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Original Scientific Article

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RESHAPING ACCOUNTING PROCESSES IN THE AI ERA: A CONCEPTUAL FRAMEWORK

ABSTRACT: Artificial intelligence (AI) is reshaping contemporary accounting, moving the focus from the automation of routine tasks towards advanced information processing, analytical support and strategic decision-making. This paper examines how AI transforms the accounting function by analysing changes in accounting processes, in the quality of financial information, and in the professional role and competences of accountants. The study applies a conceptual research design based on a structured qualitative synthesis of peer-reviewed literature published between 2014 and 2026 and indexed in Scopus and Web of Science. Thematic analysis of the selected corpus identifies five interrelated dimensions of AI-driven change and yields an integrative conceptual framework accompanied by five testable research propositions. The framework positions accounting

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process transformation as the central mediating mechanism through which AI technological capabilities generate improvements in accounting information quality and changes in professional roles and competences, while organisational enabling conditions act as moderators of these relationships. A feedback loop describes transformation as an iterative rather than a linear process. The study concludes that AI creates value not through technology adoption alone but through the alignment of digital capabilities with organisational readiness, sound data governance and continuous professional development, and it provides a structured foundation for subsequent empirical testing.

Keywords: artificial intelligence; accounting process transformation; accounting information quality; accounting profession; conceptual framework.

INTRODUCTION

The development of artificial intelligence (AI) represents one of the most significant drivers of digital transformation in contemporary business. Within this context, accounting occupies a particularly important position due to its fundamental role in collecting, processing, and presenting financial information. Unlike previous stages of digitalisation, which were primarily focused on automating individual activities and increasing operational efficiency, the application of AI enables broader changes in the way accounting data are generated, processed, analysed, and utilised in business decision-making (Moll & Yigitbasioglu, 2019; Sutton et al., 2016).

The increasing adoption of AI technologies creates new opportunities for transforming accounting activities and strengthening the role of accounting information in organisational decision-making. However, the implications of AI extend beyond technological implementation, requiring a broader understanding of how accounting processes, organisational capabilities, and professional competencies evolve in response to technological change. In this context, AI-driven accounting transformation should be understood as part of a broader digital transformation process in which organisations develop new capabilities to integrate digital technologies, redesign processes, and create new forms of value (Vial, 2019; Warner & Wäger, 2019). The ability to effectively leverage AI depends on the development of organisational AI capabilities that combine technological resources with managerial and human competencies (Mikalef & Gupta, 2021).

Existing literature has provided valuable insights into specific aspects of AI application in accounting, including process automation, improvements in financial information processing, and changes in accountants' competencies (Issa et al., 2016; Zhang, 2019; Kokina et al., 2021; Leocádio et al., 2024). However, there remains a need for an integrative theoretical perspective that explains the relationships between AI capabilities, accounting process transformation, information quality, organisational conditions, and the changing professional role of accountants (Sutton et al., 2016). Addressing this research gap, this study examines how AI influences accounting transformation and identifies the mechanisms through which technological capabilities generate organisational value.

To guide this investigation, the study seeks to answer the following research questions:

- RQ1: How does AI transform key accounting processes?
- RQ2: How does AI-driven accounting process transformation influence the quality of accounting information?
- RQ3: How do transformed accounting processes affect the professional role and competencies of accountants?
- RQ4: Which organisational factors enable successful integration of AI into accounting processes?

The primary aim of this study is to develop an integrative conceptual model that explains the mechanisms through which AI influences the accounting function by linking technological capabilities, accounting process transformation, accounting information quality, organisational conditions, and the development of professional competencies among accountants. Methodologically, the study rests on a structured qualitative synthesis of peer-reviewed literature, from which a conceptual model and five research propositions are derived as a foundation for future empirical investigation.

The scientific contribution of the study lies in an integrative model that connects the technological, process, informational, organisational and professional dimensions of AI-driven accounting transformation, and that specifies how these dimensions interact through mediating, moderating and feedback relationships.

The remainder of the paper is organised as follows. The next section reviews the literature on AI in accounting and identifies the research gap. The third section presents the methodology. The fourth section develops the conceptual framework and the associated research propositions. The fifth section discusses theoretical and practical implications, and the final section concludes and outlines limitations and directions for future research.

LITERATURE REVIEW

Artificial intelligence as a driver of accounting process transformation

Digital transformation has fundamentally changed the way organisations generate, process, and utilise accounting information. Previous technological developments, including accounting information systems (AIS), enterprise resource planning (ERP) platforms, and workflow automation, primarily focused on improving efficiency, standardising procedures, and reducing manual activities. However, these systems were largely based on predefined rules and historical data processing, limiting their ability to support adaptive analysis and forward-looking decision-making (Moll & Yigitbasioglu, 2019; Rikhardsson & Yigitbasioglu, 2018).

The emergence of artificial intelligence represents a new phase in the evolution of accounting technologies. Unlike traditional information systems, AI enables learning from data, pattern recognition, anomaly detection, predictive analysis, and intelligent decision support. Therefore, AI should not be understood merely as an additional automation instrument but as a transformational capability that reshapes accounting processes and expands the strategic role of accounting within organisations (Dwivedi et al., 2023; Raisch & Krakowski, 2021). From a dynamic capabilities perspective, AI adoption requires organisations to continuously sense technological opportunities, adapt existing processes, and reconfigure resources in response to changing environmental conditions (Teece, 2007). Successful AI implementation in accounting depends not only on technological availability but also on the organisation's ability to transform technological potential into sustainable operational and strategic improvements.

The transformative potential of AI derives from its ability to process both structured and unstructured information, enhance analytical capabilities, and support continuous monitoring of financial activities. Through these mechanisms, accounting evolves from a primarily retrospective reporting function toward a more proactive information and decision-support function (Issa et al., 2016). However, the value generated by AI depends on more than technological adoption alone. Consistent with the socio-technical perspective, sustainable transformation requires alignment between technological capabilities, organisational processes, and human competencies (Bostrom & Heinen, 1977). Accordingly, AI-driven accounting transformation should be viewed as a multidimensional process involving technological, organisational, and professional adaptation.

Mechanisms of AI-enabled accounting process redesign

Accounting processes encompass a broad range of activities, including transaction processing, reconciliation, financial reporting, internal control, and managerial information provision (Romney & Steinbart, 2021). The integration of artificial intelligence introduces a fundamental change in these processes by extending the capabilities of traditional accounting information systems through automation, advanced analytics, continuous monitoring, and intelligent decision support. Unlike conventional accounting technologies that primarily rely on predefined rules and historical data processing, AI-enabled systems are capable of learning from data, identifying complex patterns, and generating predictive insights that support more adaptive accounting practices (Bhimani & Willcocks, 2014; Dwivedi et al., 2023).

The transformation of accounting processes through AI occurs through several interconnected mechanisms. The first mechanism involves the automation of repetitive and standardised activities, including invoice processing, transaction classification, account reconciliation, and routine reporting procedures. Through machine learning and natural language processing, AI systems can analyse large volumes of accounting documents, extract relevant information and support automated classification and validation, thereby improving processing speed and consistency while reducing the risk associated with manual data entry (Zhang, 2019; Kokina & Davenport, 2017). By reducing manual intervention and increasing processing efficiency, AI allows accounting professionals to redirect their efforts toward activities requiring interpretation, professional judgement, and analytical reasoning (Brynjolfsson & McAfee, 2014; Issa et al., 2016).

The second mechanism relates to enhanced data integration and analytical capability. AI systems enable organisations to combine structured and unstructured data from multiple sources, identify relationships within large datasets, detect anomalies, and support forecasting activities. These capabilities extend the traditional role of accounting information systems by transforming accounting data from a historical reporting resource into a strategic source of organisational insight (Bhimani & Willcocks, 2014; Alles, 2015; Richins et al., 2017).

The third mechanism concerns the transformation of control and assurance activities. Through continuous monitoring, automated validation, and anomaly detection, AI enables organisations to move from periodic control procedures toward more dynamic and preventive approaches to internal control and auditing. Such capabilities improve the timeliness of risk identification and strengthen the reliability of accounting information (Vasarhelyi et al., 2015; Almufadda & Almezeini, 2022).

A fourth mechanism concerns generative applications that support the automated preparation of financial explanations, management commentary and analytical summaries. Because accounting is bound by regulatory requirements and professional standards, however, such applications raise specific requirements regarding transparency, accountability and explainability that do not arise in general-purpose automation (Zhang et al., 2022; Leocádio et al., 2024).

Finally, AI-driven transformation involves the redesign of accounting workflows and the development of integrated, adaptive accounting environments. The value of AI does not arise solely from technological adoption but from the ability of organisations to combine technological capabilities with appropriate processes, governance mechanisms, and professional expertise. Accordingly, AI-driven accounting process transformation represents a transition from traditional sequential and transaction-oriented accounting activities toward intelligent, continuously evolving, and decision-support-oriented accounting systems. Decisions involving accounting estimates, interpretation of standards, materiality assessment and evaluation of economic substance continue to require human expertise and contextual understanding, so that effective implementation depends on collaboration between intelligent systems and accounting professionals.

Artificial intelligence and the quality of accounting information

The fundamental purpose of accounting is to provide reliable and useful information for decision-making. According to the International Accounting Standards Board (IASB) Conceptual Framework, high-quality financial information should demonstrate relevance and faithful representation, supported by characteristics such as comparability, verifiability, timeliness, and understandability (International Accounting Standards Board, 2018).

AI influences accounting information quality primarily by transforming the processes through which information is generated, processed, and communicated. Through automated processing, continuous validation, and advanced analytics, AI can improve the accuracy, timeliness, and analytical value of accounting information (Moll & Yigitbasioglu, 2019). Automated workflows, continuous reconciliation and real-time monitoring allow organisations to access relevant financial information more quickly and to respond more effectively to changing business conditions.

AI enhances relevance by enabling predictive analysis and integration of broader datasets, allowing organisations to identify trends, evaluate risks, and support strategic decisions. At the same time, automation and intelligent validation mechanisms may reduce processing errors and improve consistency.

Nevertheless, the reliability of AI-generated outputs remains dependent on data quality, algorithm design, governance mechanisms, and professional oversight (Sutton et al., 2016; Zhang et al., 2022). Therefore, AI should be viewed as a mechanism that enhances accounting information quality through improved processes rather than as a replacement for accounting principles or professional judgement.

Artificial intelligence and the accounting profession

The transformation of accounting processes inevitably affects the professional role of accountants. As AI increasingly performs repetitive and standardised activities, the importance of analytical interpretation, professional judgement, and strategic contribution becomes more pronounced. AI enables accountants to move beyond traditional responsibilities related primarily to transaction recording and compliance reporting toward activities involving analysis, advisory support, risk assessment, and business decision-making (Kokina & Davenport, 2017; Kokina et al., 2021). In this emerging role, accountants act as intermediaries between technological systems and business stakeholders: they interpret analytical outputs, evaluate potential risks and contribute to strategic decision-making.

Although AI systems can process large volumes of information, recognise patterns, and generate predictions, accountants remain responsible for evaluating the economic substance of transactions, assessing information reliability, and applying professional judgement. Consequently, AI represents a transformation of accounting expertise rather than a replacement of the accounting profession, which is consistent with the automation–augmentation perspective on AI in management (Raisch & Krakowski, 2021).

This transformation requires the development of complementary competencies. Four groups of competencies recur in the literature: digital accounting literacy, understood as an appreciation of the capabilities, limitations and risks of AI within accounting processes; data-analytical capabilities, enabling the interpretation of financial and non-financial data; professional judgement and critical evaluation of algorithm-generated outputs; and ethical awareness together with an understanding of governance issues such as transparency, accountability and algorithmic risk (Pan & Seow, 2016; Al-Htaybat et al., 2022; International Federation of Accountants, 2024).

These changes carry direct implications for accounting education. Traditional curricula centred on accounting rules, procedures and technical reporting requirements need to be extended to include accounting data analytics and visualisation, applications of AI in financial reporting and auditing, data governance and information quality management, digital internal controls, and the ethical implications of algorithm-based decision-

making (Tettamanzi et al., 2023). Because technological change continuously modifies accounting practice, professional bodies and educational institutions are increasingly expected to support lifelong learning models (Association of Chartered Certified Accountants, 2023; International Federation of Accountants, 2024). Evidence from the Serbian market points in the same direction, indicating that the benefits of digitalisation in accounting and auditing depend heavily on continuous training and skills development (Gruslav et al., 2026).

Organisational enabling conditions

The successful integration of artificial intelligence into accounting processes depends not only on technological capabilities but also on the organisational conditions that enable effective adoption, implementation, and long-term utilisation. From a socio-technical perspective, technological innovation creates value only when it is aligned with organisational structures, business processes, and human capabilities (Bostrom & Heinen, 1977). Therefore, AI-driven accounting transformation should be understood as a multidimensional organisational change process rather than a purely technological implementation.

Several organisational factors influence successful AI adoption. These factors reflect the development of complementary organisational capabilities that enable firms to integrate technological innovations into existing structures and processes (Teece, 2007; Warner & Wäger, 2019). Four conditions recur consistently in the literature.

First, effective data governance is required because AI systems depend on the availability, quality, consistency, and reliability of underlying information; organisations must establish appropriate mechanisms for data management, validation, security, and accountability. Poor data quality can limit the accuracy and usefulness of AI-generated outputs, reducing the potential benefits of AI adoption in accounting environments (Sutton et al., 2016).

Second, technological maturity matters. Organisations with developed accounting information systems, integrated enterprise platforms, and advanced digital infrastructures are better positioned to implement AI solutions because they possess more structured data environments and established information flows (Moll & Yigitbasioglu, 2019; Romney & Steinbart, 2021). However, technological readiness alone is insufficient; successful implementation also requires organisational alignment and effective change management.

Third, management support and strategic commitment are necessary because AI adoption often requires significant adjustments in processes, responsibilities, and organisational routines. Therefore, leadership plays an

important role in defining strategic objectives, allocating resources, encouraging acceptance of technological change, and supporting the development of employee competencies.

Finally, organisational culture and continuous employee development influence acceptance and effective utilisation of AI technologies. These organisational dimensions are consistent with the digital transformation perspective, which emphasises that technology implementation requires simultaneous changes in organisational structures, capabilities, and human resources (Vial, 2019). A culture that promotes learning, innovation, and collaboration between accounting professionals and technology specialists increases the likelihood of successful AI integration. To these four conditions the literature increasingly adds ethical and regulatory governance, which determines whether AI outputs used in financial reporting can be explained, audited and defended (Zhang et al., 2022).

Taken together, these complementary perspectives provide the conceptual foundation of the proposed model: they explain how AI capabilities are converted into organisational outcomes through accounting process transformation, and why organisations with access to comparable technologies achieve different results.

