be trained to manage technology failures, Would still stay even if hotel technology fails*

Eigenvalue	% of Variance	KMO	Bartlett's Sig.	Rotated loadings
2.399	59.96%	0.749	.000	.557, .622, .641, .580

FAC4 Attitudes towards digital technology-human balance interaction

Cronbach's Alpha = 0.739

Questions/Topics: *Difficulty interacting with staff due to over-reliance on technology, Hotels should balance technology and human interaction, Preference for human staff over technology, Hotels prioritize technology over service, Hotels prefer to invest in people more than technology*

Eigenvalue	% of Variance	KMO	Bartlett's Sig.	Rotated loadings
2.382	43.74%	0.708	.000	.752, .685, .685, .604, .564

FAC5 Perceptions of the future development of digital technology in hotels

Cronbach's Alpha = 0.801

Questions/Topics: *Preference for human staff over technology, Hotels invest in people more than technology, Tech-heavy hotels are more modern and efficient, Technology enhances efficiency even if there are failures*

Eigenvalue	% of Variance	KMO	Bartlett's Sig.	Rotated loadings
2.653	53.06%	0.788	.000	.699, .576, .690, .735

Exploratory factor analysis using principal component analysis with varimax rotation is presented in Table 2. Results indicate that Bartlett's Test of Sphericity was significant ($p < .001$) for all factors, suggesting acceptability for the factor analysis, and the Kaiser–Meyer–Olkin test confirmed the sample adequacy for each factor ($KMO > 0.70$). All five factors that were extracted explain between 43.74% and 59.96% of the variation, as well as having satisfactory levels of internal consistency (Cronbach's α ranged from 0.719 to 0.802).

Table 3: Pearson correlation matrix

		Perception of efficiency of digital technology	Perceptions of the future development of digital technology
Perception of efficiency of digital technology	Pearson Correlation	1	.640**
	Sig. (2-tailed)		.000
	N	400	400
Perceptions of the future development of digital technology	Pearson Correlation	.640**	1
	Sig. (2-tailed)	.000	
	N	400	400

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the result from the Pearson correlation in Table 3, there is a strong positive relationship supporting H1 ($r = .640$, $p = .000$), meaning as more guests perceive digital technology to be efficient, the more optimistic they are about its future development in hotels.

Table 4: Pearson correlation matrix

		Impact of technical failures on guest experience	Balance between digital technology-human for interaction
Impact of technical failures on guest experience	Pearson Correlation	1	.326**
	Sig. (2-tailed)		.000
	N	400	400
Balance between digital technology-human interaction	Pearson Correlation	.326**	1
	Sig. (2-tailed)	.000	
	N	400	400

** . Correlation is significant at the 0.01 level (2-tailed).



Table 4 presents another result from the Pearson correlation, which indicates a more moderate positive relationship ($r = .326$, $p = .000$), but not negative. Results mean that the higher the guests perceive the impact of technological failure, the more they appreciate the balance between digital technology and humans for interaction, therefore not supporting H2.

Table 5: Multiple regression predicting future digital technology perspective

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.074	.061		1.204	.229
	Perception of efficiency of digital technology	.411	.012	.557	35.166	.000
	Balance between digital technology-human interaction	.560	.014	.701	40.782	.000
	Preparedness and expectations for technology failure	.015	.017	.015	.877	.381

a. Dependent Variable: Perceptions of the future development of digital technology.

The results from the multiple regression analysis from Table 5 have a remarkably high percentage of 90.3% ($R^2 = .903$), supporting H3, which indicates that the three selected predictors have a strong relationship with guests' perspectives on future digital technology development in hotels. The model is statistically significant, $F(3,396) = 1232.196$, $p < .001$, whereas the predictors, perception of efficiency of digital technology and balance between digital technology-human interaction, have a positive influence, while preparedness and expectations for technology failure ($p = .381$) do not have a direct positive influence on the perspective for future digital technology development. As for perception of efficiency of digital technology ($\beta = .557$, $p < .001$) and balance between digital technology-human interaction ($\beta = .701$, $p < .001$), results indicate that when guests perceive digital technology to be useful and there is a good balance between human and digital service, their perception of future digital technology development in hotels increases.

Table 6: Multiple regression predicting guests' preparedness and expectations

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.534	.045		11.837	.000
	Balance between digital technology-human interaction	.091	.013	.116	7.240	.000
	Impact of technical failures on guest experience	.753	.013	.910	57.023	.000

a. Dependent Variable: Preparedness and expectations for technology failure.

The results from the multiple regression analysis from Table 6 show that the model explains 91% ($R^2 = .910$) of the variance in preparedness and expectations for technology failure. Such high explained variance means that the two selected variables explain guest preparedness and expectations very well. Notably, the model is statistically significant, $F(2, 397) = 1999.407$, $p < .001$, supporting H4; however, the strongest predictor for preparedness and expectations is the impact of technical failures on guest experience ($\beta = .910$, $p < .001$), which means that when guests have previous experiences with technical issues, they tend to expect or be more



prepared for them in the future. As for the balance between digital technology-human interaction, which is also a significant but weaker predictor ($\beta = .116, p < .001$), it suggests that when guests sense a good balance between human and technology, they have more confidence and are more open to any potential technical failures.

Table 7: One-way ANOVA results by age group

		Sum of Squares	df	Mean Square	F	Sig.
Perception of efficiency of digital technology	Between Groups	18.517	5	3.703	3.977	.002
	Within Groups	366.880	394	.931		
	Total	385.397	399			
Impact of technical failures on guest experience	Between Groups	16.318	5	3.264	3.351	.006
	Within Groups	383.722	394	.974		
	Total	400.040	399			
Preparedness and expectations for technology failure	Between Groups	16.669	5	3.334	3.290	.006
	Within Groups	399.268	394	1.013		
	Total	415.937	399			
Balance between digital technology-human interaction	Between Groups	11.442	5	2.288	2.392	.037
	Within Groups	376.995	394	.957		
	Total	388.438	399			
Perceptions of the future development of digital technology	Between Groups	13.267	5	2.653	2.668	.022
	Within Groups	391.843	394	.995		
	Total	405.110	399			

A one-way ANOVA test from Table 7 revealed that age affects each of the five factors, where, according to the results, all of them are statistically significant:

1. Perception of efficiency of digital technology: $F(5,394)=3.977$ and $p=.002$.
2. Impact of technical failures on guest experience: $F(5,394)=3.351$ and $p=.006$.
3. Preparedness and expectations for technology failure: $F(5,394)=3.290$ and $p=.006$.
4. Balance between digital technology-human interaction: $F(5,394)=2.392$ and $p=.037$.
5. Perceptions of the future development of digital technology: $F(5,394)=2.668$ and $p=.022$.

Using the Tukey HSD test, additional post-hoc comparisons revealed particular group differences. For instance, notable differences were perceived between:

1. Perception of efficiency of digital technology: Under 18 vs 55+ ($p = .004$); 45–54 vs 55+ ($p = .024$).
2. Impact of technical failures on guest experience: Under 18 vs 25–34 ($p = .013$); 25–34 vs 35–44 ($p = .018$).
3. Preparedness and expectations for technology failure: 35–44 vs 55+ ($p = .003$); under 18 vs 55+ ($p = .032$).
4. Balance between digital technology-human interaction: 35–44 vs 55+ ($p = .050$).
5. Perceptions of the future development of digital technology: Under 18 vs 55+ ($p = .035$).

In summary, there is a statistically significant difference in the perception of efficiency of digital technology and failure impact between certain age groups, especially the youngest and oldest, therefore supporting H5. Older guests also have significantly different views on digital technology-human balance, and differences in expectations and readiness for digital



technology are more pronounced between generations. Younger guests have significantly higher expectations and a positive outlook for future technology compared to older guests.

Table 8: Independent samples t-test results by gender

Factor	t	df	Sig. (2-tailed)	Mean Difference
Perception of efficiency of digital technology	-6.95	398	.000	-1.68
Impact of technical failures on guest experience	-5.49	398	.000	-1.15
Preparedness and expectations for technology failure	-7.32	398	.000	-1.23
Balance between digital technology-human interaction	-5.46	398	.000	-1.53
Perceptions of the future development of digital technology	-7.30	398	.000	-1.57

An independent sample t-test from Table 8 found that for each of the five factors, there is a statistically significant difference between male and female guests, supporting H6. Results indicate that:

1. Perception of efficiency of digital technology: $t(398) = -5.46, p < .001$.
2. Impact of technical failures on guest experience: $t(398) = -6.95, p < .001$.
3. Preparedness and expectations for technology failure: $t(398) = -5.49, p < .001$.
4. Balance between digital technology-human interaction: $t(398) = -7.32, p < .001$.
5. Perceptions of the future development of digital technology: $t(398) = -7.30, p < .001$.

Across all five factors, female guests reported considerably higher mean scores, suggesting a more positive view of digital technology in hotels, increased readiness, and greater expectations for future development.

Table 9: Mediation analysis: guests' preparedness and expectations as mediator

Path	B (Unstd.)	SE	t	p	95% CI
Impact of technical failures on guest experience → Preparedness and expectations for technology failure (a)	0.7838	0.0133	59.12	< .001	[0.7578 – 0.8099]
Preparedness and expectations for technology failure → Perceptions of the future development of digital technology (b)	1.3601	0.1368	9.94	< .001	[1.0911 – 1.6292]
Impact of technical failures on guest experience → Perceptions of the future development of digital technology (direct effect, c')	-0.8448	0.1132	-7.46	< .001	[-1.0674 – -0.6223]
Indirect effect (a × b)	1.0661	0.1770	—	—	[0.6993 – 1.3989]

With 5000 bootstrap samples, the mediation analysis from Table 9 using PROCESS Model 4 demonstrated a significant indirect impact of the impact of technical failures on guest experience on the perceptions of the future development of digital technology in hotels via the preparedness and expectations for technology failure (indirect effect = 1.0661, 95% CI [0.6993, 1.3989]), thereby supporting H7. While digital technology services may influence guests' confidence and enthusiasm over future digital hotel technology, the direct effect was negative and significant ($B = -0.8448, p < .001$), indicating that this effect can be reduced and reversed if guests feel more informed and well-prepared to handle these kinds of situations. Results from the table can be further explained as "suppression effect," meaning without the mediator, the



effect can be perceived as unidirectional. But when the mediator is introduced, an opposite effect occurs that is even stronger than the direct one.

Conclusion

The research indicates that digital technology significantly influences the guest experience in hotels. The results confirm that guests who view digital technology as effective and beneficial demonstrate a higher trust in its future developments inside hotel operations. Still, over-reliance upon automated systems lacking proper human interaction compromises guests' trust.

The results also demonstrate that unpleasant encounters with technology failures may not necessarily diminish the tendency for using digital technology; instead, they raise what is considered the importance of the balance between human and digital components in the service. This suggests that the issue lies not inside the digital technology itself, but rather in the absence of prompt human involvement during failures. The mediation model further highlights guest readiness and expectations as mediating elements that change the negative effects of technology failures into favorable attitudes towards future developments. This result underscores the significance of clear communication, emergency protocols, and the professional preparedness of employees in digitally focused hotel services.

All things considered, the research indicates that human-technology interaction, not replacement, is the key to a successful digital transformation in the hotel industry. Hotels that integrate technological efficiency with compassionate and responsive human assistance can foster enhanced trust, resilience, and guest satisfaction, assuring a sustainable and balanced approach to innovation.

From a theoretical viewpoint, the results contribute to a more profound understanding of the relationship between trust, technological efficacy, and human interaction in the hospitality context. The research demonstrates that subsequent research need to examine more thoroughly the threshold of "technological saturation," which is the intersection at which intensified automation ceases improving and instead diminishes the perceived value of a service. Practically, the paper delivers a conclusive message: digitalization is not an ultimate goal, but rather a process that requires continual support from human compassion and operational adaptability.

Conflict of Interest

The author declares no conflict of interest.

References

- Albeshier, A. S., Alhelal, F., & Ahmad, A.-R. (2025). Digital information systems in hospitality: A comparative study of user feedback and rating mechanisms across booking websites. *IEEE Access*, 13, 142922-142937. <https://doi.org/10.1109/ACCESS.2025.3598242>.
- Anwar, F., Deliana, D., & Suyanto, S. (2024). Digital Transformation in the Hospitality Industry: Improving Efficiency and Guest Experience. *International Journal of Management Science and Information Technology*, 4(2), 428-437. <https://doi.org/10.35870/ijmsit.v4i2.3201>.
- Bilgihan, A., & Ricci, P. (2024). The new era of hotel marketing: integrating cutting-edge technologies with core marketing principles. *Journal of Hospitality and Tourism Technology*, 15(1), 123-137. <https://doi.org/10.1108/JHTT-04-2023-0095>.
- Das, P. (2023). Technology and guest experience: Innovations reshaping hotel management. *International Journal*



- Ristova Maglovska, C. (2025). Between Innovations and Over-Reliance: The Impact of Digital Technology on Guest Perceptions and Expectations in Hotels. *Academos Journal*, Vol. 1, No.1, 2025, 40-49
- for *Multidimensional Research Perspectives*, 1(3), 76–95.
- Dianawati, N., Saepudin, P., Misran, M., Sinaga, E.K., Putra, F.K.K. & Susanto, E. (2024). The Impact of Smart Hotel Technology on Guest Satisfaction and Loyalty: A User Competency Perspective. *African Journal of Hospitality, Tourism and Leisure*, 13(1), 213-220. <https://doi.org/10.46222/ajhtl.19770720.500>.
- Ivanov, S. H. (2023). Tourism and hotel technologies. Institute of the Greek Tourism Confederation (INSETE). https://insete.gr/wp-content/uploads/2023/02/23_02-Tourism_Technology_EN.pdf.
- García-López, A.M., Galindo-Pérez-de-Azpillaga, L. & Foronda-Robles, C. (2025). The Flow of Digital Transition: The Challenges of Technological Solutions for Hotels. *Social Indicators Research*, 178, 1323–1346. <https://doi.org/10.1007/s11205-024-03487-5>.
- Gupta, K., & Sharma, S. (2021). Kiosks as self-service technology in hotels: opportunities and challenges. *Worldwide Hospitality and Tourism Themes*, 13(2), 236–251. <https://doi.org/10.1108/WHATT-10-2020-0125>.
- Kattara, H. S., & El-Said, O. A. (2013). Customers' preferences for new technology-based self-services versus human interaction services in hotels. *Tourism and Hospitality Research*, 13(2), 67-82.
- Mandić, D., & Savić, I. (2025). The future of hospitality: Risks and challenges of implementing automated services. *SCIENCE International Journal*, 4(1), 79–85. <https://doi.org/10.35120/sciencej0401079m>.
- Mandić, D., Panić, A., & Čičin Šain, M. (2023). Automated service delivery in hotels: balancing efficiency and human interaction for optimal guest satisfaction. *International Scientific Conference on Economics, Management and Information Technologies*, 1(1), 167–174. <https://doi.org/10.46793/ICEMIT23.137M>.
- Mavitha, K., & Kushe Shekhar, S. (2025). Mapping the landscape of digital transformation and digital technologies in the hotel industry: a comprehensive bibliometric analysis. *Digital Transformation and Society*, 4(3), 329–347. <https://doi.org/10.1108/DTS-09-2024-0178>.
- Nanu, L. (2025). Redefining the servicescape in hospitality through technology and artificial intelligence: a conceptual framework. *International Journal of Contemporary Hospitality Management*, 37(9), 3042–3060. <https://doi.org/10.1108/IJCHM-02-2025-0216>.
- Park, S. (2018). *Comparing Self-Service Technologies and Human Interaction Services in the Hotel Industry*. (Publication No. CFE0007071) [Master thesis, University of Central Florida]. <https://stars.library.ucf.edu/etd/5821>.
- Roy, B. K., & Pagaldiviti, S. R. (2025). Will machines replace humans in the hospitality business? *Journal of Tourism & Hospitality*, 14(3), Article 580. <https://doi.org/10.35248/2167-0269.25.14.580>.
- Stringam, B. B., & Gerdes, J. H. (2021). Hotel and guest room technology. In C. Cobanoglu, S. Dogan, K. Berezina, & G. Collins (Eds.), *Hospitality and tourism information technology* (pp. 1–62). University of South Florida M3 Publishing.
- Wynn, M., & Jones, P. (2022). IT strategy in the hotel industry in the digital era. *Sustainability*, 14(17), 1-14. <https://doi.org/10.3390/su141710705>.
- Zahidi, F., Kaluvilla, B. B., & Mulla, T. (2024). Embracing the new era: Artificial intelligence and its multifaceted impact on the hospitality industry. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(4), Article 100390. <https://doi.org/10.1016/j.joitmc.2024.100390>.



Application of Agritourism in Macedonia: Regional Potentials, Economic Indicators and Opportunities for Sustainable Development

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Abstract: This paper analyzes the possibilities for the development and application of agritourism in Macedonia through a detailed evaluation of natural resources, agricultural structure, regional potentials, and economic indicators. The research employs a combined methodological approach: descriptive analysis, comparative regional analysis, assessment of agritourism capacities, SWOT-analysis and recommendations for sustainable development. Agritourism represents an integrated form of rural development based on agricultural resources, local traditions, and experiential tourism. Macedonia, with its diverse climate, rich agricultural regions and cultural heritage, possesses significant prerequisites for developing agritourism offerings. The aim of the paper is to identify the potentials of agritourism through regional analysis, to determine the critical factors for development, and propose recommendations for long-term sustainability. The results indicate that the Pelagonia, Vardar, Southeastern, and Southwestern regions have the greatest opportunities for agritourism development, yet face infrastructural and institutional limitations, while the Northeastern and Eastern regions require structural and infrastructural improvements. The paper provides practical guidelines for the development of standards, integration of agricultural products into tourism offer and the establishment of synergy with eco, gastronomic, and cultural tourism. The conclusion suggests that agritourism can become a significant economic pillar if systematic planning, regional branding, and investment in rural development are implemented.

Keywords: agritourism, rural development, regional analysis, sustainability.

Introduction

Rural areas in Macedonia face demographic decline, weak economic development, and insufficient income diversification. Agritourism may serve as a response to these challenges, offering additional income for agricultural households and attracting tourists interested in nature, tradition, and authentic experiences (Angelkova, Dzordzevic Milosevic, & Ristova, 2018). Given that Macedonia has rich natural resources, diverse agro-ecosystems, and traditional agricultural practices, agritourism has the potential to become a significant driver of local economic development. Agritourism represents a specific form of alternative tourism that links agricultural activities with tourism services, creating added value for rural communities (Phillip, Hunter & Blackstock, 2010).

The development of agritourism in the country is unevenly distributed across regions, which makes a systematic investigation of capacities and limitations necessary. Certain regions, such as the Vardar and Southeastern regions, have already developed wine and gastronomic tours, while the Eastern and Northeastern regions still require institutional support and infrastructural investments. Interest in alternative forms of tourism is increasing as a response to the growing demand for natural, peaceful, and authentic experiences (Sharpley & Vass, 2006). There are several reasons why agritourism is important for the country:

1. The agricultural tradition is deeply rooted in rural communities;



2. Agricultural products are high-quality and authentic;
3. Favorable climatic and geographical conditions exist;
4. Agritourism enables socio-economic diversification in areas with high levels of migration and depopulation.

According to research by Angelkova Petkova (2015), agritourism may represent one of the most sustainable models for the development of rural regions in Macedonia. The main objective of this paper is to provide a comprehensive analysis of the application of agritourism in Macedonia through a regional approach, including comparative indicators, examples of registered farms, economic indicators, identification of key success factors, weaknesses and threats, and to formulate recommendations for future development.

Theoretical Framework

Agritourism is defined as a tourism activity conducted on farms or in rural areas, where visitors have the opportunity to participate in agricultural activities, taste farm products, and stay in rural accommodations (Gadakh et al., 2025). In Macedonia, according to Angelkova Petkova (2024), agritourism is closely linked to traditional agricultural practices, local gastronomy, and the rural cultural landscape. One of the advantages of agritourism is the creation of a multiplier effect: farmers gain additional income, the local economy is stimulated and the rural community gains greater visibility. These studies emphasize the potential of agritourism to diversify the local economy and promote cultural heritage (Angelkova Petkova, 2024).

Methodology

The research applies a mixed-methods approach that includes: descriptive analysis, comparative regional analysis, quantitative analysis, and analytical methods.

- Descriptive analysis. Natural resources, agricultural crops, traditions, and agritourism activities in all eight planning regions are examined.
- Comparative regional analysis. Three tables are prepared: comparative indicators, known registered farms by region, and economic indicators.
- Quantitative analysis. Statistical data from the State Statistical Office, the Ministry of Agriculture, the Agency for Promotion and Support of Tourism and regional development centers are used.
- Analytical method. A SWOT analysis is conducted to assess potentials and challenges.

Data were collected from planning region profiles, official reports of the Ministry of Agriculture and the Ministry of Economy, existing scientific literature, as well as relevant works published by Angelkova and co-authors in the field of rural development and tourism.

Limitations of the research

- Limited availability of official data.
- Insufficient registered agritourism supply.
- Lack of classification standards for agritourism.

Agritourism Potentials

Below is a summary of regional agritourism potentials:

- Vardar Region – the strongest wine cluster in the country (Kavadarci, Negotino).
- Pelagonia Region – apple production and livestock farming are the main pillars of



agritourism.

- Polog and Southwestern Regions – a combination of mountain agritourism, dairy farms, and forest fruits.
- Eastern and Northeastern Regions – resources for rice tourism, grain farms, and traditional food.

Southeastern Region (Gevgelija, Bogdanci, Valandovo, Dojran, Strumica):

This region has the longest vegetation period in the country, a Mediterranean climate, and the most fruit-growing and early vegetable production.

- Apricot and peach farms – Bogdanci and Valandovo
Visits, fruit picking, tastings and educational tours.
- Organic tomatoes and peppers – Strumica Plain
Opportunities for learning about greenhouse production, ajvar tastings, and local recipes.
- Mediterranean olive groves – Gevgelija / Miravci
Small but developing olive plantations; olive oil tasting.
- Honey farms – Udovo, Moin, Gevgelija
Beekeeping tours, working with protective equipment, tasting honey and propolis.
- Dojran fishponds
Fishing systems and traditional fish specialties (Dojran redfin), with possible demonstrations.

Vardar Region (Veles, Gradsko, Kavadarci, Negotino):

Mainly known for viticulture and wine tourism.

- Winery “Tikveš”, Kavadarci
A long-standing example of agritourism (wine tours, tastings, gastronomic events).
- Winery “Bovin”, Negotino
- Family vineyards – Rosoman and Gradsko
Learning about grape harvesting, traditional wine or rakija making.
- Peach orchards – Rosoman
Famous for peach production; seasonal tours and fruit picking are common.
- Sheep farms – Bashino Selo (Veles) and surrounding villages
Production of white sheep cheese, tastings.

Skopje Region (Skopje, Zelenikovo, Ilinden, Petrovec):

- Farm “Chiflik” – Skopje
Horses, mini-zoo, homemade food.
- Strawberry farms in Ilinden and Zelenikovo
Pick-your-own models.
- Beekeeping cooperatives near Petrovec
Demonstrations with hives and bee products.

Polog Region (Tetovo, Gostivar):

- Dairy and cheese-producing farms – Jegunovce, Brvenica
- Mountain tours with shepherds – Šar Mountain
- Small berry and forest fruit farms



Southwestern Region (Ohrid, Struga, Debar, Kičevo):

- Ohrid bio-farm tours along the lake
- Mountain lamb farms – Debarca
- Plum orchards – Kičevo Plain

Pelagonia Region (Bitola, Prilep, Resen):

- Prespa apple orchards – the most developed agritourism model in Macedonia.
- Tobacco tours – Prilep Plain
- Cabbage farms – Mariovo and Dolneni

Eastern Region (Štip, Kočani, Vinica, Delčevo):

- Rice fields – Kočani (unique in the country)
- Cow farms – Berovo, Pehčevo
- Grain farms – Štip and Karbinci

Table 1: Agritourism Potentials by Planning Regions in Macedonia

Region	Main Agritourism Resources	Typical Activities / Products	Specific Examples
Southeastern (Gevgelija, Strumica, Valandovo, Dojran)	Mediterranean climate, fruit growing, early vegetable production, beekeeping, fish resources	Fruit picking; beekeeping tours; greenhouse tours; Dojran fishing tours	Orchards in Gevgelija, Bogdanci, Valandovo (peaches, apricots, persimmons); Beekeeping farms Udovo / Moin; Dojran fishponds; Olive groves Miravci
Vardar (Kavadarci, Negotino, Veles, Rosoman)	Viticulture and winemaking, fruit growing, livestock farming	Wine tours, tastings, grape harvesting, traditional rakija and wine production, cheese tastings	Winery “Tikveš”, Winery “Bovin”; vineyards in Rosoman; cheese-producing farms – Bashino Selo
Skopje (Skopje, Petrovec, Ilinden, Zelenikovo)	Fruit growing, vegetables, beekeeping, family animal farms	Pick-your-own models (strawberries), farm tours, animal activities, educational visits	Farm “Chiflik”; strawberry farms in Ilinden; beekeeping farms in Petrovec
Pelagonia (Prilep, Bitola, Resen)	Apple orchards, tobacco, mountain farms	Apple orchard tours, apple picking, tobacco tradition, farms with indigenous breeds	Prespa apple orchards; Tobacco tours in Prilep; farms in Dolneni and Mariovo
Southwestern (Ohrid, Struga, Debar, Kičevo)	Mountain landscapes, livestock farming, forest fruits	Lamb farms, forest fruit picking, lake-based activities	Mountain farms in Debarca; plum orchards in Kičevo; Ohrid bio-farm tours
Polog (Tetovo, Gostivar)	Mountain farms, livestock, dairy products	Shepherd tours, traditional cheese making, forest fruit picking	Dairy farms in Brvenica and Jegunovce; shepherd tours on Šar Mountain
Eastern (Štip, Kočani, Delčevo, Berovo)	Rice, grains, fruit, mountain livestock	Rice field demonstrations and workshops; organic livestock farming; tastings of local products	Rice fields in Kočani; livestock farms in Pehčevo; grain farms in Štip
Northeastern (Kumanovo, Kriva	Grains, livestock, traditional products	Homemade monastic products, traditional	Kratovo ethnographic households; cattle farms in



Region	Main Agritourism Resources	Typical Activities / Products	Specific Examples
Palanka, Kratovo)		cuisine, rural tourism	Kumanovo; local rural household

Source: Author analysis

Table 2: Comparative Indicators for Agritourism Development by Region in North Macedonia

Region	Natural Resources	Agricultural Characteristics	Tourism Potential	Limiting Factors
Skopje	Lowlands, vineyards	Viticulture, vegetables	Metropolitan market	Urbanization
Pelagonia	Plains, pastures	Dairy, grains	Strong agricultural base	Dispersion
Southeast	Sunny valleys	Fruits, grapes	Gastronomy, farms	Water stress
Vardar	Valley	Viticulture	Oenology, wine tasting	Climate risks
Polog	Mountains	Livestock farming	Mountain tourism	Infrastructure
Southwest	Lakes	Fruits	Lake tourism	Seasonality
East	Fields	Rice, horticulture	Agritourism tours	Lack of capacities
Northeast	Hills	Fruits, wheat	Traditional villages	Emigration

Source: Author analysis based on Regional Development Profiles

In Table 3, comparative indicators by regions (agritourism potential) are presented. This table ranks the regions according to:

- natural resources,
- agricultural base,
- tourism infrastructure,
- local product brands,
- accessibility/visitor friendliness.

The assessments are on a scale of 1–5 (5 = very well developed).

Table 3: Comparative Indicators by Region

Region	Natural Resources	Agricultural Base	Tourism Infrastructure	Local Agro-Brands	Accessibility	Total Agritourism Potential
Vardar	4	5	4	5	4	22/25
Southeastern	5	5	4	4	5	23/25
Pelagonia	5	5	3	5	4	22/25
Southwestern	4	4	5	4	4	21/25
Polog	4	3	3	3	4	17/25
Eastern	4	4	3	5	3	19/25
Northeastern	3	4	2	3	3	15/25
Skopje	3	4	5	3	5	20/25

Source: Author analysis

Interpretation: The Southeast, Vardar, and Pelagonia regions have the strongest agritourism potential. The Northeast region is the weakest due to underdeveloped tourism infrastructure.

Most Well-Known Registered Farms by Region



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A table of the most well-known registered agritourism farms and complexes by region (List includes the most notable and most frequently mentioned farms in public registries, media publications, and local tourism strategic documents.)

Table 4: Most Well-Known Registered Agritourism Farms

Region	Most Well-Known Farms / Agritourism Entities	Type
Vardar	Wineries “Tikveš”, “Stobi”, “Bovin”; Farm “Eko Karpovica”	Wine, livestock
Southeast	Farm “Eko Karaman”, Dojran fish farms, plantations in Strumica	Fish farming, plantations, beekeeping
Pelagonia	Apple complexes in Resen, Farm “Bitolsko Mleko”, farms in Kruševo	Orchard, livestock
Southwest	Ohrid fish farms, dairy farms in Vevčani and Debarca, Kičevo farms	Fish, dairy
Polog	Dairy farms in Zerovjane, cattle farms around Gostivar	Dairy, livestock
East	Rice farms (Kočani), Organic farms in Berovo, dairies in Delčevo	Grain, organic
Northeast	Beekeeping farm “Kratovski Med”, livestock farms around Kumanovo	Beekeeping, livestock
Skopje	Urban farms in Ilinden, “Kamnik” winery, Sopište farm	Urban-rural, wine

Source: Register of Agritourism Entities – Ministry of Agriculture, Forestry and Water Economy (2023–2024).

Economic and ecological aspects

Economic

Agritourism diversifies the economy of family farms—rather than relying solely on product sales, farms offer accommodation, activities, tastings, and souvenir sales (Gadakh et al., 2025; Angelkova Petkova, 2024).

Ecological

Sustainable practices (organic farming, minimal use of chemicals, preservation of nature and biodiversity) are essential both for attracting tourists and for safeguarding the local ecosystem (Gadakh et al., 2025; Angelkova & Ristova, 2021).

Table 5: Economic Indicators for Agritourism by Region (All figures are indicative and approximate)

Region	Average Annual Visits (Agritourists)	Estimated Annual Revenue (€)	Capacity (Beds/Farms)	Typical Activities
Polog	18,000 – 22,000	€1.2–1.6 million	120–150 capacity; ~40 farms	Monastery tours, dairy farms, mountain tourism
Skopje	25,000 – 30,000	€1.8–2.5 million	200–230 capacity; ~50 farms	Urban + rural mix, wine tours, gastronomy
Northeast	8,000 – 12,000	€350–500 thousand	80–100 capacity; ~20 farms	Grain products, livestock farming, traditional crafts
Vardar	30,000 – 35,000	€2.0–2.8 million	250–300 capacity; ~60 farms	Wine routes, olive growing, honey
Southeast	22,000 – 26,000	€1.4–1.9 million	150–170 capacity; ~45 farms	Fruit growing, peppers, early agricultural crops
East	10,000 – 14,000	€0.6–0.8 million	100–120 capacity;	Medicinal herbs, grains, rural



Region	Average Annual Visits (Agritourists)	Estimated Annual Revenue (€)	Capacity (Beds/Farms)	Typical Activities
			~30 farms	cultural tourism
Pelagonia	16,000 – 20,000	€1.0–1.3 million	140–160 capacity; ~35 farms	Dairy products, grains, traditional cuisine

Source: Author estimation based on regional development indicators and tourism data

Table 6: SWOT Analysis of Agritourism in North Macedonia

S – Strengths	W – Weaknesses
- Diverse climate suitable for fruit growing, viticulture, and livestock farming. - Rich agricultural and gastronomic traditions. - Presence of family farms and small producers. - Strong regional brands such as Prespa apples, Tikveš wine region, and Strumica early vegetable production. - Natural resources (lakes, mountains) enabling combined rural + eco tourism. - Increasing tourist interest in local food and experiential tourism.	- Underdeveloped tourist infrastructure on many farms. - Lack of standardized agritourism service protocols. - Low level of digitalization and marketing among farmers. - Limited knowledge in managing tourism-oriented services. - Shortage of trained staff for maintaining agritourism activities. - Seasonality and dependence on fluctuating tourist flows.
O – Opportunities	T – Threats
- Development of wine, eco, and gastronomic tours. - Potential for regional branding (Prespa apple, Tikveš wine, Kocani rice). - Use of EU funds for rural development. - Growing interest in nature-based, rural, and Wellness tourism. - Linking agritourism with local festivals and cultural events. - Potential for artisanal products (honey, cheese, dried fruit, ajvar). - Access to European rural development funds.	- Emigration and ageing of the rural population. - Competition from neighboring countries (Bulgaria, Serbia, Greece) with more developed rural destinations. - Climate change affecting agricultural production. - Unstable policies regarding subsidies and governmental support. - Insufficient international promotion of the country. - Outflow of young people from rural areas leading to labor shortages. - Lack of cooperation between farmers and tourism operators.