Research gap and positioning of the study

Although prior studies have significantly advanced understanding of AI adoption in accounting, they primarily examine individual dimensions of this phenomenon, such as AI capabilities, process automation, information quality, or changes in accountants' professional roles. A comprehensive conceptual framework integrating these perspectives into a single model remains limited. To address this gap, Table 1 positions the proposed framework within the existing literature and highlights its theoretical contribution.

Table 1. Positioning of the proposed conceptual model within the existing literature

Existing studies	Primary focus	Main limitation	Contribution of the proposed model
Sutton et al. (2016)	AI and automation in accounting processes	Primarily technology and process oriented; limited consideration of organisational and professional outcomes	Integrates process transformation with information quality, accountants' competencies, and organisational outcomes.
Moll and Yigitbasioglu (2019)	Digital transformation of the accounting profession	Focuses mainly on changing professional roles; does not provide an integrated transformation framework	Connects role transformation with AI-enabled process redesign, information quality, and organisational factors within a single framework.
Mikalef and Gupta (2021)	AI capability and organisational performance	Developed at a general organisational level rather than within accounting	Adapts AI capability theory to the accounting context and explains how technological capabilities generate accounting transformation.
Rikhardsson and Yigitbasioglu (2018)	Business intelligence and analytics in management accounting	Emphasises analytical tools rather than comprehensive organisational transformation	Extends analytical perspectives by incorporating AI-enabled organisational redesign and professional competence development.
Leocádio et al. (2024)	AI in auditing practice	Confined to the audit function; organisational conditions treated as context rather than as moderators	Broadens the scope to the accounting function as a whole and models organisational conditions explicitly as moderating variables.
Proposed conceptual model	AI-driven accounting transformation	Addresses limitations of previous fragmented approaches	Provides an integrative framework linking AI technological capabilities, accounting process transformation, accounting information quality, accountants' changing roles and competencies, organisational moderators, and continuous feedback mechanisms.

Source: Authors

Unlike previous studies, which typically examine isolated aspects of AI adoption — such as technological capabilities, process automation, information quality, or changes in accountants' professional roles — the proposed framework integrates these perspectives into a single conceptual model. Its primary theoretical contribution lies in explaining the mechanisms

through which AI technological capabilities are translated into organisational and professional outcomes. In addition, the model incorporates organisational enabling conditions as moderating factors and introduces a continuous feedback loop, emphasising that accounting transformation is a dynamic and iterative process rather than a linear sequence of events.

METHODOLOGY

Research design

This study adopts a conceptual research design based on a qualitative synthesis of existing academic literature. Rather than collecting primary empirical data, the study integrates theoretical and empirical findings from prior research to develop an explanatory conceptual framework of AI-driven accounting transformation. This approach is appropriate for emerging research areas where theoretical integration is required to explain complex relationships among technological, organisational, and professional dimensions.

Identification and selection of the literature

The conceptual model was developed through a structured review of the contemporary academic literature addressing artificial intelligence in accounting and related disciplines. The analysis primarily draws upon peer-reviewed journal articles indexed in Scopus and Web of Science, supplemented by targeted searches in Google Scholar and by professional reports issued by international accountancy bodies. The search was conducted in July 2026 and covered publications issued between January 2014 and June 2026. Seminal earlier works were retained where they provide the theoretical foundations of the framework (Bostrom & Heinen, 1977; Teece, 2007).

The literature search used Boolean combinations of the following search strings, applied to title, abstract and keyword fields: ("artificial intelligence" OR "machine learning" OR "intelligent automation") AND ("accounting" OR "accounting information system*" OR "financial reporting" OR "audit*") AND ("transformation" OR "process*" OR "competenc*" OR "information quality").

Studies were retained if they (i) were published in a peer-reviewed journal or issued by a recognised professional body, (ii) were written in English, and (iii) addressed the organisational, process-related, informational or professional consequences of AI in accounting. Studies were excluded if they dealt exclusively with the technical architecture of algorithms without an accounting application, if they were editorials or unrefereed conference

abstracts, or if they duplicated findings already covered by a more comprehensive source. The screening produced a final corpus of 31 sources, of which 26 are peer-reviewed journal articles, two are monographs, and three are reports or pronouncements issued by international professional and standard-setting bodies.

Thematic synthesis and construction of the framework

The selected literature was examined using thematic analysis and conceptual synthesis. Each source was coded in a structured extraction matrix recording the research question addressed, the theoretical lens applied, the accounting activity examined and the reported organisational or professional outcome. Recurring concepts, theoretical constructs, and relationships identified across previous studies were systematically compared and integrated into broader conceptual categories. This process resulted in the identification of five core dimensions of AI-driven accounting transformation:

- ☐ AI technological capabilities;
- ☐ accounting process transformation;
- ☐ accounting information quality;
- ☐ transformation of the accountant's professional role;
- ☐ organisational enabling conditions.

Based on the theoretical relationships identified in the literature, the study develops an integrative conceptual framework and formulates five research propositions intended for future empirical validation. The propositions were derived by mapping the direction and the conditionality of the relationships reported in the coded corpus, and by distinguishing direct effects from mediated and moderated ones.

Use of generative artificial intelligence tools

In accordance with the journal's policy on generative AI and AI-assisted technologies, the authors declare the following. Generative AI tools were used for language editing, for structuring the manuscript in accordance with the journal's formatting requirements, and for preparing the graphical layout of Figure 1. The identification of the research gap, the selection and interpretation of the sources, the construction of the conceptual framework and the formulation of the research propositions are the authors' own intellectual work. No AI tool is listed as an author. The authors have verified the authenticity and the bibliographic accuracy of every reference cited in this paper against the original sources, and they bear full responsibility for the content, the interpretation and the conclusions presented.

Data availability

This study is conceptual and does not use primary or secondary quantitative data; consequently, no raw data set is associated with the results. To support transparency and replicability of the literature synthesis, the coding matrix of the reviewed corpus — listing every source together with its publication type, theoretical lens, the accounting activity examined, the reported outcome and the conceptual dimension to which it was assigned — is deposited at Mendeley Data:

[https://data.mendeley.com/datasets/2rzs7wjvyx/1\(DOI:10.17632/2rzs7wjvyx.1\)](https://data.mendeley.com/datasets/2rzs7wjvyx/1(DOI:10.17632/2rzs7wjvyx.1)).

Together with the search strings and the screening criteria reported above, the matrix allows the corpus and the coding decisions underlying the framework to be reconstructed independently.

RESULTS: AN INTEGRATIVE CONCEPTUAL FRAMEWORK

Constructs of the framework

Building on the theoretical foundations presented in previous sections, this study develops an integrative conceptual model explaining how artificial intelligence influences accounting transformation and the evolution of the accounting profession. The central assumption of the model is that AI does not create organisational value through technological adoption alone. This assumption is consistent with the AI capability perspective, which argues that organisational value emerges from the combination of technological resources, organisational capabilities, and the ability to effectively utilise AI-driven insights (Mikalef & Gupta, 2021). Instead, value emerges through the interaction between technological capabilities, transformed accounting processes, improved information quality, organisational conditions, and enhanced professional competencies. Accounting process transformation is therefore conceptualised as the central mechanism through which AI capabilities generate organisational and professional outcomes. The framework consists of five interconnected dimensions.

AI technological capabilities

AI technological capabilities represent the primary driver of accounting transformation. This dimension includes the ability of AI systems to automate complex activities, process large volumes of structured and unstructured data, detect patterns, identify anomalies, and support predictive analysis. These capabilities span process automation, cognitive insight and cognitive

engagement applications, which differ in the degree of judgement they substitute for or support (Davenport & Ronanki, 2018). However, technological capabilities alone are insufficient to generate sustainable value. Their impact depends on the organisation's ability to integrate AI into existing accounting systems, redesign workflows, and develop appropriate governance mechanisms.

Accounting process transformation

Accounting process transformation represents the central mediating mechanism of the model. It refers to changes in accounting activities, workflows, and information-processing structures resulting from AI implementation. Through automation, intelligent data processing, continuous monitoring, and advanced analytics, AI transforms accounting from a transaction-oriented function into a more integrated and decision-support-oriented capability. This transformation enables organisations to improve operational efficiency while increasing the analytical and strategic contribution of accounting functions.

Accounting information quality

Accounting information quality represents a key outcome of AI-driven process transformation. The model assumes that transformed accounting processes improve the relevance, timeliness, reliability, consistency, and analytical value of financial information. AI contributes to information quality through faster processing, improved validation procedures, continuous monitoring, and advanced analytical capabilities. Nevertheless, the quality of AI-generated information remains dependent on data governance, algorithm reliability, and professional oversight.

Transformation of the accountant's professional role

The transformation of accounting processes directly influences the professional role of accountants. As AI performs increasingly standardised activities, accountants move toward responsibilities requiring interpretation, professional judgement, analytical reasoning, and strategic support. The model therefore conceptualises AI as a factor that reshapes accounting expertise rather than reducing the importance of accountants. The future relevance of the profession depends on combining accounting knowledge with technological literacy and analytical capabilities.

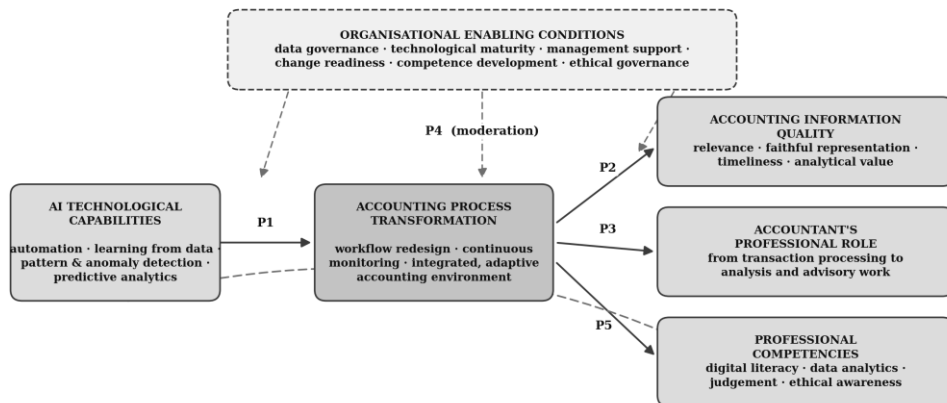
Organisational enabling conditions

Organisational enabling conditions represent contextual factors that determine the effectiveness and sustainability of AI implementation. These conditions include data governance and information quality management; technological maturity and accounting system capabilities; top management support and strategic commitment; organisational readiness and change management; employee competencies and continuous development; and ethical and regulatory governance. The model assumes that organisations with stronger complementary capabilities are better positioned to transform AI potential into sustainable accounting improvements.

The conceptual framework

The conceptual framework presented in Figure 1 illustrates the relationships among the main dimensions of AI-driven accounting transformation.

Figure 1. Conceptual framework of AI-driven accounting transformation



Feedback loop: accumulated experience and competences reinforce AI capabilities and process design

Source: Authors

The framework positions AI technological capabilities as the primary antecedent of accounting transformation. Their influence is first reflected in the transformation of accounting processes (P1), representing the initial stage of organisational change enabled by AI adoption through the automation of routine activities, intelligent data processing, continuous monitoring, advanced analytics, and integrated workflows.

Accounting process transformation, in turn, positively influences the quality of accounting information by enhancing its relevance, timeliness, reliability, consistency, and analytical value (P2). Simultaneously, it contributes to changes in accountants' professional roles by shifting responsibilities from transaction processing toward analytical, advisory, and strategic activities (P3). Furthermore, it increases the importance of advanced competencies, including data literacy, analytical thinking, professional judgement, digital literacy, and ethical responsibility, which enable accountants to create value in AI-supported accounting environments (P5).

The model further proposes that organisational factors — including management support, technological infrastructure, data governance, organisational culture, employee competencies, and clear governance rules — do not directly influence the constructs themselves but moderate the relationships among them (P4). These enabling conditions strengthen the extent to which AI technological capabilities are translated into process transformation and, ultimately, into organisational and professional outcomes.

Finally, the framework incorporates a continuous feedback loop, emphasising that experience gained from changes in accounting roles and competencies continuously informs and improves AI capabilities, accounting processes, information quality, and organisational capabilities. This feedback mechanism highlights the dynamic and iterative nature of AI-driven accounting transformation rather than a one-way linear process.

Research propositions

Based on the proposed framework, the following research propositions are developed for future empirical testing.

P1: AI technological capabilities positively influence accounting process transformation.

P2: Accounting process transformation mediates the relationship between AI technological capabilities and accounting information quality.

P3: Accounting process transformation contributes to the transformation of the accountant's professional role by shifting responsibilities from routine processing toward analytical, advisory, and strategic activities.

P4: Organisational enabling conditions positively moderate the relationship between AI technological capabilities and accounting process transformation.

P5: Accounting process transformation increases the importance of advanced analytical, technological, interpretative, and advisory competencies among accounting professionals.

The emerging profile of the accounting professional

The transformation of accounting under AI does not imply the disappearance of professional expertise but rather the emergence of a new professional model. The future accountant combines traditional accounting knowledge with technological understanding, analytical capabilities, strategic thinking, and ethical responsibility. Table 2 summarises the main differences between the traditional accountant and the emerging AI-enabled accounting professional.

Table 2. Comparative analysis of traditional and future accountant archetypes

Dimension	Traditional accountant	Future accountant
Work focus	Recording and processing historical transactions	Analysis, interpretation, and strategic insight generation
Reporting paradigm	Periodic and retrospective reporting	Continuous, real-time, and analytical reporting
Main skillset	Accounting procedures and compliance knowledge	Data analytics, technological literacy, and professional judgement
Decision-making role	Providing financial information for decisions	Supporting strategic organisational decisions
Control function	Manual verification of transactions	Evaluation of information quality, algorithmic risks, and system reliability

Source: Authors

DISCUSSION

The proposed conceptual framework contributes to the growing body of literature on artificial intelligence in accounting by providing an integrative explanation of how AI technological capabilities are translated into organisational and professional outcomes. While previous studies have examined individual aspects of AI adoption, such as automation, information quality, organisational capabilities, or changes in accountants' professional roles, they have generally treated these dimensions separately. In contrast, the proposed framework integrates these previously fragmented perspectives into a single explanatory model.

Unlike previous AI capability models developed at the organisational level (e.g., Mikalef & Gupta, 2021), the proposed framework explicitly adapts the AI capability perspective to the accounting domain. More importantly, it positions accounting process transformation as the central mediating mechanism through which AI technological capabilities influence both accounting information quality and the transformation of accountants' professional roles. This conceptualisation extends existing AI capability research by explaining not only whether AI creates value but also how such value is generated within accounting functions.

The framework also extends previous accounting literature that primarily conceptualises AI as a tool for automation. Earlier studies have largely emphasised operational efficiency, transaction processing, and cost reduction. Although these contributions remain important, they provide only a partial explanation of AI adoption in accounting. The proposed model argues that AI should be understood as a broader transformational capability that simultaneously reshapes accounting processes, information quality, organisational capabilities, and professional competencies. In this respect the model complements domain-specific frameworks confined to the audit function (Leocádio et al., 2024) by extending the analysis to the accounting function as a whole.