Source: Author analysis

Critical Factors, Recommendations, and Outcomes for Agritourism Development in North Macedonia

Table 7: Critical Factors for Agritourism Development in North Macedonia

Category	Critical Factors	Implication for Development
Infrastructure	Access roads, signage, parking, sanitation, safety	Improving accessibility and increasing visitor numbers
Human Resources	Farmer training, tourism knowledge, hospitality, language skills	Professional service and enhanced tourist experience
Marketing and Promotion	Digital marketing, online presence, social media, regional branding	Attraction of domestic and foreign tourists
Product Resources	High-quality agricultural products, local	Development of authentic tourist



Category	Critical Factors	Implication for Development
	gastronomy, indigenous varieties	offerings
Institutional Support	Subsidies, EU programs, municipal support, legal framework	Long-term sustainability of agritourism projects
Integration with Other Tourism Forms	Combination with rural, eco, and gastronomic tourism	Increased attractiveness and differentiation
Sustainability and Environment	Protection of farmland, organic production, ecological practices	Eco-certified tourism and better market positioning
Socio-Cultural Factors	Traditions, local events, crafts, cultural heritage	Creation of additional experiences and added value

Source: Author analysis

Possible Recommendations

1. Developing a marketing strategy: creating online platforms and promotional campaigns.
2. Training for farmers: courses in hospitality, service management, and marketing (Gadakh et al., 2025).
3. Infrastructure improvement: accessible roads, signage, accommodation facilities.
4. Linking agritourism with local products and gastronomy: the “Farm to Table” concept (Gadakh et al., 2025).
5. Environmental protection and eco-friendly agriculture.
6. Creating thematic activity packages, for example, “apple picking + cheese tasting” (Angelkova Petkova, 2024).

The findings indicate that North Macedonia has a strategically favorable position for agritourism development, although the potential is unevenly distributed across regions. While agritourism is often perceived as an additional activity, it can become a major economic driver, especially in depopulated rural areas. Agritourism strongly depends on natural resources, infrastructure, and local institutional support. The Vardar and Southeast regions, due to developed viticulture, have the highest visitor numbers and income, while the Polog and Northeast regions hold significant potential for expansion through livestock-based and traditional cultural tours. The East region is important for rice production, which remains underutilized for agritourism purposes. There is a need for farm digitalization, certification of agritourism services, integrated rural packages, and support for local brands (Prespa apple, Strumica pepper, Kocani rice). Based on the above, the synergy between tourism and agriculture creates new opportunities for economic diversification.

Conclusion

Agritourism has the potential to become one of the key pillars of sustainable economic development in the rural regions of North Macedonia. Although the country faces infrastructural, institutional, and demographic challenges, its abundant natural, agricultural, and cultural resources provide an opportunity to develop a competitive agritourism offer. The development of agritourism in North Macedonia has significant potential to revitalize rural areas, improve the economic position of farms, and promote authentic natural and cultural value. It represents a major opportunity for the country but requires a systemic approach. Improving rural infrastructure, regional branding of products, supporting small farms in



offering tourist activities and connecting agritourism with gastronomy and cultural tourism are essential steps. With these measures, agritourism can become an important economic sector, especially in rural areas where traditional agriculture is already well established.

References

- Angelkova Petkova, T. (2024). The mapping of potential forms of tourism in the Malesevo region, for the development of a sustainable tourist destination. *Knowledge – International Journal*, 67(6), 999–1004. <https://ojs.ikm.mk/index.php/kij/article/view/7494>
- Angelkova, T., Ristova, C. (2021). The importance of travel agencies for the development of Macedonia as an attractive tourist destination. *Fourth International Scientific Conference “Challenges in Tourism and Business Logistics in the 21st Century”*, November 19, 2021, Štip. <https://eprints.ugd.edu.mk/29379>
- Angelkova, T., Dzordzevic Milosevic, S., Ristova, C. (2018). The development of agro tourism in Northeastern Macedonia – From hospitality to tourist activities. *LAP – Lambert Academic Publishing*. ISBN 978-613-9-85004-4. <https://eprints.ugd.edu.mk/20190>
- Angelkova, T., Stanojkova, M. (2017). Rural tourism as an alternative type of tourism. *First International Scientific Conference, ISCTBL, Faculty of Tourism and Business Logistics – Gevgelija, Macedonia*, pp. 129–134. ISSN 978-608-244-465-9
- Barbieri, C. (2013). Assessing the sustainability of agritourism in the US. *Journal of Sustainable Tourism*, 21(2), 252–268.
- Gadakh, A., Kumbhar, V., Khosla, S., & Karunendra, K. (2025). Identifying key features for establishing sustainable agro tourism centre: A data-driven approach. *arXiv*. <https://arxiv.org/abs/2509.09214>
- Telegrafi. (2018, May 7). *The promotion of rural tourism in Macedonia is not sufficiently offered by tourist operators*. <https://telegrafi.com/en/the-promotion-of-rural-tourism-in-Macedonia-is-not-sufficiently-offered-by-tourist-operators/>
- Ministry of Agriculture. (2023). *Register of Agritourism Entities*. Skopje.
- Ministry of Economy. (2024). *Regional Development Indicators*. Skopje.
- Phillip, S., Hunter, C., Blackstock, K. (2010). A typology for defining agritourism. *Tourism Management*, 31(6), 754–758.
- Sidali, K. L., Spiller, A., & Schulze, B. (2011). Food, agriculture and tourism: Linking local gastronomy and rural tourism. *Springer*.
- Sharpley, R., & Vass, A. (2006). Tourism, farming and diversification. *Tourism Management*, 27(5), 1042–1052.



An Entrepreneurial Approach and Policy Frameworks for the Advancement of Public-Private Partnerships

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Abstract

In contemporary working conditions, public institutions face limited access to the resources necessary for implementing projects of communal and societal interest. The concept of Public-Private Partnerships (PPPs) serves as a mechanism for supporting local development and facilitating the realization of infrastructure projects. Entrepreneurial initiatives and private investors enable the utilization of available capital and innovative opportunities in the function of executing infrastructure projects. The focus of this research is the analysis of the entrepreneurial approach as a key factor in the application and development of the public-private partnership model, with particular emphasis on the implementation of innovative business models and strategic partnerships.

By applying both quantitative and qualitative research methods, this study aims to explore the potential for implementing an entrepreneurial approach and corresponding policies that enhance synergy between public institutions and private initiatives in order to increase efficiency. The primary research objective is to confirm the fundamental hypothesis that entrepreneurial thinking and practice contribute to building more innovative and sustainable long-term business partnerships.

Keywords: Public-Private Partnership, Entrepreneurship, Innovation, Sustainable Development, Management

Introduction

The Public-Private Partnership (PPP) model represents a contemporary framework of business collaboration between public institutions and private enterprises, emerging as an alternative solution to the challenges related to limited access to necessary resources and the growing demand for modernization of infrastructure and public services.

On one hand, the public sector is increasingly confronted with resource constraints and the need to enhance efficiency in delivering public services. In an environment characterized by dynamic economic and social changes, as well as fiscal and budgetary limitations, the PPP model enables the effective combination of financial resources, technical expertise, and the



innovative capacity of private investors with the strategic goals and interests of public institutions. As a modern instrument for cooperation between the public and private sectors, this model encourages innovation, flexibility, and an entrepreneurial approach in implementation, thereby contributing to improved quality of public service delivery.

The necessity of adopting the public-private partnership model has become particularly evident within local communities, as municipalities face growing challenges in providing public services and infrastructure on the one hand, and managing budgetary restrictions on the other. The PPP model thus stands as a powerful instrument for accelerating development. Nevertheless, its implementation remains limited due to various challenges faced by public institutions.

Through analyzing the potential of applying the entrepreneurial approach within institutional practices, the PPP model can be further advanced as a framework for delivering high-quality public services and as a tool for achieving sustainable economic development. In the context of sustainability, current policies may be described through a model emphasizing the development of an ecological sector, which, unlike other sectors of activity, is characterized by the integration and application of sustainable technologies (Ospanova, A.; Popovychenko, I.; Chuprina, 2022, 17, 171–18).

Through the implementation of specific activities—beginning with an analysis of the current situation, followed by the identification of areas with the greatest potential for applying the public-private partnership model that incorporates entrepreneurial initiative—conditions are created for sustainable development. Sustainable development, as defined in the report, is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Elliott, 2012). The foundations for effective implementation of the public-private partnership model and for achieving sustainable development are established through a systematic assessment of the current situation and the determination of priority areas where this model, supported by entrepreneurial initiative, can be most effectively applied. On the other hand, the entrepreneurial approach acts as a driving force behind innovation, flexibility, and competitiveness. Enterprises are increasingly focused on identifying responses to the challenges of sustainable business operations and on introducing new approaches to organizational practices (Magdincheva-Shopova & Stojanovska-Stefanova, 2023). Integrating entrepreneurial thinking and action into the process of developing and managing public-private partnerships can significantly contribute to improving efficiency, reducing risks, and creating added value for all stakeholders. This approach encourages proactivity, creative problem-solving, and strategic thinking, all directed toward achieving long-term sustainability. Long-term sustainable development implies sustained economic growth, technological advancement, efficient resource management, and ultimately, the enhancement of the overall quality of life (Jurjević et al., 2019, p. 45).

Materials and Methods

Based on the defined research objective, both quantitative and qualitative research methods were selected, whereby the application of one method does not exclude the use of the other. To achieve the aims of this study, an appropriate methodological framework was adopted. The applied approach relies on the selection of classical research methods through which relevant insights were obtained regarding the phenomenon under investigation. During the development



of this paper, several scientific methods were employed, including the method of analysis, the method of synthesis, as well as specific scientific methods categorized as specialized, quantitative, and interrelated techniques. By applying the methods of analysis and synthesis, a comprehensive examination of professional literature in the field of public-private partnerships and the role of the entrepreneurial approach in the implementation of this business model was conducted. Additionally, the research method was applied to analyze the implementation measures of public-private partnerships. Through the inductive approach, the obtained results were interpreted, while the quantitative method relied on a deductive model for verifying the acquired knowledge, providing a detailed description of services and an objective perspective on the nature of the phenomenon being studied.

Results

The public-private partnership (PPP) business model represents a synthesized model of joint initiatives between the public and the private (entrepreneurial) sectors, in which each institution or entity contributes specific resources and activities in the processes of planning, decision-making, and execution of particular projects. In a narrower sense, the term “public-private partnership” refers to the implementation of specific activities through which public and private institutions, jointly and with shared resources, operate under predefined locations and conditions to create a product or service that fulfills a public need.

Through the PPP model, the resources of private entities are engaged to create goods or services required by state institutions and citizens. An essential feature of PPPs lies in the unique concept of collaboration and their long-term orientation.

In essence, the PPP model implies that private companies invest their own capital, undertake construction, maintenance, and management of specific projects until completion, after which the investment project is transferred to the ownership of the state or municipality. This synergistic business model between public institutions and private enterprises generates numerous benefits. PPPs can offer significant advantages such as utilizing private-sector expertise, innovation, and financial resources, thereby improving the quality, efficiency, and sustainability of public services (Manual for Establishing Public-Private Partnerships at the Local Level, USAID, Skopje, 2024, p. 5). This model constitutes a form of concession relationship, whereby the private company or partner implements a specific project, subject to prior authorization or approval — a concession — granted by the competent public authority. The application of the entrepreneurial approach within the PPP concept enables the realization of its core benefit: a long-term budgeting strategy that covers the entire life cycle of an infrastructure project, ensuring more efficient use of public financial resources. This approach also reduces the likelihood of excessive public spending on routine infrastructure maintenance instead of development and improvement. Upon the expiration of the contractual period, the infrastructure facility that was the subject of cooperation is transferred to public ownership, i.e., to the relevant state institution or local self-government unit. From a temporal perspective, such agreements are of a long-term nature, typically concluded for periods of twenty years or more, encompassing all phases — from design and construction to management, maintenance, and final transfer of ownership. By combining public and private resources and aligning the aspirations of both partners, public-private partnerships contribute to a better market valorization of public assets and to greater efficiency in public spending, ultimately serving the



public interest (Link, A. N., *Public/Private Partnership: Innovation Strategies and Policy Alternatives*, Springer, New York, 2006, p. 4). Fundamentally, the PPP model is characterized by the following key features: Participants – the private partner (an investor or privately-owned company) and the public partner (a government institution or a local self-government unit); Duration – a relatively long implementation period for the project activity; and Mutual interest and shared responsibility of both parties for the successful execution of the project and the achievement of sustainable results (see Figure 1).

Figure 1: Characteristics of the Public-Private Partnership Model

Public-Private Partnership Model	Description
Participants	Private company and public institution
Duration	Relatively long implementation period
Interest and Responsibility	Shared interest and mutual responsibility

Source: Author's own research

Based on the conducted research on the public-private partnership (PPP) model, it can be concluded that the most prevalent forms of PPPs include the following business models: the BOT model (Build-Operate-Transfer) and the PFI model (Private Finance Initiative). These models represent the most frequently implemented frameworks for collaboration between public institutions and private investors (see Figure 2).

Figure 2: Characteristics of the Most Common Public-Private Partnership Models

BOT Model of PPP (Build–Operate–Transfer)	PFI Model of PPP (Private Finance Initiative)
Private Finance Initiative	Private Finance Initiative
The private company designs, finances, and constructs a specific facility or project	The private company designs, finances, and constructs a specific project
The private company operates the facility for a defined period of time, after which the facility is transferred to the public partner	The private company and the public institution jointly use and manage the facility

Source: Author's own research

The BOT model, or Build–Operate–Transfer model, represents a form of delivery and implementation of large-scale infrastructure projects, in which, through private initiative — that is, a private investor or company — a concession is obtained from a state entity (public sector) for the financing, design, construction, management, and operation of a specific facility or system within a defined time period. During that period, the private company uses the facility to recover the investment and operating costs, after which, in accordance with the concession agreement, the facility is transferred to the ownership of the public partner.

The PFI model, or Private Finance Initiative model, represents a specific form of public-private partnership in which the private company undertakes the obligation to design, finance, and construct a certain infrastructure project, as well as all administrative work and maintenance of the project for the benefit of the public sector. The public partner, on its part, uses the specific infrastructure project to provide public services. Based on the research conducted, it can be concluded that this model is most often applied in the sectors of education, healthcare, social protection, and other areas of public interest. Since the private partner is responsible for the design and construction of the facility, it possesses full control over its maintenance, which enables optimization and reduction of the total costs during the project's life cycle. The public



partner pays the private partner an agreed amount that covers all components – design, construction, operation, and maintenance – for a predetermined period.

Discussions

In modern market economies, public institutions are increasingly confronted with the need for new management models that enable the rational use of resources and the provision of improved public services. Therefore, through the entrepreneurial approach, certain characteristics such as flexibility and result orientation can be transferred into the functioning of public institutions. The promotion of innovation, efficiency, and sustainability within the public sector is enhanced by the application of the entrepreneurial approach in the development of public-private partnerships. Schumpeter (1942) originally emphasized the innovative component of entrepreneurial behavior, which possesses the capacity to disrupt economic equilibrium and thereby stimulate economic progress—replacing the old with newer, richer, more developed, and more attractive products (K. McCraw, T. (2007). *Prophet of Innovation*, Harvard University Press, p. 3). Transparent procedures for public-private partnerships, derived from legal regulations, create a favorable business environment that encourages innovative solutions for improving public services. Entrepreneurship, in essence, represents a specific behavioral model of enterprises, based on its core characteristics such as innovativeness, proactivity, risk-taking, and tolerance of uncertainty, among others (Wu, Y.J., Yuan, Ch., & Chen, M. (2021). *From Thinker to Doer: Creativity, Innovation, Maker and Venture Capital*, Frontiers, pp. 7–10). A significant role in ensuring synergy between the protection of the public interest and the result-oriented nature of private companies is played by public policies that foster the entrepreneurial spirit within state institutions through the encouragement of initiative and the effective management of risks. The successful implementation of the PPP model depends on institutional capacity, a clear legal framework, and the consistent application of control and oversight policies. Conversely, entrepreneurship is often understood as an individual behavior aimed at promoting innovation and expressing creative activities (Ozsungur, 2021). The entrepreneurial approach should not be perceived as opposing the public interest, but rather as a complementary framework for enhancing efficiency and innovation within the public sector.

Conclusions

The entrepreneurial approach and the policies applied within the framework of the public-private partnership model contribute to making the public sector more innovative, flexible, and results-oriented. By combining public and private resources and aligning the aspirations of both partners, public-private partnerships enable better market valorization of public assets and greater efficiency in public spending, all with the purpose of achieving outcomes that serve the public interest (Link, A. N., *Public/Private Partnership: Innovation Strategies and Policy Alternatives*, Springer, New York, 2006, p. 4). To ensure the long-term success of public-private partnerships, it is essential to implement policies that promote transparency, accountability, and professionalism within the public sector, as well as stable institutional support for investors. The application of appropriate policies creates active value creators, allowing private companies, through participation in projects of public interest, to contribute to social progress, mutual interests, and shared benefits based on trust and responsibility. In this regard, the following policy measures are proposed: Policies for harmonizing and simplifying the legal framework governing public-private partnerships; The establishment of a



specialized state institution for public-private partnerships to provide appropriate support to both public institutions and private enterprises; The implementation of standards for control and accountability throughout the entire PPP process; The promotion of risk-sharing models, ensuring that both public and private sectors equitably distribute investments and benefits; The creation of financial models that facilitate the realization of PPP projects; Policies for strengthening institutional capacity and human resources; Policies for fostering innovation and sustainable development; and Policies aimed at strengthening public trust and awareness. These measures help stimulate innovative approaches among companies and encourage the identification of new markets (Faulkner, 2001). Promoting the entrepreneurial approach within the public sector should be understood as a strategic direction for improving public management and enhancing the effectiveness of public resources. The entrepreneurial approach is not contrary to the public interest—it is, in fact, a necessary precondition for its more efficient realization. With properly designed policies and a genuine partnership between public and private entities, sustainable management models can be established that will contribute to greater competitiveness, improved infrastructure, and a higher quality of life for citizens.

Conflict of interests

I declare no conflict of interest.

References

1. Magdincheva-Shopova, Marija and Stojanovska-Stefanova, Aneta (2023) Policies for supporting green entrepreneurial businesses. *Knowledge International Journal*, 60.1 (1). pp. 161-167. ISSN 2545-4439
2. Ospanova, A.; Popovychenko, I.; Chuprina, E. Green Economy—Vector of Sustainable Development. *Problemy Ekorožwoju* 2022, 17, 171–181
3. Jurjević, Ž., Bogičević, I., Đokić, D., & Matkovski, B. (2019). Information technology as a factor of sustainable development of Serbian agriculture, *Strategic Management*, 24(1), 41-46. <https://doi.org/10.5937/StraMan1901041J>
4. Прирачник за воспоставување на јавно приватно партнерство на локално ниво, УСАИД, Скопје 2024, стр.5)
5. Link, A. N., *Public/Private Partnership: Innovation Strategies and Policy Alternatives*, Springer, New York, 2006., p.4.).
6. K. McCraw, T. (2007). *Prophet of Innovation*, Harvard University Press, p. 3.).
7. Wu, Y.J., Yuan, Ch., Chen, M. (2021). From Thinker to Doer: Creativity, Innovation, Maker and Venture Capital, *Frontiers*, p. 7-10)
8. Ozsungur, F. (2021). A New Entrepreneurship Model for Digital Enterprises. In Sandhu, K., *Disruptive Technology and Digital Transformation for Business and Government* (pp. 43-45). Hershey: IGI Global
9. (Link, A. N., *Public/Private Partnership: Innovation Strategies and Policy Alternatives*, Springer, New York, 2006., p.4.)
10. Faulkner, B. (2001), “Towards a framework for tourism disaster management”, *Tourism Management*, Vol. 22 No. 2, pp. 135-147.
11. Elliott, J. (2012). *An introduction to sustainable development*. Routledge. <https://doi.org/10.4324/9781849770477>



Social Media and the New Paradigm of the Global Public Sphere: Between Information and Influence

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Abstract: This paper examines the impact of social media on contemporary communication in comparison with traditional channels. The main objective is to analyze the advantages and disadvantages of social media, as well as their role in the rapid dissemination of information and the formation of public opinion. The research includes an analysis of relevant literature and survey data, confirming that social media enhance communication.

Keywords: information dissemination, digital communication, public opinion, global interaction

Introduction

The advent of the digital era has transformed the dynamics of human interaction and the dissemination of information.

Danah M. Boyd and Nicole B. Ellison (2007) note that “*what makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks.*” Social networks, as a modern manifestation of these transformations, have revolutionized the way individuals communicate and share information. With their widespread popularity and pervasive influence, social networks have become integral components of both personal and professional communication.

Martin (2005) defines digital literacy as the competence of individuals to access various digital tools and content, use them effectively, recognize and evaluate digital resources, produce new information in the process, and communicate efficiently through media.

This paper explores the complex relationship between social networks and the evolution of communication, examining how these platforms influence the ways in which information is shared and investigating their advantages and disadvantages within this context.

“*Information is power, and today a much larger part of the world’s population has access to that power.*” (Nay, J., 2005)

Social networks, encompassing platforms such as Facebook, Twitter, Instagram, and others,



have brought individuals together in virtual spaces, transcending geographical boundaries. These networks have empowered users to create profiles, connect with others, and share a diverse range of content - from personal anecdotes to breaking news. Constance Duncombe (2017) argues that “the role of Twitter as a key part of negotiation strategy is a crucial demonstration of how social media can shape the struggle for recognition, and thereby legitimize political possibilities for change.” The transformative influence of social networks is evident in their ability to redefine interpersonal communication, enabling instant interactions and fostering a sense of connectedness.

The impact of social networks on communication and the dissemination of information is a multifaceted phenomenon that reshapes the structure of modern society. As Melissen Jan (2005) emphasizes, “official communication aimed at foreign publics is, after all, no new phenomenon in international relations.”

Cathy Sun (2020) observes that “the transformative power of social media in world politics has increasingly been recognized, but remains underexamined. As this new medium fundamentally changes the ways in which state identities are shaped and foreign policy conducted, we would do well to scrutinize the effects of social media in creating or limiting opportunities for diplomacy and global cooperation.”

The advantages of instant communication and access to information—alongside the challenges posed by misinformation-highlight the need for a nuanced examination of the role social networks play in shaping communication. Khan et al. (2014) argue that “the Internet and social media must have both positive and negative effects on users, but it all depends on the digital literacy of internet users.” Similarly, Arafah & Hasyim (2022) note that “the positive and negative impacts of the use of internet media (social media) are highly dependent on digital literacy,” which they define as the ability to understand and use information from a variety of digital sources.

Materials and methods

The subject of this research is the analysis of the relationship between online social networks and the dynamics of information dissemination. This research begins with an analysis for examining the complex interrelationship between these digital networks and the dynamics of information sharing, focusing on the influence of popular topics and news. By sharing news articles or posts related to topics that are popular in everyday life, this research aims to discover the mechanisms underlying the choices made by individuals in a digital ecosystem saturated with information.

Zahra, A. A. et al. (2020) notice that in the rapid development era, the use of social media is indeed able to become a new forum for the community to express various criticisms of policy.

This research aims to systematically examine the complex interaction between online social networks, communication, and the dissemination of information. Through the survey method, which includes factors such as demographic attributes, the frequency of using social media, preferences for specific platforms, tendencies for seeking information related to prevailing topics or news, sharing behavior, the main factors influencing engagement choices, verification



habits, trusted sources of information, transformative effects on opinions, willingness to participate in online communication, the influence of visual content, and the relative effectiveness of visuals versus text-based information related to popular topics, this paper attempts to reveal the multilayered connections between individual behaviors, digital networks, and communication of information. By clarifying these relationships, the research attempts to enrich our understanding of how online social networks shape the contemporary landscape of information sharing and influence.

The main research question is: How do social media platforms influence the speed, reach, and perception of information dissemination in the digital era? The auxiliary hypotheses are that: 1.The influence of social media has a significant effect on the way of communication and dissemination of information on a global level; 2.News spread on social media affects more quickly the creation of public opinion, unlike traditional channels of communication; 3.The use of social media in communication significantly improves the speed, reach, and impact of information dissemination compared to traditional channels.

Within this research, a convenient sample consisting of 60 respondents was used, with an age distribution from 16 to 65+ years. The research was conducted in Skopje, during the period from August 1 to August 30, 2024, allowing enough time for the participation of all respondents. The procedure for data collection was precisely planned and implemented to ensure the accuracy and reliability of the results. The research was conducted in several phases, beginning with the selection and recruitment of respondents from different age groups, through an electronic form via the Google Forms platform. Informed consent was obtained from all participants, and they were assured of the confidentiality and anonymity of their responses. The completed questionnaires were then collected and safely stored for subsequent analysis.

The measurement scale was developed to assess the complex interaction between online social networks, communication, and information dissemination. Its continuous use in research and practice provides ongoing refinement and adaptation to different age contexts, thereby increasing its usefulness and relevance in various fields.

Results

The analysis of the demographic distribution of the research provides valuable insights into the age composition of the respondents and highlights the age-related patterns in their responses. The first question of the survey, “What is your age?”, facilitated the segmentation of respondents into different age groups, allowing for a comprehensive understanding of the generational nuances that influence information-sharing behavior in the context of social networks.

Among the 60 respondents, the age distribution is as follows:

1. Age 16–24 years: A notable portion of the sample, comprising 18 individuals (30% of the total number of respondents), falls within the age range of 16 to 24 years. This segment represents the younger participants who are most likely digital natives and active users of social media platforms.
2. Age 25–40 years: The largest age group in the sample, consisting of 24 individuals (40% of the total number of respondents), falls within the age range of 25 to 40 years.



This demographic segment includes individuals who are likely part of the workforce and actively engaged in online interactions.

3. Age 40–65 years: Sixteen participants (26.7% of the total number of respondents) belong to the age group of 40 to 65 years. This segment represents a more mature demographic, potentially including experienced users of both traditional and digital media.
4. Age 65 years and above: The smallest age group in the sample, consisting of two individuals (3.3% of the total number of respondents), is composed of participants aged 65 or older. This demographic subgroup represents the older generation, which may have varying levels of familiarity and engagement with online social networks.

The distribution of respondents across different age groups sheds light on the demographic landscape of the research and indicates potential age-related variations in information-sharing practices. The prevalence of younger participants in the study may suggest that the younger generation is more actively immersed in the digital space, while the participation of individuals from older age groups indicates a broader adoption of digital platforms to remain connected and informed.

These initial findings lay the foundation for deeper research into the correlations between age, social media usage, and information-sharing behavior.

The second question in the research, “What is your gender?”, provides insight into the gender composition of the respondents and offers a basis for understanding how gender intersects with information-sharing behaviors in the domain of online social networks.

Out of a total of 60 respondents, gender distribution revealed a clear representation of both sexes. Among the respondents, 41 identified as female, representing 68% of the sample. This significant presence of female respondents suggests that women are actively engaged in using social media as a means of communication, information sharing, and participation in discussions on trending topics.

On the other hand, male respondents accounted for 19, comprising the remaining 32% of the sample. Although numerically smaller, the representation of this group demonstrates that men are also prominent contributors in the digital landscape, participating on online platforms to access and share information related to popular topics and news.

Understanding how gender intersects with social media usage and information sharing is crucial for comprehending the different ways in which individuals engage with digital platforms.

The third question in the research, “How often do you use social media platforms?”, provides insight into the cadence of respondents’ interaction with digital platforms. This aspect of the study offers a lens into the frequency with which respondents engage with social media, allowing for an examination of how their usage patterns correlate with their involvement in sharing information related to popular topics and news.



Among the 60 respondents, a diverse range of social media usage frequencies emerged. The majority of respondents, 43 individuals (71.7% of the sample), reported using social media platforms several times a day. This widespread pattern reflects the integral role of digital platforms in the daily routines of the participants, indicating that frequent access is a common behavior among the surveyed individuals.

Ten respondents (16.7% of the sample) indicated that they use social media platforms once a day, representing a moderate level of engagement. The responses of this group suggest a structured approach to social media use, potentially implying that they allocate specific time for engaging with digital content.

A smaller subgroup of respondents, 5 individuals (8.3% of the sample), reported using social media platforms several times a week. The responses of this group suggest a more intermittent pattern of engagement, likely influenced by work schedules or a deliberate choice to limit exposure to digital platforms.

Only two respondents (3.3% of the sample) indicated that they rarely use social media platforms. This minority response points to a reduced reliance on digital platforms for communication and information sharing, potentially reflecting a preference for alternative means of staying updated.

The frequency of social media use among respondents has significant implications for their interaction with information on popular topics and news. Frequent users are likely to encounter a larger volume of content and potentially play a more active role in sharing and discussing information. Conversely, those who engage less often may have different motivations for their online presence.

By analyzing the relationship between the frequency of social media use and information-sharing behavior, the research aims to uncover the complex interaction between digital habits and the dissemination of information in the digital sphere. The following sections will explore more deeply how the frequency of social media use influences respondents' tendencies to seek, share, and engage with news and discussions on trending topics. The fourth question of the research, "Which social media platforms do you use regularly?", reveals preferences regarding digital platforms for communication and information sharing. The responses to this question provide insight into the social media landscape with which the respondents actively engage, shedding light on the potential platforms through which information related to popular topics and news is disseminated.

Among the 60 respondents, the distribution of regular use of different social media platforms is as follows:

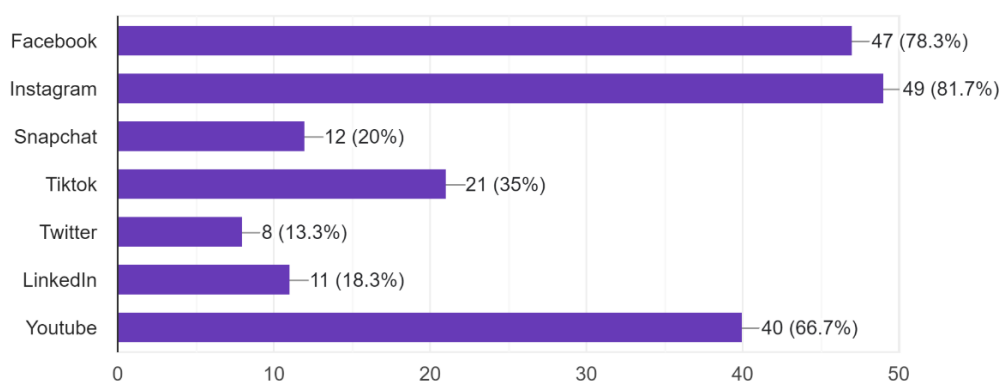
1. Facebook: An overwhelming majority of respondents, 47 individuals (78.3% of the total number of respondents), reported regularly using Facebook. This result highlights the enduring popularity of Facebook as a platform for social interaction and content sharing.
2. Instagram: Similarly, a significant number of participants, 49 individuals (81.7% of the total number of respondents), indicated that they use Instagram regularly. Instagram's



emphasis on visual content and storytelling appears to resonate with a substantial portion of the sample.

3. Snapchat: Twelve respondents (20% of the total number of respondents) mentioned that they regularly use Snapchat. Snapchat's focus on ephemeral messaging and multimedia sharing attracts a specific segment of participants.
4. TikTok: Twenty-one individual (35% of the total respondents) reported regular use of TikTok. The rapid rise in the platform's popularity, especially among younger demographics, is reflected in this response.
5. Twitter: Eight respondents (13.3% of the total number of respondents) stated that they use Twitter regularly. The real-time nature of Twitter and its emphasis on concise, text-based content are appealing to this subgroup of participants.
6. LinkedIn: Eleven individuals (18.3% of the total number of respondents) mentioned regular use of LinkedIn. LinkedIn's focus on professional networking and career-related content makes it a relevant platform for certain users in the sample.
7. YouTube: A significant number of respondents, 40 individuals (66.7% of the total number of respondents), reported regularly using YouTube. YouTube's diversity in offering a wide range of video content caters to the varied interests within the sample.

Chart 1: Author's own source



The distribution of responses reflects the dominance of well-established platforms such as Facebook and Instagram, which continue to attract a substantial user base. Additionally, the presence of newer platforms like TikTok indicates evolving preferences among participants, particularly within younger demographics. Understanding the popularity and usage patterns of these platforms is essential for comprehending how participants engage with social networks and how these platforms can influence communication and the dissemination of information related to popular topics and news.

The diversification of social media platform usage among respondents provides valuable insights into the channels through which information related to popular topics and news may flow. By examining the platforms with which respondents regularly engage, the research seeks to illuminate how different digital ecosystems influence the dissemination and consumption of information in the context of trending topics. The following sections will delve deeper into the correlations between platform preferences and information-sharing behavior, enriching our understanding of the complex interaction between social media usage patterns and information



dissemination.

The fifth question of the research, “When a popular topic or news appears, how likely are you to seek information about it on social media?”, examines respondents’ propensity to seek information on digital platforms when confronted with popular topics or news. This research investigates the role of social media in meeting respondents’ information needs and assesses the extent to which these platforms serve as sources of information regarding trending topics.

Among the 60 respondents, varying attitudes emerged regarding seeking information on social media in response to popular topics. The majority of respondents, 28 individuals (46.7% of the sample), indicated a higher likelihood, stating that they are very likely to turn to social media for information when a popular topic or news item arises. This result highlights the importance of digital platforms as channels for timely and relevant information, reflecting respondents’ trust in the capacity of social media to provide insight into current events.

Meanwhile, 24 respondents (40% of the sample) expressed a moderate level of likelihood, indicating that they are somewhat likely to seek information on social media when a popular topic or news item arises. This response suggests that social media platforms play a significant role in supplementing participants’ information-seeking behavior, especially when the subjects attract attention.