The proposed model is also consistent with the socio-technical systems perspective, which emphasises that technological innovation generates value only when aligned with organisational structures and human capabilities. However, the framework expands this perspective by explicitly incorporating organisational enabling conditions — including data governance, technological maturity, management support, organisational readiness, and professional competencies — as moderating factors that influence the effectiveness of AI-driven accounting transformation. Rather than treating these organisational factors merely as contextual variables, the proposed framework explains their active role in strengthening or constraining the relationships among the core constructs.

Furthermore, the proposed framework confirms previous findings suggesting that AI enhances the quality of accounting information through improved automation, analytical capabilities, and continuous monitoring. Nevertheless, it extends existing conceptualisations by identifying accounting process transformation as the mechanism through which these improvements emerge. This perspective provides a more comprehensive explanation than approaches that directly associate AI adoption with improvements in accounting information quality without specifying the intermediate organisational processes involved.

The framework also contributes to the literature on the accounting profession. Previous studies consistently argue that AI shifts accountants'

responsibilities from routine processing toward analytical and advisory activities. The proposed model confirms this general direction of professional evolution while extending prior research by integrating professional role transformation within a broader organisational transformation process. Rather than viewing changes in accountants' competencies as an isolated consequence of AI adoption, the framework conceptualises professional evolution as one of the principal organisational outcomes of AI-driven accounting transformation.

Finally, unlike previous conceptual frameworks that implicitly assume a linear process of technological adoption, the proposed model introduces a continuous feedback mechanism. This feedback loop emphasises that experience gained through transformed accounting processes, improved information quality, and evolving professional competencies continuously contributes to the further development of organisational AI capabilities. Accordingly, AI-driven accounting transformation should be understood as an iterative and dynamic process rather than a one-time technological implementation.

Practical implications

For practitioners, the framework carries three implications. First, organisations should approach AI implementation as a strategic transformation programme rather than as a technology procurement decision: investment in tools that is not accompanied by workflow redesign is unlikely to improve information quality. Second, because organisational conditions act as moderators rather than as direct causes, firms should sequence their investment, establishing data governance and baseline technological maturity before scaling AI applications in reporting and control. Third, professional bodies and employers should treat competence development as a component of the implementation programme itself rather than as a subsequent training activity, since the analytical, interpretative and ethical competences identified in the framework determine whether AI outputs can be relied upon in financial reporting.

CONCLUSION

AI has become a major catalyst of transformation in accounting, influencing not only operational activities but also the broader structure, purpose, and professional orientation of the accounting function. This study demonstrates that the impact of AI extends beyond the automation of routine tasks by enabling new forms of information processing, analytical support, and strategic decision-making.

The conceptual framework developed in this study identifies accounting process transformation as the key mechanism through which AI capabilities generate organisational value. AI contributes to the redesign of accounting workflows by improving automation, data integration, continuous monitoring, and analytical capabilities. Through these changes, accounting information becomes more timely, relevant, reliable, and useful for managerial decision-making. However, these benefits are not generated automatically; they depend on appropriate data governance, organisational readiness, technological infrastructure, and effective human oversight.

In relation to the research questions, the study concludes that AI transforms accounting processes through intelligent automation, predictive analysis, continuous control mechanisms, and improved information integration (RQ1). These transformations enhance accounting information quality (RQ2) while simultaneously redefining professional competencies and responsibilities (RQ3). Furthermore, successful AI adoption depends on organisational factors such as management support, data quality, technological maturity, supportive organisational culture, and continuous employee development (RQ4).

Unlike previous conceptual studies that examine isolated aspects of AI adoption in accounting, this study develops an original integrative framework that explains how AI technological capabilities, accounting process transformation, accounting information quality, organisational enabling conditions, and professional evolution interact within a single explanatory model. By positioning process transformation as the central mechanism of change, the framework provides a more comprehensive explanation of AI-driven accounting evolution than approaches focused solely on automation.

This study is subject to several limitations. As a conceptual contribution, the proposed framework requires empirical validation; the propositions are analytically derived rather than tested, and the reviewed corpus is restricted to English-language sources, which may under-represent evidence from non-Anglophone accounting systems, including those of South-East Europe. Future research should test the proposed relationships using quantitative methods, including structural equation modelling, and investigate how AI-driven accounting transformation develops across different organisational contexts and accounting domains. Comparative studies contrasting large and small entities, and studies situated in transition economies, would be particularly valuable in establishing the boundary conditions of the framework.

Overall, AI should be understood as an evolutionary force that enhances rather than replaces the accounting profession. The future of accounting will depend on effective collaboration between intelligent technologies and human expertise, with accountants remaining essential for interpretation, ethical

evaluation, professional judgement, and ensuring the credibility of financial information.

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Use of generative AI: see the Methodology section.

REZIME

PREOBLIKOVANJE RAČUNOVODSTVENIH PROCESA U ERI VEŠTAČKE INTELIGENCIJE: KONCEPTUALNI OKVIR

Veštačka inteligencija (AI) pokreće fundamentalnu transformaciju savremenog računovodstva, pomerajući fokus sa jednostavne automatizacije ka naprednoj obradi informacija, analitičkoj podršci i strateškom donošenju odluka. Ovaj rad istražuje uticaj veštačke inteligencije na računovodstvenu funkciju analizirajući promene u računovodstvenim procesima, kvalitetu finansijskih informacija, profesionalnoj ulozi računovođa i kompetencijama koje su potrebne u savremenom poslovnom okruženju. Studija primenjuje konceptualni istraživački pristup zasnovan na strukturiranoj kvalitativnoj sintezi recenzirane literature objavljene u periodu 2014–2026. godine i indeksirane u bazama Scopus i Web of Science. Tematskom analizom identifikovano je pet međusobno povezanih dimenzija promena vođenih veštačkom inteligencijom, na osnovu kojih je razvijen integrativni konceptualni okvir sa pet istraživačkih pretpostavki. Okvir pozicionira transformaciju računovodstvenih procesa kao centralni posrednički mehanizam kroz koji tehnološke sposobnosti veštačke inteligencije utiču na kvalitet računovodstvenih informacija i na promenu profesionalne uloge i kompetencija računovođa, dok organizacioni uslovi deluju kao moderatori tih odnosa. Konceptualni okvir polazi od pretpostavke da veštačka inteligencija stvara vrednost ne samo kroz usvajanje tehnologije, već kroz usklađivanje digitalnih sposobnosti sa organizacionom spremnošću, efikasnim upravljanjem podacima i kontinuiranim razvojem profesionalnih kompetencija. Rad doprinosi postojećoj literaturi predstavljanjem višedimenzionalne perspektive transformacije računovodstva zasnovane na primeni veštačke inteligencije i pruža teorijsku osnovu za buduća empirijska istraživanja.

Ključne reči: veštačka inteligencija; transformacija računovodstvenih procesa; kvalitet računovodstvenih informacija; računovodstvena profesija; konceptualni okvir.

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MARKETING COMMUNICATION ACROSS PRICE SEGMENTS IN THE DIGITAL REAL ESTATE MARKET: EVIDENCE FROM BELGRADE

ABSTRACT: This paper examines the relationship between digital marketing communication and price positioning in residential real estate projects in Serbia. It investigates whether different types of marketing messages are associated with distinct price segments. The analysis is based on a qualitative content analysis of promotional texts from official project websites of 19 residential developments in Belgrade, combined with price data derived from the Real Estate Market Reports published by the Republic Geodetic Authority (RGZ) for 2025. Projects are classified into low, middle, and high price segments using a percentile-based approach.

Marketing messages are coded into five categories: luxury, lifestyle, quality, location, and investment. The results show that functional value dimensions, particularly quality-related communication, are more strongly associated with higher price

segments. Investment-oriented messaging is also more prevalent in higher-priced projects, while psychological value dimensions, such as luxury and lifestyle communication, show limited variation across segments. Location-related messaging remains consistently high across all price categories.

The findings suggest that digital real estate communication is primarily driven by functional and economic value signals rather than symbolic luxury positioning. This indicates a partial decoupling between price levels and psychological branding in the observed market. The study contributes to customer value theory and real estate marketing literature by providing empirical evidence from an emerging market context. The findings of this study may be useful for both researchers and real estate developers. They provide empirical evidence on the relationship between marketing communication and price segmentation, while highlighting the importance of aligning marketing strategies with price segments to enhance the perceived value of residential projects.

Key words: digital marketing, real estate, price segmentation, content analysis, customer value, residential property, marketing communication

INTRODUCTION

The residential real estate market in the Republic of Serbia has become increasingly competitive, particularly in Belgrade urban area where multiple housing developments are simultaneously offered to potential buyers (Zelisko, 2026; Alihodžić, 2024). In such conditions, price formation is influenced not only by objective factors such as location, size, and construction quality, but also by how projects are presented and communicated to the market. Marketing communication therefore plays a critical role in shaping buyer perceptions and supporting price positioning. (Gutiérrez-Velasco et al., 2025)

At the same time, the growing heterogeneity of market participants further complicates competitive dynamics. Real estate projects are evaluated differently depending on investor preferences, behavioural factors, and investment objectives, introducing a subjective dimension into the perception of project attractiveness (Zelisko, 2025). As a result, developers increasingly rely on targeted marketing messages designed to resonate with specific buyer groups, particularly investors (Dalia & Ruslan, 2025).

With the expansion of digital technologies, official project websites have become a primary communication channel between developers and potential buyers. These platforms not only provide information but also highlight selected attributes of residential projects, such as lifestyle benefits, construction quality, location advantages, and investment potential. (Dalia & Ruslan, 2025). The framing of such messages may signal intended market positioning and influence perceived value (Markowitz, 2024).

Previous research emphasizes the importance of communication strategies in product positioning, particularly in high-value and infrequent purchase contexts. However, empirical studies examining the relationship between marketing messages and price positioning in real estate remain limited, especially in emerging markets (Karabağ & Özkaptan Alptekin, 2022).

This gap is particularly relevant in Serbia, where rapid residential development has been accompanied by increasingly sophisticated marketing practices (Marinković et al, 2024). Despite the growing role of digital communication, little is known about how promotional language relates to price differentiation in this context.

The aim of this paper is to examine the role of marketing messages in the price positioning of residential real estate. The study focuses on promotional content from official project websites and explores whether specific types of marketing messages are associated with different price segments. Accordingly, the central research question of this study is: How do digital marketing messages differ across price segments in residential real estate projects in Serbia?

METHODOLOGY

The conceptual foundation of the study is based on the multidimensional understanding of customer value, which encompasses functional, economic, and psychological components (Kotler et al., 2025). In line with this framework, the five categories of marketing messages identified in this study are operationalised as manifestations of these three core value dimensions.

Luxury-oriented and *lifestyle-oriented* communication are interpreted as expressions of psychological value. Psychological value reflects symbolic, experiential, and identity-related benefits that extend beyond functional product attributes, including status signalling, self-expression, and hedonic consumption (Gou et al., 2025).

Investment-oriented messages correspond to the economic dimension of customer value, which is associated with financial utility, perceived return

on investment, and asset appreciation. Recent research in real estate marketing confirms that property is increasingly framed as a hybrid consumption–investment good, where financial rationality plays a central role in purchase decisions (Singh et al., 2023).

Finally, *quality*-oriented and *location*-based messages reflect the functional dimension of customer value. Functional value is defined as the utilitarian assessment of product attributes such as construction quality, materials, technical specifications, accessibility, and spatial positioning, which directly affect perceived usefulness and satisfaction (Sadeghlou et al., 2023).

Hypotheses

Based on the theoretical framework of customer value, marketing messages are grouped into three value dimensions: psychological, functional, and economic. In line with this classification, the following hypotheses are formulated.

Psychological value dimension

H1: Luxury-oriented marketing messages are not strongly associated with higher price segments.

H2: Lifestyle-oriented marketing messages are uniformly distributed across price segments.

Functional value dimension

H3: The prevalence of quality-oriented marketing messages increases with price segment.

H4: Location-based marketing messages do not substantially differ across price segments.

Economic value dimension

H5: Investment-oriented marketing messages are more prevalent in higher price segments.

The empirical analysis is based on a qualitative content analysis of promotional texts published on the official websites of newly developed residential projects in Belgrade. The sample includes 19 residential projects that had newly built units available for sale during 2025, selected based on three inclusion criteria: (1) active sales activity in 2025, (2) availability of an official project website, and (3) publicly accessible information on average price per square metre.

The homepage of each project is used as the unit of analysis, as it represents the primary and most visible layer of digital marketing communication. Each project is coded using a binary coding scheme, where the presence or absence of predefined marketing message categories is

recorded (1 = presence, 0 = absence). An illustrative example of the coding procedure is presented in Table 1.

Table 1 – coding scheme example

Project (example)	Luxury	Lifestyle	Quality	Location	Investment	Price segment
Project A	1	0	1	1	0	High
Project B	0	1	1	1	1	Medium
Project C	0	0	1	1	0	Low

Reference – Author

Information on residential projects and price levels was obtained from four quarterly reports of the Real Estate Market Report (RGZ) for 2025, which provide systematic data on housing market developments and average price levels per square metre. These reports served as the primary source for price validation and market consistency.

For the purposes of segmentation, average new apartment price levels per square metre for all municipal units in Belgrade were obtained from four quarterly reports of the Real Estate Market Report (RGZ) for 2025. Based on these reported price values, market price segments were constructed using a percentile-based approach. Specifically, the first (33rd percentile) and second (66th percentile) quantiles were used to define three price segments: low, medium, and high. The lowest 33% of observed price levels constituted the low-price segment, values between the 33rd and 66th percentiles defined the medium-price segment, and values above the 66th percentile formed the high-price segment.

Residential projects included in the sample were subsequently classified into these segments according to their corresponding average price per square metre. This approach ensures that segmentation reflects market price distribution rather than administrative or spatial boundaries.

A comparative analysis is then conducted to examine differences in the prevalence of marketing message categories across these price segments, with the aim of identifying systematic variations in price-related communication strategies.

RESULTS

The sample consists of 19 residential real estate projects in Belgrade, which are classified into three price segments based on percentile thresholds derived from RGZ market data. The high-price segment includes 9 projects

(47.4%), the low-price segment consists of 7 projects (36.8%), while the middle segment is the smallest with 3 projects (15.8%). Average price levels range from 2,168 €/m² in the low segment to 4,685 €/m² in the high segment, confirming clear market stratification.

The analysis of marketing communication reveals that certain message categories are significantly more prevalent than others across the entire sample. Location-related messages are the most frequently used, appearing in 13 out of 19 projects (68.4%), followed by quality-oriented communication (63.2%) and lifestyle framing (57.9%). Investment-oriented messages are present in 26.3% of projects, while luxury-related communication is the least common category, appearing in only 21.1% of cases.

When examined across price segments, clear differences in communication patterns emerge. The results of the cross-segment analysis are presented in Table 2.

Table 2 – Distribution of marketing messages across price segments (%)

Segment	Luxury (%)	Lifestyle (%)	Quality (%)	Location (%)	Investment (%)
Low (n=7)	14.3	57.1	42.9	71.4	14.3
Middle (n=3)	33.3	66.7	100.0	66.7	0.0
High (n=9)	22.2	55.6	66.7	66.7	33.3

Reference – Author

In the high-price segment, marketing communication is strongly oriented toward functional attributes. Quality-related messaging appears in 66.7% of projects, while location is emphasized with equal frequency. Lifestyle-oriented communication is present in 55.6% of high-end projects, whereas investment messaging appears in 33.3% of cases. Interestingly, luxury framing remains relatively limited even in this segment, appearing in only 22.2% of projects.

The middle-price segment, although limited in size, shows a distinct pattern. All projects in this category (100%) emphasize construction quality, making it the most dominant message type within this group. Lifestyle and location-related messages appear in 66.7% of projects, while luxury communication is present in one-third of cases. Notably, investment-oriented messaging is entirely absent in this segment.

In the low-price segment, marketing communication is more diversified but less focused on quality. Location emerges as the dominant

category, appearing in 71.4% of projects, followed by lifestyle messaging in 57.1%. Quality-related communication is present in 42.9% of cases, while both luxury and investment-oriented messages are relatively rare, each appearing in 14.3% of projects.

Overall, the comparative analysis indicates that functional and investment-related messages are more strongly associated with higher price segments, particularly in terms of construction quality and financial framing. In contrast, lifestyle and location-related communication is consistently distributed across all segments, suggesting that these categories are not primary differentiators in price positioning. Contrary to common expectations, luxury-oriented messaging does not show a strong association with higher price levels, indicating that symbolic positioning plays a limited role in the digital communication of residential real estate projects in the observed market.

Hypothesis testing

The empirical results provide support for several of the proposed hypotheses.

H1, which suggests that luxury-oriented marketing messages are not strongly associated with higher price segments, is supported. Luxury messaging appears in 22.2% of high-price projects and 14.3% of low-price projects, indicating only a marginal difference between segments.

H2, which assumes that lifestyle-oriented marketing messages are uniformly distributed across price segments, is also supported. The frequency of lifestyle messaging remains relatively stable, ranging from 55.6% in the high-price segment to 57.1% in the low-price segment and 66.7% in the middle segment.

H3, which proposes that the prevalence of quality-oriented messages increases with price segment, is confirmed by the data. Quality-related communication is observed in 42.9% of low-price projects, compared to 66.7% in the high-price segment and 100% in the middle segment.

H4, which states that location-based messaging does not substantially differ across segments, is supported. Location is consistently emphasized across all price categories, with frequencies of 71.4% in the low segment and 66.7% in both middle and high segments.

H5, which assumes that investment-oriented marketing messages are more prevalent in higher price segments, is partially supported. Investment messaging appears in 33.3% of high-price projects but is largely absent in the middle segment and limited to 14.3% in the low segment.

DISCUSSION

The findings of this study provide several important insights into the relationship between the language of digital marketing communication and price positioning in residential real estate. Overall, the results suggest that marketing messages are only partially aligned with price-based segmentation, with clear differences observed mainly in functional and economic value dimensions, while psychological value dimensions appear less effective in differentiating market segments.

First, the results indicate that quality-oriented communication increases with price level, supporting H3. This reflects the fact that construction quality remains a key justification mechanism for higher prices in residential real estate markets. However, the relatively high presence of quality-related messaging across all segments suggests that quality has become a baseline expectation rather than a distinctive positioning tool. In other words, while higher-priced projects emphasize quality more frequently, it is simultaneously a standard attribute across the market, reducing its discriminatory power.

Second, investment-oriented messaging is more prevalent in higher price segments, partially supporting H5. This finding reflects the growing financialisation of residential real estate, where properties are increasingly positioned as investment assets in addition to consumption goods. The limited presence of investment messaging in lower and middle segments suggests that this type of communication is selectively applied, primarily in projects targeting more financially oriented buyers or investors.

In contrast, psychological value dimensions demonstrate weaker segmentation effects. Luxury-oriented messaging does not show a strong association with higher price segments, supporting H1. This may indicate a strategic avoidance of explicit luxury framing in digital communication, even in high-end projects. One plausible explanation is that developers may seek to avoid reinforcing perceptions of overpricing or exclusivity that could limit the pool of potential buyers. Instead, they rely more on implicit signals of quality and location rather than explicit luxury rhetoric.

Similarly, lifestyle-oriented messaging is relatively uniformly distributed across all segments, supporting H2. This can be explained by the fact that lifestyle narratives in real estate communication are increasingly standardized and aimed at a broad audience. Regardless of price level, developers tend to emphasize modern living, comfort, and urban experience, which function as universal appeal elements rather than strong segmentation signals.

Location-based communication also shows limited variation across segments, supporting H4. This reflects the structural nature of location in real

estate valuation, where spatial attributes are fundamental and universally relevant regardless of price positioning. Consequently, location is consistently emphasized across all segments, functioning as a core rather than differentiating attributes.

An additional important finding is the partial decoupling between lifestyle-oriented and investment-oriented narratives. While lifestyle communication emphasizes experiential and consumption-related benefits, investment messaging focuses on financial returns and asset value. The results suggest that these two narratives are not always combined, particularly in higher segments where investment framing is more prominent. This may indicate that developers strategically adjust communication depending on the perceived buyer profile, distinguishing between end-users and investor-oriented demand.

From a theoretical perspective, these findings contribute to customer value theory by demonstrating that functional and economic value dimensions are more strongly associated with price segmentation than psychological value dimensions in the context of residential real estate. While prior literature often emphasizes the role of symbolic and experiential value in premium markets, the present study suggests that in the Serbian residential market, differentiation is primarily driven by functional attributes and financial framing rather than luxury-based symbolic positioning.

Overall, the results indicate that price positioning in digital real estate communication is not strongly constructed through luxury narratives, but rather through a combination of functional quality signals and selective investment framing. This suggests that developers rely less on overt symbolic differentiation and more on universally understood value dimensions when communicating property offerings in digital environments.

Limitations

Despite providing meaningful insights into digital marketing communication in residential real estate, this study has several limitations that should be acknowledged.

First, the analysis is based on a relatively small sample of 19 residential projects. Although these projects represent some of the most visible developments in the Belgrade real estate market, the limited sample size restricts the generalisability of the findings. Smaller and less visible projects were not included, which may introduce a selection bias toward larger and more professionally marketed developments.

Second, the study is geographically limited to the city of Belgrade. As a result, the findings may not fully capture regional variations in marketing

communication practices across other cities and municipalities in Serbia, where market dynamics and development structures may differ significantly.

Third, the analysis focuses exclusively on official project websites as the primary source of marketing communication. Other important communication channels, such as real estate agency listings, property platforms, and online advertisements, are not included in the dataset. These channels may contain different or additional messaging strategies, which are therefore not reflected in the present analysis.

Fourth, the study is based on a single period, primarily reflecting market conditions in 2025. Given the dynamic nature of the real estate market, price levels and marketing strategies may change over time. Consequently, the observed segmentation and communication patterns should be interpreted as a snapshot rather than a stable long-term structure.

Finally, price-based segmentation is derived from market data that is itself subject to continuous change due to ongoing price increases and market volatility. As a result, segment boundaries may shift over time, which could affect the classification of projects in future analyses.

CONCLUSION

This study examines the relationship between digital marketing communication and price positioning in residential real estate projects in Serbia, based on content analysis of official project websites and RGZ-based price segmentation.

The findings show that price positioning is only partially reflected in marketing communication. Functional value, particularly quality-related messaging, is more strongly associated with higher price segments, while investment-oriented communication is also more prevalent in premium projects. In contrast, psychological value dimensions, such as luxury and lifestyle, show limited differentiation, indicating a high degree of standardisation in symbolic messaging.

These results suggest that developers rely primarily on functional attributes and, to a lesser extent, investment narratives, while luxury communication plays a limited role even in higher segments. From a theoretical perspective, the study shows that functional and economic value dimensions are more closely aligned with price segmentation than psychological ones. Practically, the findings highlight the importance of aligning marketing communication with price segments to enhance perceived value.

REZIME
MARKETINŠKA KOMUNIKACIJA U RAZLIČITIM CENOVNIM
SEGMENTIMA NA DIGITALNOM TRŽIŠTU NEKRETNINA:
EMPIRIJSKI DOKAZI IZ BEOGRADA

Ovaj rad ispituje odnos između digitalne marketinške komunikacije i cenovnog pozicioniranja u projektima stambene nekretninske izgradnje u Srbiji. Istražuje se da li su različiti tipovi marketinških poruka povezani sa različitim cenovnim segmentima. Analiza se zasniva na kvalitativnoj analizi sadržaja promotivnih tekstova sa zvaničnih veb-sajtova 19 stambenih projekata u Beogradu, u kombinaciji sa podacima o cenama preuzetim iz izveštaja Republičkog geodetskog zavoda (RGZ) za 2025. godinu. Projekti su klasifikovani u niske, srednje i visoke cenovne segmente korišćenjem pristupa zasnovanog na percentilima.

Marketinške poruke su kodirane u pet kategorija: luksuz, način života, kvalitet, lokacija i investiciona vrednost. Rezultati pokazuju da su dimenzije funkcionalne vrednosti, posebno komunikacija o kvalitetu, snažnije povezane sa višim cenovnim segmentima. Poruke usmerene na investicionu vrednost takođe su prisutnije u skupljim projektima, dok dimenzije psihološke vrednosti, kao što su luksuz i način života, pokazuju ograničene razlike između segmenata. Poruke vezane za lokaciju ostaju dosledno zastupljene u svim cenovnim kategorijama.

Rezultati sugerišu da je digitalna komunikacija u oblasti nekretnina prvenstveno vođena funkcionalnim i ekonomskim vrednosnim signalima, a ne simboličkim luksuznim pozicioniranjem. To ukazuje na delimično razdvajanje između nivoa cena i psihološkog brendiranja na posmatranom tržištu. Rad doprinosi teoriji korisničke vrednosti i literaturi o marketingu nekretnina pružajući empirijske dokaze iz konteksta tržišta u razvoju. Nalazi ovog rada mogu biti korisni kako istraživačima, tako i developerima. Oni pružaju empirijske dokaze o povezanosti marketinške komunikacije i cenovne segmentacije, uz isticanje značaja usklađivanja marketinških strategija sa cenovnim segmentima u cilju unapređenja percepcije vrednosti stambenih projekata.

Ključne reči: digitalni marketing, nekretnine, cenovno pozicioniranje, analiza sadržaja, korisnička vrednost, stambene nekretnine, marketinška komunikacija

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ENERGY SECURITY AND DIVERSIFICATION OF NATURAL GAS SUPPLY IN THE WESTERN BALKANS AFTER 2022 IN THE CONTEXT OF THE UKRAINE CRISIS

ABSTRACT This paper examines the impact of disruptions in the energy sector caused by the Russia–Ukraine conflict, which has been unfolding across the European continent since 2022. The research focuses on structural changes in natural gas supply, with particular emphasis on the countries of the Western Balkans and the Republic of Serbia. Through the analysis of available literature, economic indicators and relevant statistical reports, the changes resulting from shifts in the energy supply are investigated. The reports indicate significant price shocks, inflationary pressures, and the reorientation of trade, accompanied by accelerated energy diversification and integration with the European Union (EU). The tensions between Russia and Ukraine have caused the shifts in the energy landscape as well as the shortages of energy resources in the region. The analysis reveals notable differences in economic resilience across countries, where economies with lower dependence on Russian energy sources and greater diversification demonstrate a higher degree of stability. The paper further examines household energy consumption and the share of energy expenditures, while providing a comparative analysis of overall inflation and energy-sector inflation. The challenges faced by economic policymakers in securing reliable energy supplies are investigated. In addition,

the paper provides policy recommendations aimed at strengthening energy security and ensuring the uninterrupted supply of energy resources.

Keywords: energy resources; Western Balkans; European Union; Serbia; diversification; Ukraine crisis

INTRODUCTION

The economic development and stability, both at the national and global levels, are intrinsically linked to the energy sector. Energy sector plays a fundamental role in ensuring macroeconomic stability and fostering economic growth. The process of globalization, international market integration and rapid technological advancement have intensified the international dependence of national economies, thereby enhancing the strategic importance of the energy sector. With the passing of time, the significance of energy sector has increased, raising new questions and methods of perceiving energy resources, their availability and the security of supply.

The military conflict between Russia and Ukraine began in February 2022. Although de jure it represents a conflict between two neighbouring countries, de facto it reflects the re-emergence of the longstanding geopolitical divide between the East and the West and constitutes one of the most significant international developments since the Cold War (Beker-Pucar, 2022). Beyond its humanitarian and security implications, the conflict has generated profound and long-lasting economic repercussions for countries worldwide. Research on the economic consequences of regional conflicts is grounded in several established theoretical frameworks.

The theory of economic interdependence (Keohane & Nye, 2012) suggests that stronger economic ties among countries may reduce the likelihood of armed conflict while simultaneously increasing their exposure to external geopolitical shocks. According to Stiglitz (2016), well-intentioned efforts toward economic integration may ultimately fail when policymaking is guided by questionable economic doctrines shaped more by ideology and interests than by empirical evidence and economic science.

In contrast, the economic theory of conflict (Collier, 2007) focuses on the economic causes and consequences of armed conflicts, arguing that wars may generate benefits for certain actors while inflicting substantial damage on the economy as a whole.

For understanding the effects of the war in Ukraine on the Western Balkans, Wallerstein's (2004) world-systems theory is particularly relevant. This

theoretical framework explains how economic shifts occurring within the core of the world system, in this case, the European economies, can have disproportionately strong effects on semi-peripheral regions such as the Western Balkans. From this perspective, it becomes evident why relatively small and open economies are particularly vulnerable to geopolitical developments occurring beyond their national borders.

Although the Western Balkans does not present the same strategic significance for Russia as Ukraine, the region nevertheless remains important for several reasons. Serbia, as the largest and most influential country in the region, is particularly significant (Pribićević & Buturović, 2023). Russia's primary strategic objective in the Western Balkans is to prevent the accession of Serbia and Bosnia and Herzegovina to NATO, as well as their membership in the EU, since such possible integration into Western political and security structures would substantially weaken Moscow's influence in Southeast Europe (Bieber, 2019; Samorukov, 2019).

For many years, Europe developed its energy strategy around imports of natural gas, with Russia serving as its dominant supplier. This relationship was founded upon mutual economic benefits and interdependence. European countries secured a stable and relatively inexpensive energy source, while Russia gained a reliable export market for its natural gas. Over time, however, this cooperation created a high degree of dependence, which proved to be a major challenge during periods of political instability and geopolitical conflict.