Seven respondents (11.7% of the sample) adopted a neutral stance, indicating that their likelihood of seeking information on social media in response to popular topics is neither high nor low. The responses of this group may imply a balanced approach to information sources, where social media represents just one of several ways to stay informed.

Notably, only one respondent indicated that it is very unlikely for them to seek information on popular topics or news on social media. This lack of responses in the “very unlikely” category suggests a general tendency among respondents to at least consider digital platforms as potential sources of information, even if not the primary ones.

The varying degrees of likelihood to seek information on social media in response to popular topics reflect the central role these platforms play in meeting respondents’ information needs. The following sections of the results will delve deeper into the factors influencing this behavior, examining the motivations behind respondents’ information-seeking tendencies and exploring how digital platforms contribute to shaping their understanding of trending topics.

The sixth question of the research, “How often do you share, post, or retweet news articles or posts related to popular topics?”, examines respondents’ engagement in disseminating information on their social networks. This inquiry reveals the frequency with which respondents contribute to the circulation of news articles or posts related to trending topics, shedding light on the extent of their participation in the information-sharing ecosystem.

Among the 60 respondents, varying patterns of engagement in sharing and disseminating news articles or posts on popular topics emerged. A significant portion of respondents, 26 individuals (43.3% of the sample), reported that they rarely share such content. This finding indicates that



a considerable number of respondents engage infrequently in information dissemination on social media, suggesting that they are relatively passive consumers of information.

Seventeen respondents (28.3% of the sample) indicated that they never share, post, or retweet news articles or posts related to popular topics. This result suggests that this subgroup of respondents primarily uses social media for personal interactions rather than information dissemination, potentially reflecting different motivations for their online presence.

In contrast, another group of 11 respondents (18.3% of the sample) stated that they occasionally share such content. This response implies an intermittent pattern of engagement, where respondents sporadically contribute to the flow of information on social media without making it a consistent habit.

Six respondents (10% of the sample) stated that they frequently engage in sharing, posting, or retweeting news articles or posts related to popular topics. The responses from this subgroup indicate active participation in the information dissemination process, suggesting a tendency to amplify discussions on trending topics within their digital circles.

The distribution of responses highlights the varying degrees of engagement demonstrated by respondents in sharing news and posts related to popular topics. The subsequent sections of the results will delve deeper into the factors that motivate respondents to share content, explore the types of content they are more likely to disseminate, and examine how their sharing behavior contributes to the broader dynamics of information flow on online social networks.

The seventh question of the research, “What factors influence your decision to engage with news or posts related to popular topics on social media?”, explores the motivations behind respondents’ choices to interact with content on digital platforms. This inquiry sheds light on the multilayered considerations that affect participants’ decisions to engage with news and posts related to trending topics, providing insight into the factors that shape their digital interactions.

Among the 60 respondents, varying considerations emerged as influential factors in their decision-making processes for engaging with news and posts on popular topics. A significant subgroup of respondents, 15 individuals (32.3% of the sample), indicated that personal interest is a key motivator. This result suggests that respondents are drawn to content that resonates with their individual curiosities, reflecting the importance of content relevance in driving engagement.

Eleven respondents (19.4% of the sample) highlighted the credibility of the source as a decisive factor in their engagement decisions. This response emphasizes the importance of trustworthy and reliable sources in guiding respondents’ interactions, reflecting a conscious effort to engage with content supported by reputable information providers.

An equal number of respondents, 11 individuals (19.4% of the sample), stated that their engagement is influenced by the alignment of content with their personal beliefs. This finding suggests that respondents tend to engage with content that reinforces their existing viewpoints,



reflecting the role of social media in strengthening echo chambers where like-minded perspectives are amplified.

Ten respondents (16.1% of the sample) emphasized the relevance of content to their friends or followers as a factor influencing their engagement decisions. This result highlights the importance of social connections in driving respondents' interactions, underscoring the role of content likely to stimulate discussions within their immediate networks.

Nine respondents (12.9% of the sample) indicated that emotional impact plays a role in their decision to engage with news or posts related to popular topics. This response suggests that emotionally resonant content has the potential to elicit active participation and responses from the respondents.

The distribution of responses illustrates the complex interplay of motivations influencing respondents' decisions to engage with social media content. By dissecting these factors, the study aims to provide a comprehensive understanding of the psychological, emotional, and social dimensions that contribute to the decision-making process, ultimately shaping the ways in which respondents communicate and contribute to the dissemination of information on popular topics.

The next research question, "How often do you verify information related to popular topics before sharing it on social media?", delves into respondents' practices of fact-checking before disseminating content within their digital networks. This study examines the frequency with which respondents demonstrate caution and discernment when sharing content related to trending topics, highlighting the role of information credibility in their online interactions.

Among 59 respondents, different patterns of fact-checking habits emerged as they reflected on their engagement with social media content. A significant portion of respondents, 17 individuals (32.3% of the sample), stated that they most often verify information before sharing it. This response suggests a conscientious approach to information sharing, reflecting the respondents' commitment to ensuring the accuracy of content prior to dissemination.

Fifteen respondents (29.0% of the sample) indicated that they always verify information related to popular topics before sharing it. This result highlights a strong commitment to information accuracy, demonstrating that these respondents prioritize responsible content sharing, even in the fast-paced digital environment.

Thirteen respondents (16.1% of the sample) stated that they sometimes verify information before sharing it. This response implies a more selective approach to verification, where respondents exercise discretion based on the perceived importance or relevance of the content.

Nine respondents (12.9% of the sample) indicated that they rarely verify information before sharing it. This finding points to a less stringent approach to verification, suggesting that these respondents may be more inclined to share content based on intuition or familiarity with the source.



Eight respondents (9.7% of the sample) stated that they never verify information before sharing it. While this group represents a smaller subgroup, their responses indicate a portion of participants who prioritize rapid content sharing over thorough fact-checking.

The distribution of verification habits among respondents highlights the varying degrees of caution exercised before sharing information on social media. The following sections of the results will delve deeper into the motivations and implications of these verification habits, examining how respondents' attitudes toward information accuracy contribute to the integrity of information dissemination on digital platforms.

The next research question, "Which sources do you trust the most for accurate information on popular topics?", delves into respondents' perceptions of reliable sources when seeking information related to trending topics. This investigation reveals the preferences respondents have for established information providers, highlighting the sources they consider trustworthy within the digital landscape.

Among 59 respondents, a diverse range of trusted sources emerged as participants considered their preferred means for obtaining reliable information. Specifically, both academic/research institutions and news websites garnered the highest levels of trust among respondents, with each selected by 16 individuals (27.1% of the sample) for academic/research institutions and 18 individuals (30.5% of the sample) for news websites. This finding underscores the importance of authoritative, fact-based sources in shaping respondents' information-seeking behaviors.

An additional 14 respondents (23.7% of the sample) expressed trust in traditional news sources such as newspapers and television broadcasts. This finding indicates that established media continue to hold credibility in the eyes of the respondents, despite the proliferation of digital platforms.

Seven respondents (11.9% of the sample) noted that they trust social media influencers as sources of accurate information on popular topics. This result suggests a recognition of the potential expertise and insights possessed by certain influencers, although it is noteworthy that this choice had a lower representation compared to more traditional sources.

Four respondents (6.8% of the sample) indicated that they trust government websites for accurate information. This response suggests a measure of confidence in official sources for information on popular topics, potentially reflecting reliance on authoritative bodies for factual content.

The diversity of trusted sources highlights the complex landscape of information credibility in the digital era. The following sections of the results will explore the implications of these preferences, shedding light on how respondents' trust in specific sources influences their engagement with information on popular topics and news, and how these perceptions shape their online interactions.

The next research question, "Have you ever changed your opinion on a popular topic based on



discussions or information encountered on social media?” investigates the potential influence of digital discussions on respondents’ opinions. This study seeks to understand whether social media interactions play a role in reshaping participants’ viewpoints, shedding light on the dynamics of opinion evolution in the digital sphere.

Among 60 respondents, a significant portion, 39 individuals (65% of the sample), admitted that they had indeed changed their opinion on a popular topic as a result of discussions or information encountered on social media. This response suggests that the digital arena serves as a space where individuals are exposed to diverse perspectives and information that can lead to changes in their viewpoints.

In contrast, 21 respondents (35% of the sample) stated that they had not changed their opinion based on discussions or information on social media. This result indicates a segment of respondents who remain steadfast in their views, potentially reflecting the influence of pre-existing beliefs or a limited range of exposure to diverse perspectives.

The distribution of responses highlights the potential influence of social media discussions and exposure to information on respondents’ opinions. The following sections of the results will delve deeper into the factors contributing to opinion changes, exploring the role of diverse perspectives, the nature of discussions, and the mechanisms that facilitate shifts in perception within the digital ecosystem.

The next research question, “How comfortable are you engaging in debates or discussions about popular topics on social media?” examines respondents’ willingness to participate in dialogues and conversations within the digital sphere. This study explores the level of comfort respondents experience when engaging in debates on trending topics, shedding light on their readiness to contribute to the exchange of ideas and perspectives.

Among the 59 respondents, the distribution of comfort levels is as follows:

1. Nine individuals (15.3% of the total respondents) reported feeling slightly comfortable engaging in debates or discussions about popular topics on social media. This response suggests a moderate level of readiness to express their views, accompanied by a certain degree of reservation.
2. A significant portion of the sample, 23 respondents (39% of the total respondents), expressed a neutral stance. Their responses indicate an absence of strong inclination toward either comfort or discomfort in participating in digital debates. This suggests that their willingness to engage in discussions may vary depending on the specific context or topic.
3. Eleven participants (18.6% of the total respondents) reported feeling very uncomfortable engaging in debates or discussions about popular topics on social media. This finding reflects a strong reluctance to enter potentially contentious exchanges or debates, possibly due to concerns about online confrontations or negative interactions.
4. Ten individuals (16.9% of the total respondents) indicated that they feel slightly uncomfortable participating in such discussions. This response suggests a certain level of apprehension, although participants in this group are not entirely opposed to engaging in debates on digital platforms.



5. Six respondents (10.2% of the total respondents) highlighted that they feel very comfortable engaging in debates or discussions about popular topics on social media. This result indicates a high level of confidence in their ability to navigate digital discussions and exchange diverse viewpoints without feeling overwhelmed or hesitant.
6. The next research question, “Do you think visual content is more appealing than textual content when it comes to news or information related to popular topics?”, investigates participants’ perceptions of the attractiveness of visual versus textual content in this context. This study aims to determine whether visual elements elicit greater engagement and facilitate more effective information transmission compared to traditional text-based content.

Among the 60 participants, a clear majority of 48 individuals (80% of the sample) indicated that they believe visual content is more appealing than textual content when it comes to news or information related to popular topics. This significant response suggests a widespread preference for visual elements as an effective means of capturing attention and conveying information, particularly in the context of rapidly evolving topics.

Conversely, 12 participants (20% of the sample) reported that they do not consider visual content to be more appealing than textual content in this context. This response suggests a belief that textual content remains a valuable means of conveying information, particularly for participants who prioritize in-depth analysis or comprehension of the material.

The distribution of responses underscores the significance of visual content in participants’ perceptions of engagement and appeal within the domain of news and trending topics. Subsequent sections of the results will examine the implications of this preference, exploring how the integration of visual materials in information dissemination aligns with participants’ content consumption habits and contributes to a richer understanding of trending subjects.

Discussions

As Karman (2014) said the information technology, especially the internet, contributes significantly to social change. Social media is an application with the most users by which people can easily interact and communicate virtually without limited time and place.

The findings of the study illuminate the complex interplay between social media platforms, information dissemination, and participants’ engagement with popular topics and news. Analyzing the responses across various questions provides valuable insights into how digital platforms influence communication, opinion formation, and information-sharing behaviors.

The diversity in the choice of social media platforms by respondents for regular use emphasizes the multi-layered nature of digital interactions. As platforms such as Facebook, Instagram, TikTok, and YouTube dominate respondents’ preferences, it is evident that visually-centered platforms play a significant role in facilitating the sharing of information related to popular topics. The prominence of these platforms aligns with respondents’ recognition of the influence of visual content on their understanding of news and trending topics. When people are overwhelmed with the volume of information confronting them, they have difficulty discerning what to focus on. Attention rather than information becomes the scarce resource, and those who



can distinguish valuable information from background clutter gain power. (Nay J. 2005)

The frequent use of social media platforms by respondents several times a day highlights the integral role these platforms play in their daily routines. Usage patterns indicate the significance of social media as a primary source of information and communication. This pattern is reinforced by participants' tendencies to actively seek information on popular topics through social media. The continuous flow of content available on these platforms facilitates real-time updates, making them a convenient source for staying informed about current events and discussions.

A further point must be noted with regard to data, and that is user concerns about privacy and their rights to their own data. In many of the early web applications, copyright is only loosely enforced. (O'Relly, 2005)

It is important to acknowledge that the study's findings are based on self-reported responses, which may be subject to bias or variations in interpretation. Future research could explore in greater depth the factors influencing respondents' decisions to verify information and the nuances of their engagement with visual content. Additionally, understanding how platform algorithms and content-sharing practices shape respondents' exposure to diverse perspectives could provide further insights into the dynamics of information dissemination on social media.

This paper and the analysis presented underscore the significant role of social media platforms in shaping communication, opinion formation, and information-sharing behavior related to popular topics and news. The prevalence of visual content, combined with the diversity of trusted sources, presents opportunities for robust information exchange. By examining this dynamic, the paper contributes to a deeper understanding of the complex landscape of digital interactions and their impact on the dissemination and comprehension of information in the digital era.

Conclusions

The use of social media has become an inseparable part of community communication patterns in the digital age Mutsvairo, B. (2016). Social media serves as a fundamental catalyst for global communication in the digital era, playing a significant role in the dissemination of news and information essential for effective communication. Through platforms such as Twitter, Facebook, Instagram, and others, public figures and citizens can communicate directly with the public and with one another, enabling faster and more efficient message distribution. The digital nature of these platforms eliminates the barriers of traditional communication and allows news and diplomatic messages to reach a wide audience in a short time. Social media enables messages and information to be transmitted globally, transforming the dynamics of international communication. Through platforms accessible to millions of users, public figures, diplomats, companies, and organizations have a broader reach and can communicate directly with diverse communities. This facilitates not only faster news dissemination but also the promotion of topics of national and global significance. The impact of visual content, such as videos and infographics, further enhances the clarity and speed of message delivery. There are several social media platforms that are frequently used in the digital era, such as Instagram, YouTube, and WhatsApp. Social media also provides various benefits across multiple fields,



particularly in education and the economy (Manurung, A. A. et al., 2023). News circulated on social media spreads rapidly and has a swift impact on shaping public opinion. The real-time nature of news on these platforms allows users to respond to events as they unfold. This enables individuals to quickly become informed, react, and comment on developments, accelerating the process of public opinion formation. Social media eliminates traditional intermediaries, allowing information to reach the audience directly. Through social networks, messages and opinions can reach the public without the need for traditional mediators. Consequently, communication becomes more open and accessible, enabling information to reach the audience without interpretation or alteration.

Conflict of interests

I declare no conflict of interest.

References

1. Arafah, B., & Hasyim, M. (2022). Social media as a gateway to information: Digital literacy on current issues in social media. *Webology*, 19(1), 2491-2503.
2. Boyd, D., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 12(3), 210-230.
3. Cathy Sun (2020). *Social media and the new age of diplomacy*. Retrieved from <https://uschinadialogue.georgetown.edu/responses/social-media-and-the-new-age-of-diplomacy>
4. Constance Duncombe, Twitter and transformative diplomacy: social media and Iran–US relations, *International Affairs*, Volume 93, Issue 3, May 2017, Pages 545–562, <https://doi.org/10.1093/ia/iix048>
5. Karman. Social Media: Between Freedom and Exploitation. *Jurnal Studi Komunikasi dan Media*, 18 (1), 2014, 75-88.
6. Khan, G.F., Swar, B., & Lee, S.K. Social Media Risks and Benefits: A Public Sector Perspective. Korea: KoreaTECH, 2014.
7. Manurung, A. A., Saragih, E. P., Gurning, E., Tarigan, I. Y., Silaban, M. W., & Napitupulu, O. (2023). Social Media Utilization in the Digital Era. *Indonesian Journal of Education and Mathematical Science*, 4(1), 36-39.
8. Martin, A. (2005). DigEuLit – A European framework for digital literacy: A progress report. *Journal of eLiteracy*, 3(1), 130-136.
9. Melissen, J. (Ed.). (2005). *The new public diplomacy: Soft power in international relations*. Palgrave Macmillan.
10. Mutsvairo, B. (2016). Digital activism in the social media era. *Switzerland: Springer Nature*.
11. Nye, J. S. Jr. (2004). *Soft power: The means to success in world politics*. PublicAffairs.
12. O'Reilly, T. (2005). What is Web 2.0: Design patterns and business models for the next generation of software. *Communications & Strategies*, 1(6), 17-37.
13. Zahra, A. A., Purnomo, E. P., & Kasiwi, A. N. (2020). New democracy in digital era through social media and news online. *Humaniora*, 11(1), 13-19.



Measures and Mechanisms for Improving the Judiciary in the Republic of North Macedonia

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Abstract

This paper analyses the state of the judiciary in the Republic of North Macedonia, with the aim of identifying the key weaknesses that affect its independence and the public's confidence in the judicial system. The research employs qualitative analysis of relevant legislation, institutional reports and international rule of law indices, as well as case studies. The findings indicate the presence of political influence, insufficient transparency, delayed proceedings and a perception of selective justice. Systemic reforms are needed to depoliticise the judiciary, increase oversight, and enable greater efficiency and digitalisation with accountability. This will strengthen public trust and the rule of law in the country.

Keywords: judiciary; independence; transparency; reforms; digitalisation; Macedonia

Introduction

The judiciary is one of the fundamental pillars of any modern democratic state, whose role is not only reflected in the application of legal norms, but also in creating social balance and protecting individual rights and freedoms. In the theory of the separation of powers, the judiciary is meant to act as an independent and impartial arbiter, a guarantor of the rule of law and justice. However, in practice, particularly in transitional countries such as the Republic of North Macedonia, this ideal often faces numerous challenges that undermine its legitimacy and effectiveness. Political influences, corruption, inefficiency, and structural weaknesses are just some of the problems facing the judicial system. These phenomena are not isolated but form part of a complex systemic mess that has profound consequences for the country's social development, economic stability and European prospects. The public's perception of injustice and inequality before the law creates a climate of mistrust that undermines the most fundamental democratic processes. In the context of European integration, the reform of the judicial system is a key priority, but also one of the most difficult challenges. Although there is a formal commitment to reforms, their implementation often falls short, prolonging the genuine transformation of the judiciary. This gap between theory and practice, between proclaimed reforms and their actual implementation, is a central problem that this paper explores. The aim of this research is to analyse the key challenges facing the judiciary in the Republic of North Macedonia, with a particular focus on political influences, corruption, and public opinion. The paper combines a theoretical approach with empirical research, based on a survey questionnaire conducted among a representative group of citizens. In this way, we aim to provide a



comprehensive picture of the situation in the judicial system, identifying the root causes of its inefficiency and offering concrete recommendations for its improvement. The structure of the paper includes an analysis of the theoretical foundations of the judiciary, an investigation of political influences, an examination of corruption and mistrust, as well as a presentation of the results of the empirical research. The final sections focus on possible solutions and prospects for improving the judiciary in the context of European integration. In this way, the work offers a comprehensive approach to understanding and resolving the problems within the judicial system, which are crucial for the country's future development.

Materials and Methods

For the purposes of this research, a questionnaire survey method was used. The survey was conducted between 16 October 2025 and 26 October 2025 on a total of 87 respondents. The questionnaire was designed to examine citizens' perceptions of the state of the judicial system, with a particular emphasis on the independence, efficiency, and transparency of the judiciary. The issue of the judiciary in North Macedonia has been addressed by several authors. **Stojanovska and Angelova (2022)**, in their study 'Justice on Test', highlighted the political influences on the judiciary. **Petrevski (2023)**, in the paper 'Corruption and Justice' and **Academic Ivanov (2024)** in the comparative study 'Judicial Reforms in the Balkans'

Results and discussion

This research, conducted via a questionnaire, revealed critically low trust in the judicial system. What was interesting to us was that the respondents showed strong support for the introduction of modern technologies. Over sixty per cent were in favour of the automation of case allocation, viewing digitalisation as a path towards greater transparency. This support is higher among younger respondents, suggesting a generational difference in the perception of the solutions.

A survey of 87 respondents revealed a critical level of distrust in the judicial system. The survey showed that 72% of respondents believe the judiciary operates under political influence, while 77% identify corruption as a key problem. The speed of court proceedings was rated as unsatisfactory by 96% of respondents.

A tabular representation of the key findings in the study

Perimeter	Result	Percentage
Perception of political influence	63 respondents	72%
Corruption as a major problem	67 respondents	77%
Dissatisfaction with the speed and procedures	83 respondents	96%
Support for digitalisation	54 respondents	62%
Trust in the judiciary	9 respondents	10%

1. Theoretical foundations of the judiciary

1.1 The Concept of the Separation of Powers

The separation of powers is a fundamental pillar of every democratic state. This concept is based on the idea that state power should be divided into three independent branches: the legislative, executive, and judicial. The aim is to establish a system of checks and balances to prevent the possibility of power being abused.



In the Republic of Macedonia, the separation of powers is constitutionally guaranteed. According to the Constitution of the Republic of Macedonia, the legislative power is exercised by the Assembly, the executive power by the Government, and the judicial power is independent and is exercised by the courts. The judiciary is responsible for the protection and enforcement of citizens' rights and freedoms, as well as for ensuring the rule of law.

The foundation of a strong rule of law is judicial independence. This implies that judges must be independent in their work.

They must carry out their work, that is, their decision-making, independently, without any influence such as:

1. Political influence
2. Influence from institutions
3. Interest groups

The impartiality of the court entails equal access to justice for all citizens, without discrimination, prejudice or influence. It is achieved through clear and fair procedures for the appointment and removal of judges, transparency in court proceedings, and the training and professionalism of the judiciary.¹

As far as the Republic of Macedonia is concerned, public reactions and opinion are not particularly favourable towards the country's judiciary. The public perceives the justice system as subject to political influence, corruption and inefficiency. Cases such as "Kočani", "Frosina", and others, only deepen citizens' distrust of the judicial system. Therefore, it is essential to advance the principles of independence and impartiality through concrete mechanisms and reforms.

Fundamental principles according to international standards

International organisations such as the United Nations, the Council of Europe and the European Union have established clear standards for the functioning of the judiciary. The basic principles include:

1. Independence from the executive and legislative branches
2. Objective and transparent selection of judges
3. Protection of judges from political and economic pressures
4. Training and continuous professional development
5. Obligation for public accountability

Compared with EU member states, Macedonia lags behind implementing these principles. For example, according to the Rule of Law Index of the World Justice Project, Macedonia scores lower in judicial independence than countries such as Slovenia, Croatia or Bulgaria. This highlights the need for a systematic approach to the advancement of the judicial system.²

¹https://commission.europa.eu/document/download/e7197a43-7f00-4eac-b02d818ac71345f0_en?filename=61_1_58090_coun_chap_northmacedonia_nm.pdf

² <https://rm.coe.int/north-macedonia-2024-2022-/1680b1f6e3>



1.2. Political influences on the selection and dismissal of judges.

Insufficient implementation of reforms – laws are passed, but not always enforced. The European Union and the international community contribute to guiding, supporting and monitoring judicial reforms in Macedonia. However, the responsibility for a successful and long-term reform remains with domestic institutions, political will and civil pressure. Without internal commitment, external support has a limited effect. The judicial system in Macedonia and other Balkan countries faces similar challenges, including political influence, corruption, lack of independence and inefficiency. Although reforms have been undertaken, their implementation is limited and progress is slow.

In Macedonia, the judiciary faces a low level of public trust, with only 4% of citizens trusting it fully. The main problems include political influence, inefficiency, insufficient transparency and a lack of financial resources. In 2022, the digitisation of the courts was initiated, but progress has been slow due to the need to amend more than 200 laws. In 2023, controversies arose over the removal of the president of the Judicial Council, which led to concerns about the independence of the judicial system.

Albania is implementing significant reforms through the 'vetting' law, which allows for the scrutiny of the assets, professional ethics, and competence of judges and prosecutors. This reform led to the removal of a large number of judges and prosecutors, but the process faces challenges in terms of implementation and political influence.

Serbia has initiated reforms to improve the independence of the judicial system, but faces serious challenges. In 2024, the European Commission emphasised that although steps have been taken to improve independence, there are serious concerns about protecting judicial independence from political influence. Furthermore, public confidence in the judiciary is low, and corruption remains a serious problem.

Bosnia and Herzegovina has begun negotiations for EU membership, but the judicial system remains susceptible to political influence and ethnic divisions. In 2019, the European Commission recommended the adoption of a new Law on the VSTV to strengthen the independence and accountability of the judicial system. However, the reform process is slow and faces political obstacles.

Montenegro has begun EU membership negotiations and undertaken some reforms in the judicial system. However, it faces challenges regarding the independence of the courts and the fight against corruption. In 2024, the European Commission emphasised that although steps have been taken to improve independence, there are concerns about protecting judicial independence from political influence. The judicial system in Balkan countries faces similar challenges, including political influence.

Political influence over the judicial system is not a recent phenomenon. Since independence, the judiciary has been subject to various forms of pressure from the executive branch. The system for selecting judges and prosecutors, particularly through the Judicial Council and the Council of Public Prosecutors, has long been heavily influenced by party structures.



1.3. Judicial independence and impartiality

The fundamental problem begins with the system for selecting and appointing judges and public prosecutors. Although formally independent bodies such as the Judicial Council and the Council of Public Prosecutors were established to ensure impartiality and objectivity in the selection process, their composition and mode of operation have long been dominated by political interests. Some members of these bodies are appointed by the Assembly, which directly opens the door to party influence. Thus, instead of selecting professionally and ethically competent candidates, the selection process often boiled down to political compromise, clientelism and personal interests. Influence is also manifested through the career development of judges and prosecutors. Case transfers, promotions, disciplinary proceedings, and dismissals are often used as tools of pressure. Judges considered 'disloyal' to certain political structures may be placed under monitoring, removed from sensitive cases, or sanctioned under questionable circumstances. At the same time, those who cooperate with the ruling structures are rewarded with promotions, prestigious cases, and institutional protection.³ The result of all this is an erosion of citizens' trust in the judicial system. The perception that justice is not available on an equal footing for everyone, but is selective and directed by political interests, encourages apathy and mistrust. Instead of being a shield for the rights and freedoms of citizens, the judiciary is increasingly perceived as an extension of the ruling parties.

The international community and domestic civil society organisations constantly point to the need for reforms in the justice sector. The European Commission, the Venice Commission and other bodies regularly note political influences as one of the main obstacles to the rule of law and the country's European integration. However, the implementation of substantive reforms is proceeding slowly, often in a formal manner and without genuine political will. Without genuine depoliticisation of the judicial system, transparency in the selection of judges and prosecutors, as well as clear mechanisms for accountability and protection from political pressure, justice will remain a hostage to day-to-day politics. The true independence of the judiciary is not just a legal category, but a prerequisite for a democratic and just society.

It is necessary to prevent and completely eradicate the mechanisms of political pressure that are implemented in the judicial system and its bodies.

For a start, the selection of judges and prosecutors, which theoretically exists as a transparent and independent system through the Judicial Council, in reality often results in the appointment of individuals close to certain political circles. Political parties influence personnel policy through informal channels. Pressure through the media and public narrative follows, where some media outlets close to political centres of power exert pressure on judges through campaigns, threats, and the devaluation of their work by publishing false information with the aim of further increasing distrust.

Selective justice, as the greatest contributing factor to distrust, is evident in the fact that court proceedings against opposition or 'disobedient' figures are conducted much more aggressively and swiftly than those against individuals close to the government. Furthermore, political

³ <https://www.opengovpartnership.org/members/north-macedonia/commitments/MK0178/>



control over the public prosecutor's offices, although formally independent, shows in practice that the chief public prosecutor and other senior prosecutors are often politically aligned with the ruling establishment. According to surveys and research by the , more than 70% of citizens do not trust the judiciary. This creates a sense of injustice and fuels social and political tensions.

2. Corruption and distrust in the judiciary

Corruption in the judiciary represents a serious threat to the rule of law and democracy. In the Republic of North Macedonia, corruption in the judicial system is a long-standing and systemic problem that undermines institutions, erodes public trust and slows the country's European integration. The judicial system, which should be a pillar of justice, is increasingly perceived as a tool for political and economic interests, being abused in the making of judgments, decisions, and in the governance and respect for the law and the state's Constitution.

The 2024 Corruption Perceptions Index (CPI) shows that corruption is a dangerous problem in every part of the world, but improvements are happening in many countries. The CPI ranks 180 countries and territories around the world according to their perceived levels of public sector corruption. The results are given on a scale from 0 (highly corrupt) to 100 (very clean). North Macedonia is ranked 88th out of 180, with a score of 40/100, a drop of 2 points over the past two years.⁴

The increase in the average score in the Middle East and Western Balkans is a cause for optimism, but this is the first rise in more than a decade, and it is only one point – to 39 out of 100. To achieve significant progress, this region must tackle the immense challenges of conflict and authoritarianism. There is a general lack of trust in the institutions' commitment and ability to improve the general state of the country. Corruption, nepotism, clientelism, personal and party interests, and political and family connections are the most frequently mentioned problems associated with the institutions and are the main source of distrust.

2.1. Political influence

Government parties have influence over the appointment and promotion of judges. Unfortunately, in countries with a low level of prosperity, the significant areas for growth are subject to extremely low levels of party influence and bias, as they hire personnel (judges, public prosecutors, civil servants and lawyers) who are employed on the basis of their political affiliation, rather than their expertise and suitability for the position. As a country with a low level of trust in its judiciary, precisely due to the high prevalence of corruption, Macedonia finds itself at an unfavourable and unsatisfactory level for a state that is growing, integrating and striving for European aspirations. This is the result of the resentment and mistrust felt by the Macedonian population, stemming from court rulings that conclude without fully respecting the law and the Constitution.⁵

2.2. Weak institutional framework, insufficient resources and low salaries

Insufficient independence of the Judicial Council and an ineffective system for disciplinary accountability, as well as insufficient resources and low salaries for judges and court staff, also

⁴ North Macedonia ranked 63rd in the Rule of Law Index

⁵ Corruption Perceptions Index 2024 - Transparency.org



represent a problem that requires a solution to improve the judiciary. Higher salaries and an increased allocation of the resources required for work would provide a strong incentive for judges to devote greater effort to resolving cases. A culture of impunity and the poor protection of whistle-blowers on corruption are part of the branch that weighs heavily on confidence in the judiciary. The reason for this is the small number of cases in which corrupt judges are punished. Citizens or parties who point out irregularities often face pressure from senior state officials or remaining political factions, which further discourages them from reporting wrongdoing.

2.3. Loss of confidence in institutions

Over 70% of citizens believe they do not have equal access to justice (according to IDSCS), which indicates a deeply rooted distrust in the judicial system.⁶ This sense of inequality stems from the perception that the courts do not treat all citizens equally, but often act according to political or economic interests. As a result, citizens feel discouraged from seeking protection of their rights through the institutions, which further challenges the rule of law and undermines democracy.

Selective justice, impeded economic development and blocked EU integration are among the greatest losses resulting from the practice of corruption. Investors avoid a state with an unstable and unpredictable judiciary, a state in which laws are frequently changed, as they cannot rely on a judicial system that is unstable and lacks public confidence, which is of paramount importance when starting a business or making an investment in a country such as the Republic of Macedonia. This is happening as a result of several failed investments and business plans to open companies in this territory, which would have resulted in the creation of new jobs and an automatic reduction in the unemployment rate.

Low public trust in the judiciary

Research (by IDSCS, Transparency International) shows that over 60% of citizens have no trust in the judiciary. North Macedonia is ranked 63rd in the 'Rule of Law Index' by the Washington-based non-governmental organisation, the World Justice Project. The published report indicates that Denmark leads the list, while within the European Union, Bulgaria and Hungary are the lowest-ranked when it comes to the rule of law.

For this year's Rule of Law Index, more than 154,000 households and 3,600 legal experts were surveyed. Among the Western Balkan countries, Kosovo is the best placed (57), followed by North Macedonia (63, up one place from last year's 64) and Bosnia and Herzegovina (70). Montenegro is not mentioned on the list. Serbia, which has fallen compared to last year, is in 83rd place this year, while Albania is in 87th place out of a total of 140 ranked countries.

2.4. Frequent case backlogs

Deliberate prolongation of proceedings leads to statutes of limitations being reached, a phenomenon particularly common in cases involving high-profile individuals.

The "Target-Fortress" case

⁶ The Judiciary in 2023 - from delayed to outdated justice – Libertas p.3



This case concerns the mass illegal wiretapping of over 20,000 citizens. Although the Basic Criminal Court delivered verdicts in 2021, the Ap t Court overturned them and remitted the case for a retrial, stating that the verdict was unclear and unsuitable for further examination. With the amendments to the Criminal Code, some of the charges in the 'Target-Fortress', 'Talir', 'TNT', 'Trajectory', and 'Toplik' cases became statute-barred or were amended, "Power Broker", etc. According to legal experts, with the amendments to articles 353 and 394, absolute prescription for criminal prosecution will occur for 14 court cases involving over 80 accused individuals.