The war in Ukraine marked a turning point in Europe's natural gas supply system. Supply disruptions, sharp increases in energy prices and heightened market uncertainty revealed the risks associated with dependence on a single supplier (Bechev, 2023). In response, the European Union initiated a process of supply diversification aimed at gradually reducing its dependence on Russian natural gas. Nevertheless, this transition is both complex and costly, requiring substantial financial investment and the development of new energy infrastructure.

Within this context, the Western Balkans occupies a unique position. The countries of the region are characterised by limited energy self-sufficiency and a distinct dependence on Russian natural gas, which, in most cases, remains their principal supplier. Moreover, the region relies on only one or two major gas corridors, significantly increasing its vulnerability.

A particular challenge is the region's underdeveloped energy infrastructure. The limited number of gas pipelines, insufficient cross-border interconnections, and inadequate storage capacity additionally reduce the ability of these countries to react rapidly to interruptions in gas supply. Hence, any alteration in gas supply, whether caused by political decisions or market developments, has a direct impact on economy and stability of these countries.

Beside its economic significance, natural gas supply also has a strong political dimension. The control over energy resources and transport routes enables supplier countries to exercise influence over the countries that depend upon them. In this sense, natural gas has become an instrument of foreign policy, i.e. a means of pursuing broader geopolitical objectives. This phenomenon is particularly evident in the Western Balkans region, where the interests of multiple international actors intersect.

The objective of this paper is to analyse an energy source supply, natural gas supply, under the conditions created by the Russia–Ukraine war, with particular emphasis on the Western Balkans. The study examines the degree of energy dependence across individual countries, the structure of energy supply as well as the principal challenges the region faces in terms of energy security. Particular attention is devoted to opportunities for supply diversification and the future development of the regional energy sector.

By examining these issues, the paper seeks to provide a comprehensive insight into the role of natural gas as both an energy resource and a geopolitical factor, while highlighting the need to strengthen the energy independence and resilience of the Western Balkan countries in the face of contemporary global challenges.

An analysis of energy dependence in the Western Balkans, with particular reference to the Republic of Serbia, represents an essential field of research for evaluating economic, security, and regulatory implications of geopolitical crises, as well as identifying possible strategies and enhancing the long-term sustainability of national energy systems.

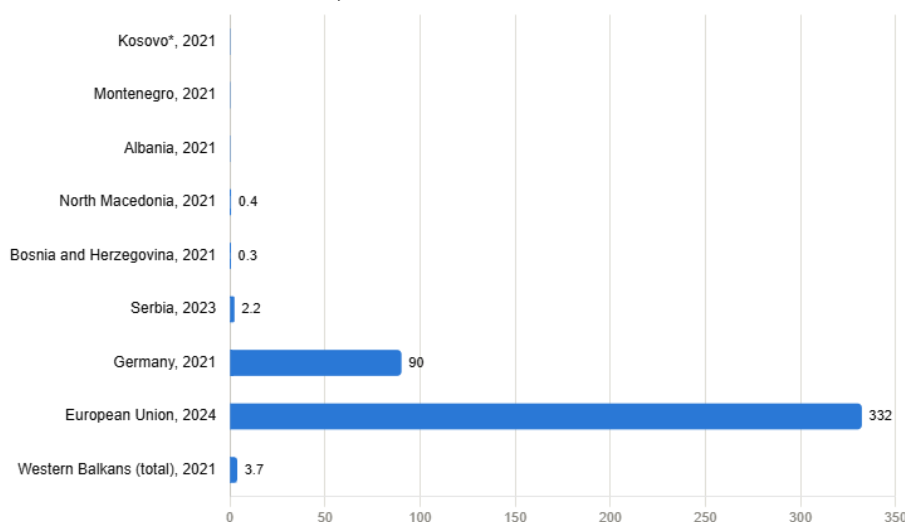
This paper relies on a broad range of data, including macroeconomic indicators, reports issued by international financial institutions and academic literature. Particular emphasis is placed on comparative data analysis, enabling the assessment of varying degrees of resilience demonstrated by Western Balkan economies during the periods of constrained energy supply during the Russia–Ukraine war. Understanding these economic consequences is of critical importance for policymakers, investors, and the academic community alike.

TOTAL NATURAL GAS CONSUMPTION IN THE REGION

The Western Balkans is a relatively small region in terms of total natural gas consumption, but its importance extends far beyond the quantities consumed. According to available data, total natural gas consumption in the Western Balkans amounted to approximately 2.7–4 billion cubic metres (bcm) annually in 2021, with Serbia accounting for roughly two-thirds of this volume.

For comparison, this amount represents only about 4% of Germany's natural gas consumption, Germany being one of Europe's largest economies. This clearly indicates that the Western Balkans is not a major gas consumer, either globally or within the European context. Nevertheless, despite its relatively low level of consumption, the region possesses considerable geostrategic importance due to its geographical position and its role as a transit corridor in regional energy flows.

Figure 1 - Natural gas consumption, in bcm, in the European Union and the Western Balkan countries, based on available data.



Source: Gallop et al. (2023).

Another important characteristic of the region is the uneven consumption across individual countries. While Serbia, Bosnia and Herzegovina, and North Macedonia use natural gas primarily for heating and industrial purposes, countries such as Albania and Montenegro have virtually no developed gas sector. Thus, overall consumption is not only relatively low but also structurally uneven across the region.

The difference becomes even more pronounced when the Western Balkans is compared with the European Union. According to recent data, total natural gas consumption in the European Union amounted to approximately 332 billion cubic metres in 2024, several times higher than that of the Western Balkans. This comparison indicates that the Western Balkans accounts for only a marginal share of total European gas consumption. (Balkan Insight (2023))

Nevertheless, despite its relatively limited consumption, the region remains highly significant for several reasons. The geographical position of

the Western Balkans makes it an important transit corridor for gas pipelines connecting the East and the West. Dependence on imported energy, particularly from Russia, makes the countries of the region highly sensitive to political and economic shifts. Further investment in gas pipeline infrastructure could additionally increase the region's importance in the future.

It is particularly important to emphasize that low consumption does not imply low vulnerability. On the contrary, owing to limited supply sources and insufficiently developed infrastructure, Western Balkan countries are often exposed to greater risks than larger economies with more diversified energy sources. Although the Western Balkans remains a relatively small gas consumer in European terms, its importance derives from its geopolitical position, dependence on imports, and potential role in future energy flows. For this reason, natural gas supply in the region has far greater significance than might be inferred solely from consumption volumes (Bašić & Pantelić, 2023).

Table 1 - Natural gas supply, transformation, and consumption according to EUROSTAT data.

Region	November 2025	January 2026
European Union	1,059,985.802	1,463,967.409
Montenegro	0	0
North Macedonia	1,542.420	1,852.970
Serbia	12,891.00	16,151.00
Bosnia and Herzegovina	0	0

Source: EUROSTAT data.

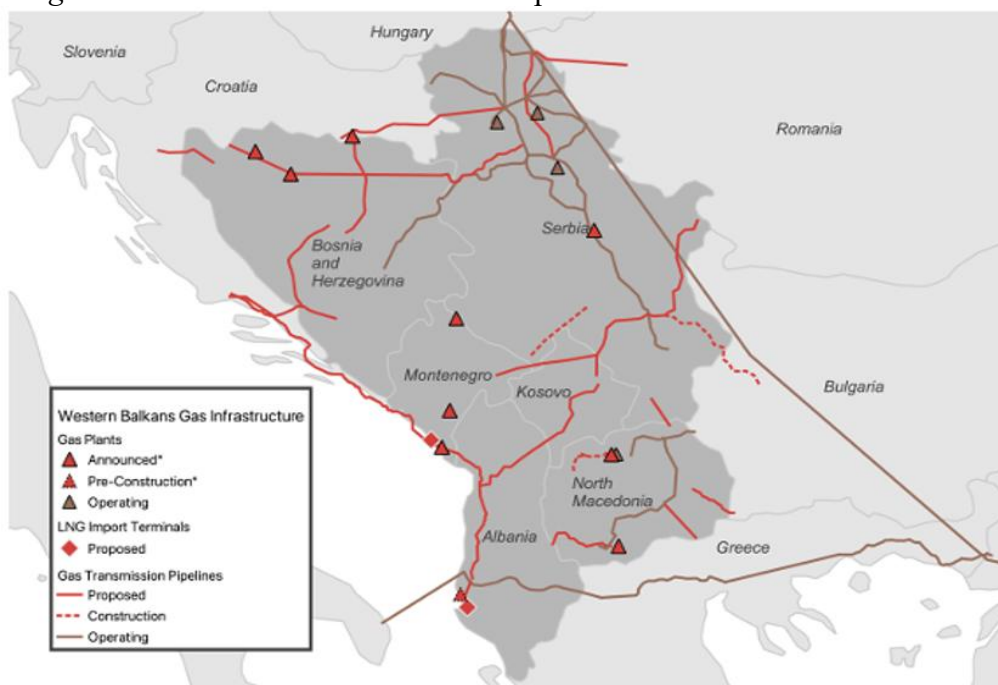
RUSSIA AS THE DOMINANT SUPPLIER

At present, it is difficult to predict how long the military operations will last, and it is unrealistic to expect that the conflict between Russia and the West will end in the near future. In the initial phase of the conflict, the most substantial economic difficulties are likely to affect Western countries,

particularly those that remain highly dependent on Russian energy supplies (Bašić & Pantelić, 2023)¹.

A defining characteristic of the natural gas market in the Western Balkans is its marked dependence on a single dominant supplier—the Russian Federation. In most countries of the region, the natural gas used by households, industry, and the energy sector originates predominantly from Russia. Consequently, natural gas represents not only an economic, but also an important geopolitical factor. Historically, this dependence is the result of long-term supply contracts, geographical proximity, and infrastructure designed primarily to accommodate gas deliveries from the east. Pipelines passing through the region, such as TurkStream and its extensions, commonly referred to as the Balkan Stream, have reinforced this dependence by enabling the direct transportation of Russian gas to consumers in Southeast Europe.

Image 1 - Gas infrastructure under development in the Western Balkans



Most Western Balkan countries lack substantial alternative sources of natural gas supply. Although diversification efforts are under way, such as the construction of interconnectors, connections to liquefied natural gas (LNG)

¹ Pribicevic, O., Buturović, Ž. (2023). Rat u Ukrajini – Srbija ponovo na razmeđu između Istoka i Zapada. *Demokratske promene u Srbiji* (ur. Bašić & Pantelić). Beograd: Institut društvenih nauka.

terminals, and the development of renewable energy sources, these processes remain at an early stage and are not yet capable of fully meeting regional demands or replacing the existing dependence on Russian gas.

It is particularly important to emphasize that this dependence is reflected not only in the volume of imported gas but also in the structure of the market. In many countries of the region, supply is organized by a limited number of companies and long-term contracts, which further reduces market flexibility and the ability to switch suppliers. Such a market structure increases the influence of dominant suppliers compared with markets characterised by a higher degree of competition.

In the context of the war in Ukraine, this supply model has revealed a number of weaknesses. Reduced deliveries, political tensions, and price volatility have exposed the risks associated with reliance on a single dominant partner. Although the Western Balkan countries have not experienced supply interruptions to the same extent as some European Union Member States, the possibility of such scenario remains.

From the perspective of international relations, control over natural gas supply allows countries to exercise a degree of political influence. In the case of Russia, energy resources are frequently regarded as an instrument of foreign policy i.e. as a means of strengthening the country's position in the international scene. Countries that are highly dependent on gas imports may become exposed to external pressures through increased energy vulnerability. Unlike larger European economies, which have access to a broader range of supply sources, such as Norway, the LNG market, and renewable energy, Western Balkan countries have limited capacity to adapt rapidly in the event of a major disruption.

It is also important to stress that the influence of a supplier is not always direct or visible. It may also be revealed through long-term energy strategies, infrastructure investment and partnerships with domestic companies. Thus, energy relations become embedded within a broader political and economic framework that shapes the development of the region (Gallop & Kozybay, 2024).

DEPENDENCE BY COUNTRY

The Western Balkans is characterised by relatively low natural gas consumption compared to larger European economies, yet the region remains highly sensitive to the structure and origin of its energy supply, particularly in relation to Russian gas.

In Serbia, annual natural gas consumption amounts to approximately 2.7 billion cubic metres, of which around 80–90% has been supplied by Russia

via the Balkan Stream pipeline. Natural gas accounts for approximately 12–15% of Serbia's total energy mix, indicating a substantial dependence on a single supplier and potential political vulnerability. Although Serbia has made efforts in recent years to diversify its supply sources, Russia remains the country's dominant natural gas supplier. (OECD 2024)

Bosnia and Herzegovina has relatively low levels of natural gas consumption, with gas accounting for only around 2.8–3.6% of total energy use. Nevertheless, almost 100% of its gas imports have traditionally depended on Russian supply. (RES Foundation 2023) Although the share of gas in the overall energy mix is limited, such total dependence on Russian gas represents a significant security and political risk for Bosnia and Herzegovina.

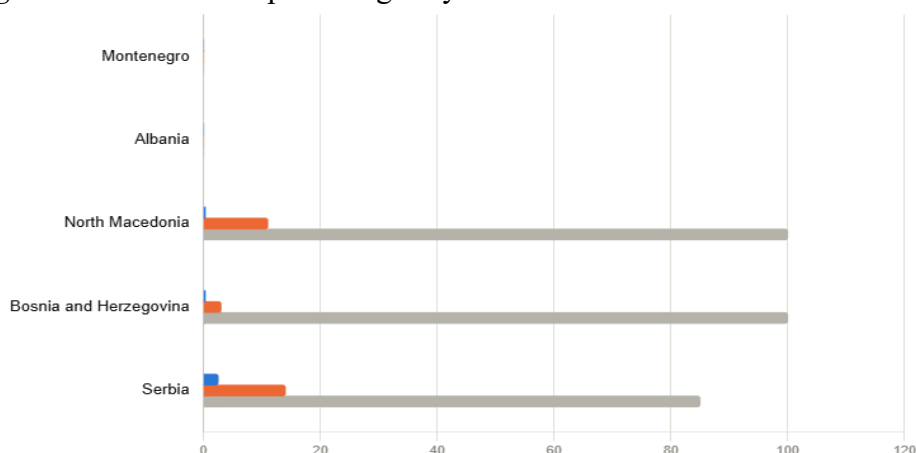
North Macedonia was likewise fully dependent on Russian natural gas prior to 2022, with gas accounting for approximately 11% of its total energy mix. (ISPI 2023) The country has no domestic natural gas production and relies entirely on imports routed through Bulgaria. This has created a high degree of vulnerability to both energy-related and political pressures.

On the other hand, Albania and Montenegro have virtually no developed natural gas sector and do not use natural gas as a major energy source. (Global Energy Monitor & CEE Bankwatch 2023). Albania is almost entirely independent of Russian gas, while Montenegro lacks developed gas infrastructure altogether. Thus, dependence on Russia in the natural gas sector is irrelevant for these two countries.