The main "Target-Fort" case, which concerns the illegal wiretapping, began on 22 December 2017 against 11 individuals, including the former director of the State Intelligence Agency, Sašo Mijalkov. During the proceedings, 53 hearings were held, at which 123 witnesses were heard, 887 pieces of material evidence were presented, and five expert analyses were conducted. A large number of more than 200 victims were also heard. The Criminal Court announced the first-instance verdict on 26 February 2021, after just over three years. A total of 55 years and 10 years of suspended sentences for 11 individuals. The Court of Appeal in Skopje, in December 2022, upheld the appeals of the defendants in the 'Target-Fortress' case and overturned the first-instance verdict, returning the case to the Basic Criminal Court in Skopje for a retrial, citing 'substantial violations'.

The 'Empire' case

The 'Imperia' case is a 2018 investigation by the SJO against a group of individuals, including businessman Orce Kamchev and Sasho Mijalkov, for organised crime, money laundering and abuse of office. The suspects transferred and concealed millions of euros through a network of companies, thereby causing a loss to the state budget of over 6 million euros. A large number of properties and shares in companies have been frozen. In 2023, one individual pleaded guilty and received a suspended sentence. As part of the investigation, 12 searches were conducted and five people were arrested. The SJO used special investigative measures, including legally intercepted conversations, to secure evidence of the criminal scheme. During 2022, the Prosecutor's Office concluded the investigation and froze significant assets linked to the suspects, including shares in companies, real estate and securities.

The "Imperia" case exposes the complexity of organised crime in the country and highlights the need for effective institutions and the rule of law. Although the investigation has concluded, the public remains vigilant about the outcome of the court proceedings and their impact on the fight against high-level corruption. Due to amendments to the Criminal Code and the prolongation of court proceedings, some of the accused evaded criminal liability due to the statute of limitations. This is a sufficient indicator of how the rule of law is being undermined and how "incomplete" verdicts are being delivered for massive criminal offences that harm the public interest. One of the significant weaknesses of the Macedonian judicial system is the frequent and unclear rotation and promotion of judges without transparent criteria. Judges with political connections are often rewarded with promotions and influential positions, while those deemed unsuitable are marginalised or removed from key cases. Furthermore, it is concerning that there are virtually no investigations or sanctions against judges and prosecutors, despite



numerous reports of irregularities and unprofessional conduct.⁷

The lack of disciplinary accountability fosters a sense of impunity within the judiciary. Compounding this is the disproportionate wealth held by some judges and prosecutors – their asset declarations reveal a luxurious lifestyle that is inconsistent with their official salaries. These phenomena undermine public confidence in the judiciary and violate the principle of equality before the law.

2.5. GRECO Recommendation

GRECO recommended that, in order to strengthen the independence of the judiciary from undue political influence, the ex officio membership of the Minister of Justice in the Judicial Council be abolished.

In the Addendum to the Second Compliance Report, GRECO assessed that this recommendation had not been implemented. GRECO expressed regret at the continued lack of progress regarding this recommendation.

The authorities now indicate that between 2019 and March 2023 the Minister of Justice did not attend a single session of the Judicial Council. Article 11, paragraph 4 of the Rules of Procedure of the Judicial Council (Official Gazette of the Republic of North Macedonia No. 274/2019 and 186/2020) provides that materials for proceedings in which they do not participate are not provided to certain members of the Judicial Council, namely the Minister of Justice and the President of the Supreme Court. In accordance with this provision, the Minister of Justice has not received any information on cases concerning the accountability of a specific judge and/or court president, or concerning the selection of a specific judge and/or court president. This means that the Minister cannot exert any influence over these proceedings. Furthermore, the Minister of Justice's practice of 'non-participation' in the sittings of the Judicial Council serves as a form of protection against the Minister's potential political influence on the work of this body. This modus vivendi will continue to be practised until an amendment to the Constitution is adopted, providing for provisions to exclude the Minister of Justice from the Judicial Council.

GRECO takes note of this information. GRECO is aware that this recommendation requires a constitutional amendment and that although a proposal in this regard was drafted, it did not successfully pass in Parliament. The explanations provided by the authorities are the same as in previous reports: the Minister of Justice does not participate in the sittings of the Judicial Council. Therefore, he cannot exert any pressure on the Judicial Council.

GRECO reiterates that there is always a risk of political influence even in the absence of a formal voting right, and even in the absence of the Minister of Justice's formal and personal attendance at meetings, and therefore expresses regret at the continued lack of progress regarding the implementation of this recommendation.

⁷ Home - IDSCS



GRECO concludes that Recommendation v remains unimplemented." Effectiveness⁸

2.6. Cooperation between the Public Prosecutor's Office of the Republic of North Macedonia and the SIO

As part of enhancing institutional cooperation between the State Commission for the Prevention of Corruption and the Public Prosecutor's Office of the Republic of North Macedonia, several activities were carried out in 2024 with the aim of strengthening coordination and improving efficiency in tackling corruption.

Supported by the EU's IPA 2020 'Rule of Law' project, the two institutions have begun drafting a new Memorandum of Cooperation, taking into account the 18th Annual Report on the work of the State Commission for the Prevention of Corruption for 2024, given that the validity of the current one expires in the first quarter of 2025. The initial draft of the Memorandum was prepared in October 2024, and its signing and entry into force are expected in 2025. The process was further encouraged by the conclusions of the thematic workshops organised as part of the USAID project – "Partnership Against Corruption". A series of meetings was held with focal points from both institutions, at which opportunities for enhancing mutual information exchange, joint action, and cooperation in handling anti-corruption cases were discussed.

In May 2024, a two-day workshop was organised to strengthen the coordination mechanisms between the DKSC and the Public Prosecutor's Office. In November 2024, a practical simulation of cooperation was conducted for the first time, in the presence of representatives from both partners, as well as from the USAID and IPA 2020 projects. Throughout 2024, the two institutions maintained a regular and timely exchange of information and documentation on cases of mutual interest, thereby strengthening transparency and efficiency in their work.⁹

2.7. The role of the media and civil society organisations

The media, as a primary source of information, are a tool in shaping public perception of the judicial system. In democratic societies, they are referred to as the 'fourth estate' precisely because of their power to inform, to expose wrongdoing and to influence public opinion. In the context of trust in the judiciary, the media can act as a bridge between the courts and the public, but also as a factor that can undermine that trust if they do not act professionally.

Transparent and responsible media coverage can increase trust in the judiciary. Through objective and timely reporting on court proceedings, decisions and reforms, the media can help foster a sense of fairness and accountability. When the public is well informed, there is less room for speculation, manipulation and doubts about the legitimacy of judicial institutions.

On the other hand, sensationalism, unverified information and biased reporting can seriously undermine confidence in the judiciary. In situations where the media convey one-sided views, abuse their power for political ends or spread false narratives, citizens may develop the perception that the justice system is corrupt, politically instrumentalised or ineffective. It is particularly important for the media to exercise special responsibility when reporting on cases

⁸ FIFTH ROUND OF EVALUATION Prevention of Corruption and Promotion of Integrity in Central Government (highest executive functions) and Law Enforcement Bodies COMPLIANCE REPORT NORTH MACEDONIA

⁹ (Annual Report on the Work of the State Commission for the Prevention of Corruption for 2024, pp. 17 and 18).



of public interest, such as corruption scandals, investigations into high-ranking officials, or sensitive court proceedings.

In the Republic of Macedonia, Media influence exerts a high level of impact on the population, particularly among older people who are not sufficiently familiar with how online portals operate, and thus they are easily taken in by fake headlines and news that the portals use to boost their view counts or to create propaganda. The most common culprits are portals and online forums that publish news related to current trials, which, without supporting evidence, release fake news and information that further widens the gap between the institutions and the public. This contributes to public distrust and resentment towards the judiciary, regardless of the verdict's outcome.

On the other hand, the mass media are dubbed "more reliable" conveyors of information because of their status as traditional outlets that inspire greater trust among citizens, but that does not mean they do not alter the news or publish transparently. The author of the analysis "Courts and Journalists – Publicity Behind Closed Doors", published by the Association of Citizen Witnesses, pointed out that the document's aim is to raise public awareness of journalists and to highlight the issue of public access in court proceedings. The document states that restricting the right to freedom of information calls into question freedom of expression and the right to receive and impart information. To prevent the restriction of freedom of information, it is emphasised that journalists should report on these topics, but also that they need to be educated on how to proceed should they be unlawfully prevented from carrying out their profession. Provisions of the Criminal Procedure Code (CPC) relating to the secrecy of the investigation were analysed, and the right of the public to be informed was emphasised. The right and obligation of journalists to investigate and inform by carefully verifying the content of the materials and information they encounter was emphasised. The document also stresses the duty of the authorities to provide information to the public that will not jeopardise the investigation and, at the same time, satisfy the public interest. Publicity is emphasised as an important segment of judicial proceedings. Journalists are encouraged to react to any cases in which they observe the unlawful exclusion of the public from proceedings. It was also stated that the media and the judiciary depend on mutual support and cooperation in order to ensure the necessary transparency in the work of the courts. At the same time, the media should respect the independence and impartiality of the judiciary.¹⁰¹¹

3. Security and working conditions for judges and prosecutors

3.1. Protection from threats and influences

In recent years, even in countries that are exemplars of democracy and security, such as the United States, there has been a worrying trend of increasing threats against judges and prosecutors, particularly in cases of high political or public sensitivity. For example, in the US, in the first five months of 2025 alone, 373 threats against federal judges have been investigated, representing a significant increase compared with the previous year. These threats include various forms of intimidation, from anonymous messages to direct attacks.

Therefore, if such examples are taken into account and analysed, in Macedonia it is necessary to establish effective security mechanisms to protect judges and prosecutors, such as:

¹⁰ Witness - "Courts and Journalists - Publicity Behind Closed Doors", p. 8

¹¹ (p.7 Journalists' experience and views on judicial transparency in North Macedonia).



- Enhancing physical security in courts and judges' homes.
- Providing personal protection in high-risk cases.
- Developing rapid response protocols for threats.

It is important to establish a culture of zero tolerance towards influence on judges and prosecutors, with strict sanctions for attempts at pressure or corruption.

Financial and professional independence

Financial independence for ensuring the impartiality of judges and prosecutors is a tool for promoting and improving the overall state of the judiciary. In some countries, independent commissions have been established to determine judges' salaries, in order to avoid political influence on their financial situation, which is not the case in our country. In some EU member states, the Constitution guarantees that judges are independent and that their careers cannot be influenced by other state bodies. This practice could serve as an example for Macedonia, where it is necessary to strengthen the financial and professional independence of judges and prosecutors, namely to have:

- Establishment of independent bodies for determining salaries
- Guaranteeing career stability and protection from unfounded disciplinary proceedings.

Psychological support and stress management

The work of judges and prosecutors is often associated with a high degree of stress, especially when dealing with sensitive cases. Therefore, it is important to provide psychological support, which may include: regular psychological consultations and stress management workshops, provision of mental health resources, and the creation of a supportive work environment that recognises and addresses stress-related issues. Such measures not only improve the well-being of judges and prosecutors, but also increase their efficiency and objectivity in their work.

3.2. The role of the human factor and opportunities for automation

Continuous and proper training is essential for maintaining high professional standards in the judiciary. In Macedonia, there is the Academy for Judges and Public Prosecutors which organises programmes for continuous professional training, with a minimum of 30 hours per year for judges and prosecutors with more than eight years' experience. In order to ensure high-quality personnel, there needs to be greater promotion of such training, through which professionalism in the judiciary is guaranteed.

These programmes help to:

- Increasing professional competence.
- Developing ethical standards and integrity.
- Enhancing capacities to address new challenges in the justice system.

Case allocation algorithms

The allocation of cases in courts should be fair and transparent to avoid the possibility of manipulation or bias. In some countries, algorithms are used for the automatic allocation of cases based on the specialisation and workload of judges.

Such systems help to ensure a fair distribution of work, reduce the possibility of influencing the selection of a judge for a particular case, and increase efficiency and transparency in the judiciary. In Macedonia, the implementation of such systems could contribute to improving



confidence in the judicial system.

3.3. Use of artificial intelligence and digital systems in the judiciary

Artificial intelligence is increasingly being used in the judiciary to automate certain processes, such as:

- Review and analysis of documents.
- Predicting the outcome of cases based on previous judgments.
- Decision support.

In our country, the integration of artificial intelligence and digital systems into the judiciary should be carried out carefully, with respect for ethical standards and by providing appropriate training for judges and prosecutors, but nevertheless, such major changes could prove to be beneficial and improve the situation in a country such as Macedonia.

3.4. Reducing the human factor and its influence on judicial assessment

Automation and the introduction of digital systems in the judiciary bring significant benefits such as faster case processing, a lower likelihood of technical errors and greater efficiency. However, this also entails a real danger: the human factor, which is crucial to fairness.

A judicial decision is not always simply the application of the law. Sometimes empathy, an understanding of the life context, or moral judgment is required. If automated systems become the primary decision-maker, situations may arise in which decisions are technically correct but unjust from a human perspective. For example, two similar cases may have the same facts but a completely different background: family circumstances, health problems, genuine remorse – something only a human can assess and incorporate into the decision. Therefore, automation should serve as a support tool, not as a replacement for a human. The role of the judge should remain central, as only a human can appreciate the 'human' side of justice.

4. The role of the European Union and the international community

In the Republic of Macedonia, the reform of the judicial system is one of the state's main priorities in the process of European integration. The European Union (EU), together with other international actors such as the OSCE, the Council of Europe and USAID, has played a significant role in setting the judiciary reform as a key condition for Macedonia's approach to membership.

Through its annual progress reports, the EU monitors reforms in the judicial sector and applies pressure to improve the independence, efficiency and transparency of the judiciary.

EU-funded projects

IPA funds (Instrument for Pre-Accession Assistance): Financing reforms in the judiciary, training for judges, and the digitalisation of courts. Projects such as "EU for Justice": Supporting the Judicial Council, the public prosecution service, and enhancing the capacities of the court administration.

4.1. Expertise from Member States

Through Twinning programmes and peer review missions, experts from member states transfer



good practices and participate in assessing the state of the judiciary, such as providing support to special bodies like the SJO (Special Public Prosecutor's Office) and the current anti-corruption institutions.

The first wave of reforms was inspired by the new democratic constitutions and the European Convention on Human Rights, incorporating international standards from comparative law and the law and practice of the European Convention. This meant introducing additional accusatorial elements into the still mixed model of criminal procedure. The efforts to provide a modern legal framework for the independence of the judiciary should not be forgotten, which is also a vital pillar of the concept, for a fair trial. This changed the entire ideology of criminal procedure, which is no longer based on faith in state bodies and the court but, on the contrary, distrusts them and therefore relies on procedural justice founded precisely on scepticism about the easy and objective ascertainment of truth and justice in the proceedings. The new guarantees for the individual undoubtedly reflected a climate of de-statification and a turn towards the rights, freedoms and interests of every individual. Unfortunately, the military conflicts and instability in the region did not create the conditions for the new constitutional concepts that placed the individual and his rights above the state to be consistently realised in practice. On the other hand, the new ideas and solutions for the protection of citizens' rights and freedoms in criminal proceedings failed to be realistically established and implemented, when in Europe and more broadly on the world stage priorities suddenly changed and a completely opposite tendency emerged to strengthen the state's instruments in the effective fight against crime, terrorism and corruption, which in a way also introduced certain confusions regarding the priorities and basic values of the criminal justice system and the principles on which it ought to function. The new institutions 'served up' by Europe in relation to witness protection, the application of special investigative measures and the like have been reflected as a completely new trend which, in order to enhance efficiency, has led to a visible erosion of the protection of human rights in criminal proceedings, which has had a negative impact on the ability to provide an effective defence for suspects and accused persons. The negative effect on human rights and, more generally, the principles of the rule of law in the countries of the Western Balkans region, similar to other young democracies in Central and Eastern Europe, from these new developments, is caused by the fact that in these states there simply was not enough time or the necessary conditions to establish the safeguards and instruments that these new powers of state prosecutorial bodies would apply in a manner that would guarantee a minimum of abuses.

4.2. Fact-checking, transparency and public scrutiny

Media outlets and fact-checking platforms play a crucial role in monitoring and analysing court proceedings. They enable the public to be informed about the progress of specific cases, to identify potential irregularities, and to encourage public pressure for fairness and accountability.

In Macedonia, several media outlets and non-governmental organisations (such as "SLOBODNA TV", "Meta.mk", and "CriThink") are already practising fact-checking and monitoring of court proceedings. This is particularly important in the context of sensitive cases,



where there is a risk of manipulation or political influence.¹²

The application of the open data principle means that the judiciary should publish accessible and verifiable information in digital form:

- Publication of all court decisions
- Court calendar
- Updated judges' biographies
- Court performance statistics

In several European countries, digital platforms already exist where citizens can track and analyse decisions, as well as participate in public discussions. Introducing such platforms here will also contribute to increased transparency and allow public scrutiny of the courts' work.