These data demonstrate that the Western Balkans is highly heterogeneous in terms of energy dependence. Serbia, Bosnia and Herzegovina and North Macedonia are markedly dependent on Russian natural gas, which can be used by Russia as an instrument of political and economic influence. Albania and Montenegro, owing to the absence of gas infrastructure, have little or no dependence on Russian gas, providing them with greater autonomy in energy-related political decisions.

The war in Ukraine has had a particularly significant impact on Serbia because it has narrowed the country's room for maintaining cooperation with both the West and Russia, the policy approach that had previously enabled Serbia to preserve its European integration path while fighting for its territorial integrity. The Western Balkans does not hold the same importance for Russia as Ukraine, but the region remains significant for several reasons. Serbia occupies a particularly prominent position as the largest country in the region. Serbia is almost entirely dependent on the supply of natural gas from Russia (Bašić & Pantelić, 2023).

Figure 2 – The consumption of gas by countries

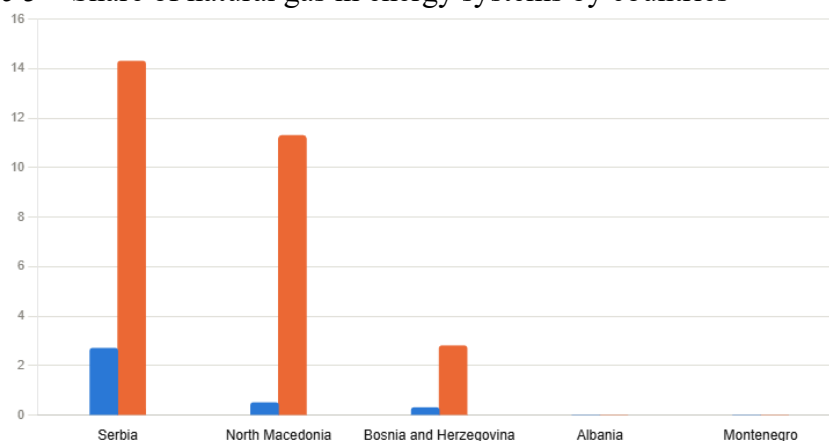


Source: Global Energy Monitor & CEE Bankwatch (2023).

THE ROLE OF NATURAL GAS IN THE ENERGY SYSTEM

Natural gas plays a different role across the energy systems of the Western Balkan countries, which is why its use depends on the level of infrastructure development, national energy policy and historical dependence on external suppliers, particularly Russia. In Serbia and North Macedonia, natural gas accounts for a relatively significant share of the overall energy mix, whereas in the other countries of the region its role is marginal or almost non-existent.

Figure 3 – Share of natural gas in energy systems by countries



Source: Global Energy Monitor & CEE Bankwatch (2023).

In Serbia, natural gas accounts for 14.3% of total energy consumption, reflecting the country's relatively well-developed gas infrastructure and its long-standing reliance on supplies delivered through the TurkStream and Balkan Stream pipelines. Natural gas is used in industrial facilities, electricity production and heating, particularly in larger urban areas. Its importance has been more emphasized in recent years because of the need to replace part of the energy supply derived from more carbon-intensive sources, thereby contributing to the reduction of greenhouse gas emissions. (Western Balkans 2023)

Nevertheless, Serbia remains highly dependent on Russian gas, which represents a significant potential vulnerability in the event of political or economic pressure.

In North Macedonia, natural gas accounts for 11.3% of the energy mix. It is used primarily in industry and for heat generation in the heating systems of urban districts. Since the country has no domestic natural gas production, it is entirely dependent on imports, predominantly from Russia via neighbouring countries, which creates a high degree of dependence. In recent years, the North Macedonian government has launched a number of initiatives aimed at diversifying supply, including the potential import of liquefied natural gas (LNG) and the strengthening of regional gas interconnectors. (ISPI 2023)

In the other Western Balkan countries, the role of natural gas is minimal or practically negligible. In Bosnia and Herzegovina, gas accounts for only approximately 2.8% of the total energy mix, and its use is limited to a number of industrial facilities and district-heating plants in larger cities. Low levels of consumption are partly attributable to the absence of well-developed gas infrastructure and the high investment costs associated with network expansion.

Albania and Montenegro make virtually no use of natural gas within their energy systems. Albania relies predominantly on hydropower for electricity generation, while Montenegro primarily uses coal and renewable energy sources and has no developed gas infrastructure. The marginal role of natural gas in these countries contributes to their independence from Russia in this particular sector, but it also limits their potential for a rapid transition toward lower-carbon energy sources, including natural gas. (Western Balkans 2023)

The role of natural gas across the Western Balkans therefore varies considerably and is shaped by historical infrastructure, political relations, and national energy-security strategies. Serbia and North Macedonia are characterised by relatively high shares of natural gas and potential vulnerability due to the import dependence, whereas the remaining countries have only a limited role for gas and potentially greater flexibility in shaping their energy transition.

Table 2 - Gas-fired power plant projects under development in the Western Balkans

Project	Location	Capacity (MW)	Status
Vlora Power Station ²	Albania, Vlore	97	Completed
Morava Power Station	Serbia, Svilajnac	120	Completed
Banja Luka Power Station	Bosnia and Herzegovina, Banja Luka	600	Completed
Prijedor Power Station	Bosnia and Herzegovina, Prijedor	600	Completed
Bosanski Brod Power Station	Bosnia and Herzegovina, Bosanski Brod	100	Completed
Bar Gas Power Station	Montenegro, Bar	50	Completed
Pljevlja Gas Power Station	Montenegro, Pljevlja	200	Completed
Podgorica Gas Power Station	Montenegro, Podgorica	150	Completed
Bitola Gas Power Station	North Macedonia, Bitola	250	Completed
Skopje Power Station	North Macedonia, Skopje	150	Completed

Source: Global Energy Monitor; Western Balkans.

NATURAL GAS SUPPLY IN THE WESTERN BALKANS FOLLOWING THE OUTBREAK OF THE WAR IN UKRAINE

The outbreak of the war in Ukraine on 24 February 2022 substantially altered the energy landscape in both Europe and the Western Balkans. Russian natural gas deliveries, which had previously dominated supply across much of Southeast Europe, became subject to restrictions, political tensions, and a substantial reorientation of energy markets. These developments significantly affected the manner in which Western Balkan countries organised their gas

² Vlora Power Station is an existing object, but has never operated due to technical issues

supply amid growing instability in European energy markets (Corsello & Tagliabracci, 2023)³.

Prior to the war in Ukraine, most natural gas consumed in the Western Balkans originated in Russia and was delivered through major international pipelines, principally TurkStream and its Balkan Stream extension. These systems enabled Russian gas to be transported through Turkey and Bulgaria to Serbia, North Macedonia, and, partly, Bosnia and Herzegovina. Consequently, the region developed a high degree of dependence on a single supplier, creating substantial vulnerability in the event of changes in political relations or disruptions in supply.

As the war in Ukraine escalated, it became clear that Europe, including the Western Balkans, would have to reassess its energy relationships. Many European Union countries experienced a sharp reduction in demand for Russian gas while intensifying efforts to secure alternative supplies, primarily through the imports of liquefied natural gas and Azerbaijani gas delivered via the Trans Adriatic Pipeline as part of the Southern Gas Corridor. This approach was aimed at reducing dependence on Russian supply and, in turn, influenced the regional orientation of energy policy.

In Serbia, which is the largest natural gas consumer in the Western Balkans, the transition has been gradual, but visible. Although Serbia has remained heavily dependent on Russian gas since 2022, a process of gradual diversification has begun. In 2021, more than 90% of the country's natural gas originated in Russia, whereas estimates for 2024–2025 indicate that the dependence declined to approximately 82%, reflecting the introduction of new supply sources and a partial shift toward Azerbaijani gas delivered through the Southern Gas Corridor (Baranov, 2025).

In September 2024, Serbia and Azerbaijan signed an urgent agreement covering additional gas supplies. This arrangement enabled the use of approximately one million cubic metres of Azerbaijani gas per day during the winter of 2024/2025, with the objective of reducing Serbia's dependence on Russia. Part of these volumes was delivered through gas infrastructure connecting Bulgaria and Serbia to the southern route, including the Trans Adriatic Pipeline.

North Macedonia has also changed its supply source since the outbreak of the war. Prior to 2022, the country was entirely dependent on Russian natural gas. Since the beginning of the conflict, however, it has gradually turned toward alternative sources, including limited volumes of Azerbaijani gas delivered through intermediary commercial and infrastructure

³ Assessing the pass-through of energy prices to inflation in the euro area https://ideas.repec.org/p/bdi/opques/qef_745_23.html, accessed: 26. 3. 2026.

arrangements. New gas interconnectors with Greece and Bulgaria, including a project to be completed by 2027, are intended to provide direct access to the Trans Adriatic Pipeline network and thus facilitate the delivery of Azerbaijani gas. These projects are expected to reduce dependence on Russian gas supplies (Gallop et al., 2024).

In Bosnia and Herzegovina, natural gas continues to account for only a small share of the overall energy mix. Nevertheless, the country is not immune to supply-related changes. Bosnia and Herzegovina has long relied on Russian deliveries via the Balkan Stream system. However, as in other parts of the region, infrastructure diversification projects and new agreements with non-Russian suppliers are currently being developed in order to improve the security of supply in the event of disruption (European Commission, 2024).

Albania and Montenegro, which have virtually no developed natural gas sector, have not undergone the same type of transition because their gas consumption was negligible before the war and has remained so since. On the one hand, this has made them more resilient to disruptions in gas supply. On the other hand, it has left them relatively detached from deeper regional gas market integration (Global Energy Monitor & CEE Bankwatch, 2023).

One of the key factors affecting the gas supply has been the development and functionality of major interconnectors and infrastructure projects enabling greater diversification. Of particular importance are gas systems linking Western Balkan countries to the Southern Gas Corridor. This corridor, which includes the Trans Adriatic Pipeline, enables Azerbaijani gas to be transported through Turkey, Greece, and Albania to Italy and creates the possibility for Western Balkan countries, particularly those that become interconnected in the future, to access alternative gas supplies outside Russian-controlled supply routes.

The EU and the United States have also supported projects aimed at strengthening regional energy security and reducing dependence on Russian supply. This support has been both political and financial, with substantial investment in gas infrastructure which facilitates the access to LNG and gas from alternative suppliers. These diversification strategies are intended not merely to replace Russian gas temporarily, but to restructure the Western Balkan energy market over the longer term so that it becomes more resilient to external shocks.

Despite these efforts, Russian influence remains significant. Agreements concerning the continuation of supply and extensions of contracts with Russian companies, as well as the political relations surrounding such arrangements, demonstrate that the transition is neither straightforward nor free from market and political complications. In Serbia, for example, negotiations have taken place concerning the extension of supply agreements with Russia. This indicates that, although diversification is progressing, it

remains incomplete and currently represents a compromise between the security of supply and broader political context.

Table 3 - Natural gas supply in the Western Balkans: 2021 vs. 2024/2025

Country	Supply 2021 (Russian gas %)	Supply 2024/2025 (Russian gas %)	Note
Serbia	~90%	~82%	Partially diversified
North Macedonia	~100%	~90%	Beginning of diversification
Bosnia and Herzegovina	~95%	~90-95%	Slower progress
Albania	0%	0%	No gas
Montenegro	0%	0%	No gas

Source: Baranov (2025).

Naftna Industrija Srbije (NIS) is one of the principal actors in Serbia's energy sector and in the wider Western Balkan region. Established in 1949 as a state-owned enterprise, the company gradually expanded its activities to include the exploration, production and distribution of oil and natural gas, as well as petroleum refining and the provision of energy services (Baranov, 2025).

Today, NIS is the largest producer of oil and natural gas in Serbia. Its portfolio includes oil extraction, the production of petrol, diesel fuel, and liquefied gases, as well as the development and maintenance of a network of filling stations covering Serbia and parts of the wider region (Gallop et al., 2024).

Following its acquisition by the Russian company Gazprom Neft in 2008, NIS entered a period of modernisation and diversification. The Russian investor provided both financial and technical support, enabling the introduction of modern technologies in oil production and refining, as well as the expansion of storage capacity and transport infrastructure (Gallop et al., 2024).

Although NIS is formally a Serbian company, Russian influence over its management and strategic orientation remains significant. This links Serbia more closely to global energy flows and affects the political dynamics of the region.

NIS plays a major role in maintaining Serbia's energy security. The company supplies a substantial share of domestic oil and gas demand and serves both public-sector and industrial consumers. In addition, NIS is actively involved in renewable-energy development, including solar and wind-energy

projects, as well as initiatives aimed at improving energy efficiency and reducing carbon dioxide emissions in production processes (Gallop et al., 2024).

Nevertheless, the company faces a range of challenges. Geopolitical tensions, energy crises in Europe and shifts in global oil and gas markets all affect its stability. During 2022–2023, the war in Ukraine required NIS to adapt its supply chains and search for alternative sources of oil and natural gas while simultaneously maintaining stable supplies to the domestic market. Despite these challenges, NIS remains a strategic asset for Serbia, with considerable importance for the national economy, energy security, and regional stability.

Sanctions afflicting Serbia, particularly in the context of its energy and financial ties with Russia, became increasingly relevant after the outbreak of the war in Ukraine in 2022. Restrictions imposed by the European Union and the United States on Russian oil and gas indirectly affected Serbia because of its reliance on Russian companies, including Gazprom and its influence over NIS (Gallop et al., 2024).

This has created an urgent need for policy measures aimed at diversifying Serbia's energy supply. Serbia responded through a multi-track approach. First, the country began developing alternative natural gas supply routes, including imports through the Trans Adriatic Pipeline and potentially via LNG terminals located in neighbouring countries (European Commission, 2024).

Serbia has also accelerated efforts to improve energy efficiency, reduce gas consumption in the public sector and industry and increase the share of renewable energy sources in the national energy mix (Bruegel, 2024).

Finally, the government has intensified diplomatic engagement with regional and European partners in order to maintain security of supply and prevent disruptions in distribution. These activities include negotiations concerning transit routes as well as participation in regional initiatives aimed at coordinating energy-security policies (Gallop et al., 2024).

CONCLUSION

Natural gas supply in the Western Balkans during the war in Ukraine has demonstrated the extent to which energy security is a critical factor for both national economies and regional stability.

The countries of the region, including Serbia, North Macedonia, Bosnia and Herzegovina, Montenegro and Albania, entered the crisis with differing degrees of dependence on Russian natural gas, making energy supply a potential instrument of Russian political influence. Prior to the war in

Ukraine, Russia, primarily through companies such as Gazprom, supplied a substantial share of the region's natural gas imports, which provided relatively stable and affordable energy supplies, but it also created a degree of dependence that proved to be a significant risk under conditions of geopolitical crisis.

Serbia, as the largest natural gas consumer in the Balkans, relied on Russia for approximately 85–90% of its gas imports. While this ensured short-term supply stability, it simultaneously increased the country's political vulnerability. North Macedonia was entirely dependent on Russian gas, while Bosnia and Herzegovina was also almost fully reliant on Russian supplies, despite the relatively small share of natural gas in its total energy mix. Albania and Montenegro made virtually no use of natural gas, which gave them a greater degree of energy independence. These differences in levels of dependence demonstrated the considerable heterogeneity of the region, both in terms of consumption and in terms of the capacity to respond to external shocks.

The war in Ukraine brought substantial changes to gas supply patterns in 2022. European Union restrictions on Russian oil and gas had an indirect impact on the Western Balkan countries. Serbia, which was particularly exposed due to its high dependence on Russian energy, was compelled to seek alternative supply routes and accelerate the development of domestic energy infrastructure. In this context, projects such as the Trans Adriatic Pipeline and potential LNG terminals assumed greater importance as the instruments of supply diversification. Government support and the role of NIS in securing gas supplies also proved critical in maintaining continuity and stability of supply.

At the same time, countries in the region accelerated efforts to reduce energy consumption and increase the share of renewable energy sources. Serbia introduced programmes of improving energy efficiency, while North Macedonia sought to expand the role of solar and wind energy in its energy mix. These measures form part of a long-term strategy aimed at not only mitigating the risks associated with dependence on Russian gas but also bringing the region closer to European energy standards and climate objectives.

From a geopolitical perspective, this situation has demonstrated that energy remains a powerful instrument in the hands of major international actors. Russia has used natural gas as an instrument of hybrid pressure. However, it has been demonstrated that the region is not powerless. Diversification of supply sources, investment in infrastructure and regional cooperation enable Western Balkan countries to reduce vulnerability and increase energy security. Although the transition remains ongoing, positive developments are already visible, particularly in the acceleration of

investments in renewable energy and the establishment of alternative supply routes.

The war in Ukraine and the accompanying energy crisis have also underscored the importance of institutional and political coordination. Western Balkan countries need to strengthen cooperation through regional initiatives, information sharing and coordinated contingency planning. At the same time, legislative and regulatory frameworks must be improved further in order to ensure energy-system stability and provide greater investment certainty for private sector participants.

The war in Ukraine has demonstrated that natural gas supply in the Western Balkans can no longer be regarded solely as an economic issue, but an important dimension of national and regional security. Countries that succeed in diversifying their supply sources, upgrading energy infrastructure and integrating renewable energy will be more resilient to crises and better positioned in international energy and political relations. Natural gas supply is therefore evolving from a conventional commercial arrangement into an instrument of geopolitical strategy and the responsibility of regional governments is to ensure that this resource is a means of stability rather than dependence.

REZIME

ENERGETSKA BEZBEDNOST I DIVERZIFIKACIJA SNABDEVANJA PRIRODNIM GASOM ZAPADNOG BALKANA POSLE 2022. GODINE U KONTEKSTU KRIZE U UKRAJINI

Rad je posvećen analizi uticaja poremećaja u energetsom sektoru izazvanih ratnim nemirima Rusije i Ukrajine, koji se dešavaju na tlu evropskog kontinenta od 2022. godine. U fokusu istraživanja je uticaj energetske inflacije na ukupnu infalciju zemalja članica Evropske Unije sa posebnim fokusom na Zapadni Balkan i Srbiju. Analizom dostupnog sadržaja, ekonomskih pokazatelja, relevantnih izveštaja statistika, sagledavaju se promene do kojih je došlo usled promene u snabdevanju energentima. Izveštaji ukazuju na snažne cenovne šokove, inflacione pritiske i preorijentaciju trgovine uz ubrzane energetske diversifikacije i integracije sa EU. Tenzije između Rusije i Ukrajine izazvale su promene u energetsom sektoru i prouzrokovale nestašicu energenata u regionu. Uočene su razlike u ekonomskoj otpornosti, ekonomije sa manjom zavisnošću od ruskih energenata i većom diversifikacijom pokazale su veću stabilnost. U radu se prati i analizira učešće i potrošnja energenata od strane stanovništva, komparativna analiza ukupne inflacije i infalcije ostvarene u energetsom sektoru. Istražuju se izazovi pred kojima se nalaze kreatori ekonomskih politika u domenu izvora energenata i

daju se određene preporuke za poboljšanja sa aspekta nesmetanog snabdevanja energentom i uticaja na inflaciju.

Ključne reči: energetske resursi; Zapadni Balkan; Evropska unija; Srbija; diverzifikacija; kriza u Ukrajini

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THE IMPORTANCE OF PROMOTION AND SALES MANAGEMENT OF HOTEL SERVICES IN SERBIA

ABSTRACT: The subject of this research is the management of the promotion and sales of hotel services as significant factors in the business success of hotel enterprises and the development of tourism in the Republic of Serbia. Given that the fact that the modern hotel industry operates in conditions of intense competition and rapid digitalization, special attention is paid to the analysis of promotional activities and sales channels that influence the market position of hotel establishments.

The aim of this paper is to determine the importance of effective promotion and sales management of hotel services, as well as their contribution to increasing tourist flows in Serbia. The research employs content analysis of relevant domestic and international literature, the descriptive method, and statistical analysis of data on tourist arrivals and overnight stays in the Republic of Serbia during the observed period.

The research results indicate that modern promotional tools, particularly digital marketing, social media, and online

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reservation systems, have a significant impact on increasing the visibility of hotel enterprises and attracting guests. Furthermore, effective management of sales channels contributes to higher occupancy rates of accommodation facilities and improved business performance. It can be concluded that promotion and sales represent key functions of hotel management, whose continuous improvement contributes to enhancing the competitiveness of the hotel sector and increasing tourist flows in the Republic of Serbia.

Key words: hotel industry, promotion of hotel services, sales of hotel services, digital marketing, tourist flows, tourist overnight stays, Republic of Serbia.

INTRODUCTION

Over the past several decades, the service sector has experienced significant growth and has assumed an increasingly important role in the structure of modern economies. Its development has been particularly pronounced in economically advanced countries, where service industries represent one of the key drivers of economic and social progress. At the same time, the strengthening of the tertiary sector is also evident in developing countries, although at a slower pace and with considerable differences among individual nations. These changes highlight the growing importance of services as a driver of economic activity and the enhancement of competitiveness in the modern marketplace (Čačić, 2013).

Tourism represents one of the most significant contemporary socio-economic phenomena, encompassing a wide range of participants and activities. Its importance is reflected in the impact it has on various spheres of society, including the economy, culture, politics, and overall social development. Owing to the numerous direct and indirect effects generated by tourism activities, tourism plays an important role in stimulating economic growth, improving living standards, and fostering the development of local communities. As a result, it occupies a prominent place in contemporary development processes worldwide (Thommandru et al., 2023). Among service industries, the hotel sector occupies a special position due to its contribution to tourism development, economic growth, and value creation. Therefore, the management of the promotion and sales of hotel services has become one of the key factors for the successful operation of hotel enterprises (Evans, 2024).

As one of the key components of the tourism industry, the hotel sector plays a significant role in tourism development and in generating its

economic benefits. The quality and availability of hotel services directly influence tourist satisfaction, the length of their stay, and the competitiveness of a tourist destination. In an environment of increasing competition in the tourism market, the successful operation of hotel enterprises increasingly depends on the effective management of service promotion and sales, which enables the attraction of new guests, higher occupancy rates, and improved business performance (Morrison, 2022).

One of the key characteristics of the modern hotel industry is the intensive internationalization of business operations and the expansion of hotel companies into new markets. A particularly important role in this process is played by large international hotel groups, which operate in numerous countries around the world. When entering a new market, these companies adapt their service offerings to the needs of their target customer groups, which already constitute their core clientele. Business travelers represent a particularly significant segment, as their requirements regarding the quality and range of hotel services influence the design of service offerings. Consequently, international hotel chains implement market segmentation strategies and develop different brands in order to respond more effectively to the needs of specific market segments (Baker, Magnini, 2016; Gursoy, 2018).

Contemporary trends in international hospitality are also reflected in the development of the hotel sector in the Republic of Serbia. In recent years, Serbia has recorded growth in tourist flows, an increase in accommodation capacity, and the arrival of renowned international hotel chains, which have contributed to improving service quality and strengthening the competitiveness of domestic hospitality. In such conditions, the successful operation of hotel enterprises increasingly depends on their ability to effectively manage promotional activities and sales processes, while adapting their offerings to the needs of different tourist segments (Dovgal, 2019; Morhulets et al., 2024). Therefore, the management of the promotion and sales of hotel services represents one of the key factors in the development of the hotel industry and the increase of tourist flows in the Republic of Serbia, which is also the subject of analysis in this paper.

MANAGEMENT OF HOTEL SERVICE PROMOTION IN MODERN HOSPITALITY INDUSTRY

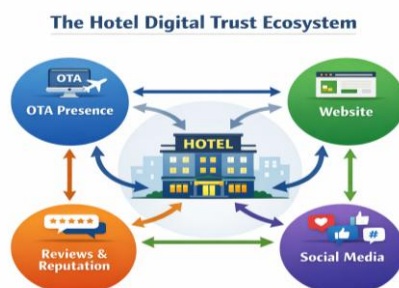
Promotion, or marketing communication, represents one of the most important instruments of the marketing mix in tourism and hospitality. Its primary role is to establish and maintain communication between service providers and potential customers, with the aim of informing, persuading,

and encouraging consumers to purchase tourism and hotel services. Through promotional activities, a positive image of products and services is created, their market recognition is increased, and demand is stimulated. In this way, promotion becomes an important factor in the successful completion of the exchange process between service providers and users. (Bateson, Hoffman, 2013; Lamb et al., 2013).

The particular importance of promotion in tourism and hospitality stems from the fact that tourism and hotel services are intangible and cannot be fully evaluated by consumers prior to consumption. Therefore, promotional activities aim to bring the characteristics of the service closer to potential guests, reduce uncertainty in the purchasing decision-making process, and shape their expectations. At the same time, promotion represents a two-way communication process that enables tourism and hotel enterprises to monitor the needs, desires, and expectations of consumers and to adapt their offerings accordingly (Popescu, Gajić, 2020). The importance of promotion is further emphasized by the specific characteristics of the tourism market, where supply and demand are spatially separated and consumers travel to the place where the service is provided. In such conditions, promotion plays a key role in connecting the tourism offer with potential customers and represents one of the most important instruments for attracting guests and enhancing the competitiveness of hotel enterprises (Kotler et al., 2010).

Promotional activities in tourism and hospitality encompass various forms of communication between service providers and target consumer groups, with the aim of presenting the tourism offer and stimulating interest in its use. Through the marketing communication process, the characteristics of tourism and hotel services are brought closer to potential guests, thereby reducing uncertainty in the purchasing decision-making process and increasing the likelihood of choosing a specific destination or accommodation facility (Hudson, S., Hudson, L., 2017).

Picture 1: Hotel Promotion on Social Media



Source: <https://www.milanstojkovic.com/promocija-hotela-na-drustvenim-mrezama/>

In addition to formal forms of promotion, word-of-mouth (WOM) communication holds particular importance in tourism and hospitality, as it is based on the exchange of experiences and recommendations among consumers themselves. Although hotel and tourism enterprises do not have full control over this form of communication, they can influence its development by providing high-quality services and creating positive guest experiences. The importance of word-of-mouth promotion has further increased with the development of the internet and social media, which enable the rapid spread of impressions, comments, and recommendations to a large number of potential customers, making it a key factor in the decision-making process regarding travel and hotel accommodation choices (Pourfakhimi et al., 2020).

The importance of promotion in tourism and hospitality is particularly evident during the decision-making process regarding travel and the selection of a tourism product. Consumers go through several stages before, during, and after travel, starting from recognizing the need to travel, through gathering information and selecting a specific destination or service, to evaluating the experience after the trip has ended. In each of these stages, promotion plays an important role in informing, guiding, and shaping the attitudes of potential consumers (Kryukova, Khetagurova, 2020).

In contemporary market conditions, an increasing number of enterprises apply the concept of Integrated Marketing Communications (IMC), which implies the coordinated use of different forms of promotional activities in order to deliver a clear, consistent, and persuasive message about the company and its offer to target markets. The essence of this approach is reflected in improving the quality of communication between the company and consumers, as well as in achieving a more efficient long-term market exchange within a given time period (Nikadimovs, 2019).

The promotional mix within Integrated Marketing Communications includes several instruments that complement each other and jointly contribute to the achievement of marketing objectives (Čerović, Knežević, 2021):

- Advertising is one of the most widely used forms of promotion, enabling rapid and mass reach to target groups through various media, but with the limitation of lacking direct feedback.
- Personal selling is based on direct contact between the seller and the buyer, enabling interactive communication and more precise adaptation of the offer to consumer needs.
- Direct marketing is focused on individualized communication with consumers, with the possibility of personalizing messages and measuring effectiveness.

- Internet promotion enables global visibility at relatively low costs and supports developed two-way communication with users.
- Sales promotion involves short-term incentive measures aimed at increasing sales, while it is important to consider their impact on the long-term image of the service.
- Publicity and public relations play an important role in shaping market perception through the publication of information in the media and the creation of a positive image.

Sponsorship represents an additional promotional tool that enhances the recognition and image of a company through support of various events and activities.

Promotional activities enable hotel enterprises to establish communication with their target market and influence the consumer decision-making process. Through various forms of marketing communication, consumers receive information about available alternatives, their characteristics, and advantages, which facilitates their choice. The ultimate goal of promotion is to influence consumer perception, attitudes, and behavior, increasing the likelihood that they will choose a particular hotel service.

MANAGEMENT OF HOTEL SERVICE SALES AND DISTRIBUTION CHANNELS

The sale of hotel services differs from the sale of most tangible products in that it is often completed well before the actual consumption of the service. Guests most commonly book accommodation in advance, either directly through reservation systems or via travel agencies, tour operators, and other intermediaries. Therefore, there may be a shorter or longer time period between the moment of sale and the moment the service is delivered. This specificity arises from the fact that in hospitality, the processes of service delivery and consumption occur simultaneously, which makes sales planning and management extremely important. Timely sales enable hotels to reduce business risk, improve occupancy rates of accommodation capacities, and more efficiently plan their business activities (Anderson, Xie, 2010).

When planning sales activities, an important role is played by the choice of sales intensity, that is, the way in which hotel services will be placed on the market. This decision directly affects market coverage and the achievement of business objectives. Intensive sales involve presence on a broad market with cooperation with a large number of sales intermediaries.

On the other hand, selective sales are focused on specific market segments and a limited number of partners, while exclusive sales involve cooperation with a single selected intermediary in a specific market or territory. The choice of an appropriate approach depends on the business strategy of the hotel enterprise, the characteristics of the target market, and the desired level of market presence (Chang, 2017; Lin et al., 2022).