4.3. Judicial accountability

Accountability means that judges and courts must be held accountable for their work to the citizens and institutions. This includes: mechanisms for reporting corruption, disciplinary proceedings against judges who have abused their office, regular reports to the public, and oversight by the Judicial Council and the SCO.

5. Results of the research conducted using the "questionnaire" instrument

In order to gain a clearer picture of the state of the judiciary in the country, the team working on this academic paper conducted a survey to gauge public opinion, the level of awareness of the court system's work, and satisfaction with it. The questions and the results of the survey are provided below.

The questionnaire was completed by 86 respondents between 16.10.2025 and 26.10.2025.

Table 1: Demographic characteristics of the respondents

1. Age - This table shows the age of the respondents. The most represented age groups are **18–25 years (33.7%)** and **45–55 years (31.3%)**, which indicates that the survey was predominantly completed by young and middle-aged people.
2. Gender - The table shows the gender of the respondents. A larger proportion are **women (66.3%)**, which indicates greater involvement of the female population in the survey.
3. Level of education - This section shows the respondents' level of education. The largest proportion have a **higher education qualification (49.4%)**, which indicates that the survey was predominantly completed by individuals with a university degree.

Age

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage of respondents (%)	Percentage of all (%)
18-25 years	28	33.73	32.18

¹²<https://www.icfj.org/news/metamorphosis-foundation-navigating-north-macedonias-complicated-disinformation-landscape>



45-55 years	26	31.33	29.89
35-45 years	14	16.87	16.09
25-35 years	11	13.25	12.64
65+ years	2	2.41	2.3
55-65 years	2	2.41	2.3
Did not answer	4	—	4.6

Gender

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage respondents (%)	of Percentage of all (%)
Female	55	66.27	63.22
Male	28	33.73	32.18
Did not answer	4	—	4.6

Level of education

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage respondents (%)	of Percentage of all (%)
Higher education	41	49.4	47.13
Secondary education	29	34.94	33.33
Higher education	6	7.23	6.9
Doctoral studies	4	4.82	4.6
Master's studies	3	3.61	3.45
Did not respond	4	—	4.6

Source: Author's research (2025)

Table 2: Perceptions of the respondents

Question 1 – measures whether respondents believe the judiciary operates under political influence. The main finding: **72% believe there is political influence.**

Question 2 - the largest proportion of respondents (52%) are **partially familiar**, which indicates a moderate but insufficient understanding of the conditions under which judges work.

Question 3 - this measures whether citizens consider training to be important. A large majority (69%) responded that it is **extremely important**, which shows high confidence in education as a factor for improvement.

Question 4 - most respondents (61.6%) are **in favour of automatic allocation via an algorithm**, as this is seen as a way to increase fairness and transparency.

Question 5 - this question measures the perception of efficiency. Half of the respondents (58%) believe that the proceedings are **very slow**, which indicates significant dissatisfaction.

1. To the question: Do you think the judiciary in Macedonia operates under political influence? Of the 86 respondents, a total of 62 answered YES.



Total respondents: 86

Did not answer: 1

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
Yes	62	72.09		71.26
Partially	15	17.44		17.24
No	9	10.47		10.34
Did not answer	1	—		1.15

2. On that, how familiar are you with the working conditions of judges and prosecutors

Total respondents: 86

Did not answer: 1

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
Partially familiar	45	52.33		51.72
Little familiar	19	22.09		21.84
Not at all	14	16.28		16.09
Familiar	8	9.3		9.2
Did not answer	1	—		1.15

3. To the question: How important do you consider training for the judicial staff to be for the proper and improved functioning of the courts in Macedonia? The majority answered that it is extremely important, while only 8.14% consider it unimportant.

Total respondents: 86

Did not answer: 1

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
Extremely significant	59	68.6		67.82
Moderately significant	20	23.26		22.99
Not significant	7	8.14		8.05
Did not respond	1	—		1.15

4. So, are you in favour of cases being allocated to courts automatically by an algorithm? 61.63% said YES, while a smaller number, around 29%, said they were not sure.

Total respondents: 86

Did not answer: 1

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
Yes	53	61.63		60.92
Not sure	25	29.07		28.74
No	8	9.3		9.2
Did not answer	1	—		1.15

5. To the question: How would you rate the speed of court proceedings in Macedonia? 50% of respondents answered 'very slow'.

Total respondents: 86

Did not answer: 1

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
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Very slow	50	58.14	57.47
Slow	33	38.37	37.93
Satisfactory	2	2.33	2.3
Very fast	1	1.16	1.15
Did not respond	1	—	1.15

Source: Author's research (2025)

Table 3: Measures for improving the judiciary

Question 6 - Of the measures offered, the largest number of respondents (19%) believe that the most important is **the introduction of an independent body to oversee judges**, which indicates a lack of trust in the current system of control.

Question 7 - The dominant response (77%) is **corruption**, which demonstrates the perception that corruption is the main obstacle to an effective judiciary.

Question 8 - This question measures the desire to take action. More than half (55%) would report an injustice immediately, which indicates a readiness for an active civic role.

Question 9 - The largest proportion (48%) answered '**somewhat**', which shows a positive perception but also a lack of trust that digitalisation will solve the problem on its own.

Question 10 - Most respondents (52%) believe that **multiple factors** should share the responsibility (Government, the Judicial Council, civil society), rather than a single institution.

6. Which of the following measures would contribute most to improving the judiciary?
On this question, the largest share (19%) believes there should be an independent body to oversee and evaluate judges.

- 7.

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage of respondents (%)	Percentage of all (%)
Independent body for the supervision and evaluation of judges	16	19.28	18.39
Reduction of political pressure	13	15.66	14.94
Greater transparency in the work of the courts	13	15.66	14.94
Better training and professional development for judges	7	8.43	8.05
Greater transparency in the work of the courts; An independent body for the supervision and evaluation of judges; Reduction of political pressure	6	7.23	6.9
Greater transparency in the work of the courts; Better training and professional development for judges; An independent body for the supervision and evaluation of judges; Reduction of political pressure; Improvement of working conditions	5	6.02	5.75
Greater transparency in the work of the courts; An independent body for the supervision and evaluation of judges	4	4.82	4.6



Greater transparency in the work of the courts; Better training and professional development for judges; Reduction of political pressure	3	3.61	3.45
Better training and professional development for judges; an independent body to oversee and evaluate judges; reduction of political pressure; improved working conditions.	2	2.41	2.3
Better training and professional development of judges; Reduction of political pressure	2	2.41	2.3
Better training and professional development of judges; An independent body for the supervision and evaluation of judges; Reduction of political pressure	2	2.41	2.3
Greater transparency in the work of the courts; Better training and professional development for judges; An independent body for the supervision and evaluation of judges; Reduction of political pressure	2	2.41	2.3
Greater transparency in the work of the courts; Reduction of political pressure	2	2.41	2.3
Greater transparency in the work of the courts; Better training and professional development for judges	1	1.2	1.15
Greater transparency in the work of the courts; An independent body for the supervision and evaluation of ; Judges; Improving working conditions	1	1.2	1.15
Greater transparency in the work of the courts; Better training and professional development for judges; An independent body for the supervision and evaluation of judges	1	1.2	1.15
Greater transparency in the work of the courts; Reduction of political pressure; Improvement of working conditions	one	1.2	1.15
Greater transparency in the work of the courts; Better training and professional development for judges; Improvement of working conditions	1	1.2	1.15
Better training and professional development for judges; An independent body for the supervision and evaluation of judges	1	1.2	1.15
Did not answer	4	—	4.6

7. In your opinion, which factor undermines the efficiency of the judiciary the most? 77% say that corruption is the factor that most undermines the efficiency of the courts.

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage respondents (%)	of Percentage of all (%)
Corruption	64	77.11	73.56
Political pressure	13	15.66	14.94
Long trial periods	six	7.23	6.9



Did not respond	4	—	4.6
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8. Would you report any injustice or irregularities in the judicial process if you noticed them? 55% of respondents would report them immediately, while 31% would do so depending on the circumstances.

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
Yes, immediately	46	55.42		52.87
Maybe, depending on the circumstances	26	31.33		29.89
I don't know	8	9.64		9.2
No	3	3.61		3.45
Did not answer	4	—		4.6

9. Do you think that the introduction of digital tools and e-justice will improve the quality of court proceedings? The largest number of respondents answered 'partially' (48.19%), while 28.92% answered 'yes, significantly'.

Total respondents: 83

Unanswered: 4

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
Partially	40	48.19		45.98
Yes, significantly	24	28.92		27.59
No, it won't make a difference	15	18.07		17.24
I don't know	4	4.82		4.6
Did not answer	4	—		4.6

10. Who should have the greatest responsibility for the advancement of the judiciary? 51% of respondents believe that responsibility for judicial appointments should be a combination of several factors, 23% believe this role should be held by the Judicial Council, and the fewest, 1%, believe it should be held by international organisations.

Total respondents: 83

Did not answer: 4

Category / Answer	Number (N)	Percentage respondents (%)	of	Percentage of all (%)
A combination of multiple factors	43	51.81		49.43
Judicial Council	23	27.71		26.44
Government	9	10.84		10.34
Civil society	7	8.43		8.05
International organisations	1	1.2		1.15
Did not respond	4	—		4.6

6. EC Report: Moderate progress, but key challenges remain

The European Commission's 2025 report assesses North Macedonia as having moderate



readiness for EU membership. Despite some progress in reforms, the country faces serious challenges in the rule of law, the fight against corruption and constitutional amendments, which are crucial for further integration.¹³

Assessment of progress towards the EU

In 2025, North Macedonia's readiness for membership of the European Union was quantitatively assessed at 3.1, representing moderate readiness and a slight shift from 3.09 in 2024. This indicates limited progress in fulfilling the tasks of the chapters.

Challenges in the rule of law and corruption

The European Commission's report once again highlights corruption and the judiciary as a challenge for the government. There has been limited progress in the rule of law, and the tragedy in Kočani revealed systemic problems. The Commission recommends adopting a new Criminal Code and improving outcomes in corruption cases, where there is a sense of impunity.

Constitutional amendments as a condition

No progress has been made on the constitutional changes, which are a prerequisite for the country's further integration. This deadlock is crucial to unblocking the EU accession process. Political blockades, often due to bilateral disputes, are slowing down the enlargement.

Reforms and alignment

Despite the challenges, significant progress has been made in reforms and alignment with the EU's foreign policy. The Macedonian authorities have continued to work on the guidelines for the rule of law, public administration reform and the functioning of democratic institutions, as well as on the Action Plan for the protection of minorities.¹⁴

The EU perspective and the significance of the report

The European Union is facing an enlargement crisis and needs to be reformed. The report from Brussels is interpreted as a wake-up call for North Macedonia, indicating that the country is stuck on its path to the EU due to the failure to implement reforms. The significance of these reports is not the same as it was 15 years ago.

Discussion

This paper examines the complex state of the judiciary in the Republic of North Macedonia, focusing on the challenges related to independence, impartiality, corruption and public trust. The results of the research, which included a questionnaire, clearly indicate a deeply rooted public perception that the judiciary is under strong political influence and is exposed to corruption. This perception is not an isolated phenomenon but is supported by analyses from international organisations such as the European Union and GRECO, which consistently point to a lack of real progress on key reforms. The findings confirm the thesis that political pressure on the processes of selecting and promoting judges, as well as an ineffective accountability system, are the primary causes of the erosion of trust. A comparison with other Western Balkan

¹³http://enlargement.ec.europa.eu/document/download/267b368e-6b55-4a42-bb726395593de4da_en?filename=north-macedonia-report-2025

¹⁴<https://europeanwesternbalkans.com/2025/07/09/rule-of-law-report-2025-for-eu-candidates-pressures-on-judiciary-and-corruption-remain-issues-of-concern/>



countries shows that North Macedonia faces similar systemic problems, but the slowness of reform implementation makes it particularly vulnerable. The survey, in which 72% of respondents believe the judiciary operates under political influence and 77% identify corruption as the main obstacle, serves as a clear indicator of public sentiment and underscores the need for urgent and decisive action.

The challenge is not only legal but also social. Low trust undermines the very foundations of the rule of law and distances the prospect of European integration. Comparison with international standards and indices (such as those of the World Justice Project) clearly shows the country's lag, indicating that formal changes are insufficient without genuine political will and cultural transformation within the institutions themselves.

Conclusion

Research shows that the judiciary in the Republic of North Macedonia faces numerous challenges related to independence, efficiency and transparency. Strengthening institutional capacity, improving accountability mechanisms, reducing political influence and digitising processes are essential steps towards a stronger and more reliable judicial system.

The main conclusions of this paper are:

- **Dominance of political influence:** The system for the election and career development of judges and prosecutors remains susceptible to political pressures, which undermines the principle of independence and contributes to the perception of 'selective justice'.
- **Corruption as a systemic obstacle:** Corruption is identified as a primary factor undermining the efficiency and legitimacy of the judiciary, as evidenced by both the survey results and international reports.
- **Crisis of public trust:** There is a deep divide between the judicial system and citizens, resulting from the slowness of proceedings, lack of transparency and a sense of impunity.
- **Need for structural reforms:** To achieve genuine reform, concrete steps are required, such as the complete depoliticisation of the Judicial Council, the introduction of automated algorithms for case allocation, the strengthening of accountability mechanisms and investment in digitalisation and training.
- **EU as a driver, but domestic responsibility as the key:** Although the European Union provides significant support and guidance, sustainable progress is impossible without a clear domestic political commitment and pressure from civil society.

Acknowledgements

The authors would like to thank all the respondents who completed the survey questionnaire and thus contributed to the empirical underpinning of this paper. We would also like to thank the reviewers and colleagues who provided valuable comments and suggestions that improved the quality of this article.

Conflict of interest

The authors declare that there is no conflict of interest that would affect the objectivity or content presented in this scientific paper.



References

1. **European Commission.** (2024). *Commission staff working document: North Macedonia 2024 report*. https://commission.europa.eu/document/download/e7197a43-7f00-4eac-b02d-818ac71345f0_en?filename=61_1_58090_coun_chap_northmacedonia_nm.pdf
2. **Council of Europe.** (2024). *North Macedonia evaluation report 2024–2022*. <https://rm.coe.int/north-macedonia-2024-2022-/1680b1f6e3>
3. **Open Government Partnership.** (2023). *North Macedonia commitment MK0178*. <https://www.opengovpartnership.org/members/north-macedonia/commitments/MK0178/>
4. **Transparency International.** (2024). *Corruption Perceptions Index 2024*. <https://www.transparency.org/en/cpi/2024>
5. **Libertas.** (2023). *The judiciary in 2023: From delayed to outdated justice* (p. 3).
6. **GRECO.** (2024). *Fifth round evaluation report: Prevention of corruption and promotion of integrity in central government and law enforcement bodies – Compliance report: North Macedonia*.
7. **State Commission for the Prevention of Corruption.** (2024). *Annual report on the work of the SCPC for 2024* (pp. 17–18).
8. **Svedok.** (2023). *Courts and journalists: Publicity behind closed doors* (p. 8).
9. **Metamorphosis Foundation.** (2024). *Journalists' experience and views on judicial transparency in North Macedonia* (p. 7).
10. **Institute for Democracy “Societas Civilis” – Skopje (IDSCS).** (2024). *IDSCS*. <https://idscs.org.mk>
11. **International Center for Journalists.** (2024). *Metamorphosis Foundation: Navigating North Macedonia's complicated disinformation landscape*. <https://www.icfj.org/news/metamorphosis-foundation-navigating-north-macedonias-complicated-disinformation-landscape>
12. **Open Government Partnership.** (2024). *North Macedonia commitment MK0181*. <https://www.opengovpartnership.org/members/north-macedonia/commitments/MK0181/>
13. **European Commission.** (2025). *North Macedonia report 2025*. http://enlargement.ec.europa.eu/document/download/267b368e-6b55-4a42-bb726395593de4da_en?filename=north-macedonia-report-2025
14. **European Western Balkans.** (2025). *Rule of Law Report 2025 for EU candidates: Pressures on judiciary and corruption remain issues of concern*. <https://europeanwesternbalkans.com/2025/07/09/rule-of-law-report-2025-for-eu-candidates-pressures-on-judiciary-and-corruption-remain-issues-of-concern>
15. **European Commission.** (2025). *2025 Rule of Law Report: Country chapter – North Macedonia*. https://commission.europa.eu/document/download/ede31053-efc6-4dd0-89ed-c9224f7eeb70_en?filename=2025+Rule+of+Law+Report+-+Country+Chapter+North-Macedonia.pdf
16. **Venice Commission.** (2025). *Opinion on the judicial reforms in North Macedonia*. <https://www.venice.coe.int/webforms/documents/default.aspx?pdffile=CDL-REF%282025%29026>





ISSN 2955-2753



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