Hotel enterprises can distribute their services through direct and indirect sales channels, as well as a combination of these two approaches (Đurašević, 2008). In practice, the combined model is most commonly applied, as it enables more efficient achievement of sales objectives and broader market access. In the second half of the 20th century, intermediaries played a dominant role in selling hotel capacities, primarily travel agencies and tour operators, which significantly influenced occupancy rates and the distribution of hotel services. However, the development of information and communication technologies, particularly the internet, has brought significant changes to the way hotel services are sold. Modern hotels today have the ability to establish direct communication with guests through their own reservation systems and independently manage the booking process. In addition, hotel enterprises can be included in joint reservation networks and global distribution systems, thereby increasing the availability of their offer on the international tourism market (Weilbaker, Crocker, 2001).

The advancement of information and communication technologies has significantly influenced the transformation of sales in hotel and tourism services. Modern technological tools have enabled more efficient management of accommodation capacities, improved revenue performance, better communication with guests, and the development of various forms of business cooperation among participants in the tourism market. As a result of these changes, traditional sales models have been gradually replaced by modern digital solutions that enable faster and more efficient distribution of tourism products and services. Of particular importance are electronic intermediaries and various information systems that support the reservation and sales process. Among them, computerized reservation systems of hotel, transport, and tourism companies stand out, as well as global distribution systems that connect a large number of service providers and sales partners, and destination management systems that contribute to more efficient management of the tourism offer of a particular destination (Dzhandzhugazova et al., 2016).

Distribution channels represent one of the most important instruments of the marketing mix in tourism and hospitality, as they enable the connection between service providers and end users. In modern business conditions, their importance is continuously increasing, as they play a key role in achieving competitive advantage and improving the business

performance of tourism and hotel enterprises. The primary task of distribution channels is to make hotel services accessible to consumers in a way that best meets their needs and expectations, thereby facilitating the purchasing process and the realization of market exchange (Taylor, 2012).

In addition to their sales function, distribution channels also have an important informational role. They enable the transfer of information between service providers, intermediaries, and potential tourists, thereby contributing to better market awareness. At the same time, modern distribution systems provide the technical and organizational conditions for the reservation, confirmation, and payment of tourism and hotel services, which significantly simplifies the purchasing process and increases the accessibility of the offer (Middleton, 1994).

Distribution channels can be viewed as a link between providers of tourism services and their users. In practice, distribution systems most often include several different channels that operate simultaneously, complement and, at the same time, compete with one another. In this process, intermediaries such as travel agencies, tour operators, and online booking platforms play a significant role, as their function is to connect supply and demand, improve market efficiency, and create new opportunities for the placement of tourism and hotel services. In this way, distribution channels contribute to market expansion and increase the accessibility of the tourism offer to different consumer segments (Čerović, 2009).

Based on the above, it can be concluded that the success of hotel service sales does not depend solely on the selection of appropriate sales channels, but also on their alignment with promotional activities. Regardless of whether a hotel uses direct, indirect, or combined sales, it is necessary to continuously develop effective promotional strategies that contribute to the recognition of the offer and the attraction of target guest segments. Of particular importance are creatively designed promotional messages that enable differentiation from the competition, as well as regular monitoring of promotion costs and effects in order to achieve optimal business results. Integrated management of sales and promotion represents one of the key conditions for increasing the competitiveness of hotel enterprises and achieving successful performance in the modern tourism market.

THE IMPACT OF PROMOTION AND SALES OF HOTEL SERVICES ON TOURIST FLOWS IN THE REPUBLIC OF SERBIA

The contemporary development of tourism is characterized by numerous changes that go beyond traditional factors of tourism supply and

demand. Driven by scientific and technological progress, digitalization, and globalization processes, tourism flows are becoming increasingly intense and widespread, contributing to the growing importance of tourism in the economic and social development of many countries. These changes are present both in developed and developing countries, regardless of whether they have a predominantly receptive or outbound tourism function (Čerović, 2002).

In such conditions, hotel enterprises face increasingly strong competition and the need to implement modern marketing activities. Effective management of the promotion and sales of hotel services has become one of the key factors for attracting tourists, increasing accommodation occupancy rates, and improving the competitiveness of a destination. Through various promotional activities, digital communication channels, and modern sales systems, hotels are able to increase their visibility on the market and influence the decisions of potential guests (Dalgıç et al., 2017).

The importance of these activities is particularly evident in the Republic of Serbia, where tourism development in recent years has been accompanied by an increase in tourist arrivals and overnight stays. An analysis of tourist flows can provide insight into the relationship between the improvement of promotional and sales activities of hotel enterprises and the results achieved in the tourism sector. Therefore, it is necessary to examine the extent to which the promotion and sale of hotel services contribute to the increase in tourist flows and the further development of the hospitality industry in Serbia (Ilić, Stefanović, 2019).

Table 1: Tourist flows in Serbia for the 10-Year Period (2015-2024)

Year	Tourists			Overnights stays of tourists			Average number of overnight stays of tourists	
	in total	domestic	foreign	in total	domestic	foreign	domestic	foreign
2024	4.432.751	2.048.016	2.384.735	12.662.151	6.564.402	6.097.749	3,2	2,6
2023	4.192.797	2.058.492	2.134.305	12.440.935	6.858.331	5.582.604	3,3	2,6
2022	3.869.235	2.096.472	1.772.763	12.245.613	7.306.219	4.939.394	3,5	2,8
2021	2.591.293	1.720.054	871.239	8.162.430	5.732.833	2.429.597	3,3	2,8
2020	1.820.021	1.374.310	445.711	6.201.290	4.936.732	1.264.558	3,6	2,8
2019	3.689.983	1.843.432	1.846.551	10.073.299	6.062.921	4.010.378	3,3	2,2
2018	3.430.522	1.720.008	1.710.514	9.336.103	5.678.235	3.657.868	3,3	2,1
2017	3.085.866	1.588.693	1.497.173	8.325.144	5.150.017	3.175.127	3,2	2,1
2016	2.753.591	1.472.165	1.281.426	7.533.739	4.794.741	2.738.998	3,3	2,1
2015	2.437.165	1.304.944	1.132.221	6.651.852	4.242.172	2.409.680	3,3	2,1

Source: Statistical Office of the Republic of Serbia, Municipalities and Regions in the Republic of Serbia

Based on the presented data from Table 1, several clearly identifiable trends in tourist flows in the Republic of Serbia can be observed during the period from 2015 to 2024.

First of all, the period from 2015 to 2019 is characterized by continuous growth in tourist flows. The total number of tourists increased from 2,437,165 in 2015 to 3,689,983 in 2019, representing an increase of over 50%. At the same time, the number of overnight stays rose from 6,651,852 to 10,073,299. A particularly significant increase is observed in the number of foreign tourists, which grew from 1,132,221 to 1,846,551 during the observed period, indicating the strengthening of Serbia's international competitiveness as a tourist destination. These results can be linked to the improvement of the tourism offer, more intensive promotional activities, and the development of modern sales channels for tourism and hotel services.

The year 2020 represents a turning point due to the COVID-19 pandemic, which caused a significant decline in tourism activities at the global level. The number of tourists in Serbia decreased to 1,820,021, representing a drop of approximately 51% compared to 2019. A particularly pronounced decline was recorded in the number of foreign tourists, from 1,846,551 to only 445,711, or more than 75%. A similar trend was observed in the number of overnight stays, which fell from 10,073,299 to 6,201,290. During this period, domestic tourists became the dominant driver of tourism demand, as evidenced by the fact that they accounted for almost four times more overnight stays than foreign tourists.

During 2021, a gradual recovery of the tourism sector occurred. The number of tourists increased to 2,591,293, while the number of overnight stays reached 8,162,430. The recovery was primarily driven by the domestic market, whereas the number of foreign tourists was still significantly below the pre-pandemic level.

In the period from 2022 to 2024, intensive growth in tourist flows continued. Already in 2022, the total number of overnight stays exceeded the level recorded in 2019, while 2024 marked the highest tourist flows in the observed period. The total number of tourists reached 4,432,751, while 12,662,151 overnight stays were recorded. It is particularly significant that the number of foreign tourists in 2024 amounted to 2,384,735, substantially surpassing the pre-pandemic record from 2019. These indicators confirm the successful recovery of Serbia's tourism sector and the growing attractiveness of the country on the international market.

By analyzing the average number of overnight stays, it can be observed that domestic tourists consistently recorded longer average stays than foreign tourists throughout the entire observed period. For domestic tourists, the average number of overnight stays ranged between 3.2 and 3.6

nights, while for foreign tourists it ranged between 2.1 and 2.8 nights. During the pandemic, a slight increase in the average length of stay was recorded, which can be explained by a reduced number of trips and longer stays of tourists at destinations.

Viewed as a whole, the data indicate that tourist flows in Serbia recorded steady growth until 2019, followed by a sharp decline caused by the pandemic. However, thanks to the gradual recovery of tourism demand, the improvement of promotional activities, the development of digital sales channels, and the growing international recognition of Serbia as a tourist destination, tourist flows has been on an upward trajectory again since 2022. In 2024, the best results of the observed ten-year period were achieved.

The growth of tourist flows in the Republic of Serbia during the observed period can be linked to the improvement of promotional and sales activities in the hotel industry, as well as to significant investments in the development of hotel infrastructure. The increasing application of digital marketing, online reservation systems, and global distribution networks has enabled greater visibility of Serbia on the international tourism market and easier access for potential guests. At the same time, the growth in the number of foreign tourists indicates a more successful positioning of Serbia as an attractive tourist destination, which has been supported both by national promotional activities and the marketing campaigns of hotel enterprises (Marjanović, Djordjević, 2016).

Positive trends in tourist flows have also been accompanied by significant investments in the hotel sector. In recent years, renowned international hotel brands have been present on the Serbian market, while new high-category projects are simultaneously being implemented (Gligorijević, Kostadinović, 2023). The opening of the luxury St. Regis hotel in Belgrade in 2024, as well as the announced arrival of the InterContinental and Ritz-Carlton brands and new Hyatt properties, confirm the growing confidence of international investors in the development of Serbia's tourism potential.

Tabel 2: Number of Tourists in Serbia by Categorized Hotels for the 10-Year Period (2015–2024)

Year	Tourists - in total					
	Hotels - all	5* hotels	4* hotels	3* hotels	2* hotels	1* hotels
2024	2.111.557	199.913	1.289.443	515.404	103.203	3.594
2023	1.955.389	187.556	1.167.839	480.397	115.029	4.568
2022	1.789.112	190.781	1.011.514	464.524	117.696	4.597
2021	1.314.105	164.505	700.264	320.743	103.843	24.750
2020	836.951	92.297	427.354	218.912	79.718	18.670
2019	1.947.924	169.847	976.889	561.715	172.184	67.289
2018	1.832.432	142.164	858.521	574.449	179.408	77.890
2017	1.670.821	140.328	779.521	522.413	170.824	57.735
2016	1.517.243	118.141	704.354	461.996	168.037	64.715
2015	1.336.203	105.778	568.999	439.746	153.613	68.067

Source: Statistical Office of the Republic of Serbia, Statistical yearbook

The data from Table 2 indicate a continuous increase in the number of tourists in hotels in Serbia during the observed ten-year period, with the exception of 2020 and 2021, when the COVID-19 pandemic caused a significant decline in tourist flows. The total number of tourists increased from 1,336,203 in 2015 to 2,111,557 in 2024, representing a growth of approximately 58%. After the pandemic minimum in 2020, when only 836,951 tourists were recorded, a gradual recovery followed, and 2024 recorded the highest number of tourists in the observed period. These trends follow the overall growth of tourist flows in Serbia and the development of the hotel industry over the last decade.

Viewed by hotel categories, four-star hotels hold the most significant share throughout the entire period. The number of tourists in this category increased from 568,999 in 2015 to 1,289,443 in 2024, representing more than a twofold increase. In 2024, approximately 61% of all hotel tourists stayed in four-star hotels, confirming the dominant position of this category on the market. At the same time, five-star hotels also recorded significant growth, with the number of tourists increasing from 105,778 to 199,913, or by almost 89%. These data indicate a growing demand for higher-quality accommodation capacities and an increasing presence of higher-category hotel offerings in Serbia.

On the other hand, mid-range hotels, i.e., three-star hotels, also recorded an increase in the number of tourists, but at a significantly slower pace. Their number increased from 439,746 tourists in 2015 to 515,404 in 2024. The share of this category in total tourist flows has been gradually decreasing, indicating that part of the demand is shifting toward higher-

category hotels. A particularly pronounced decline is observed in the importance of one- and two-star hotels. The number of tourists in two-star hotels decreased from 153,613 in 2015 to 103,203 in 2024, while one-star hotels recorded a drop from 68,067 to only 3,594 tourists. These trends indicate changes in tourist preferences, with an increasing tendency to choose higher-quality accommodation, as well as a reduction in the supply or market relevance of lower-category facilities.

Based on the presented data, it can be concluded that the structure of tourism demand in Serbia has significantly changed over the last decade in favor of higher-category hotels. The dominance of four-star hotels, the continuous growth of five-star hotels, and the simultaneous decline in the importance of one- and two-star hotels confirm the trend of improving the quality of hotel offerings and rising tourist expectations. These developments represent a positive indicator of the growth of Serbia's hotel industry and its adaptation to the modern requirements of both domestic and international tourists.

Tabel 3: Number of Overnight Stays in Serbia by Categorized Hotels for the 10-Year Period (2015–2024)

Year	Overnights stays of tourists					
	Hotels - all	5* hotels	4* hotels	3* hotels	2* hotels	1* hotels
2024	4.869.863	454.784	2.864.391	1.230.737	283.761	36.190
2023	4.594.865	436.227	2.631.563	1.201.612	305.070	20.393
2022	4.508.357	453.277	2.396.856	1.299.030	341.976	17.218
2021	3.656.021	398.929	1.714.088	1.063.171	353.029	126.804
2020	2.510.335	226.094	1.129.593	748.767	285.377	120.504
2019	4.613.396	362.580	2.033.563	1.433.998	544.165	239.090
2018	4.273.488	308.198	1.792.040	1.410.638	534.223	228.389
2017	3.938.449	308.524	1.625.263	1.267.507	565.645	171.510
2016	3.593.999	265.800	1.471.545	1.132.668	549.169	174.817
2015	3.150.931	215.370	1.233.908	1.084.011	431.715	185.927

Source: Statistical Office of the Republic of Serbia, Statistical yearbook

The data from Table 3 show that the total number of overnight stays in hotels in Serbia recorded a significant increase during the observed ten-year period. The number of overnight stays rose from 3,150,931 in 2015 to 4,869,863 in 2024, representing a growth of approximately 55%. As with the number of tourists, the COVID-19 pandemic caused a sharp decline in tourism activity in 2020, when only 2,510,335 overnight stays were recorded; however, a gradual recovery began already in 2021. The highest number of overnight stays was achieved in 2024, confirming the continuation of positive trends in the development of Serbia's tourism and

hotel sectors. These developments are in line with national tourism indicators, which show that 2024 brought an increase in total overnight stays and the continuation of post-pandemic tourism recovery.

Viewed by hotel categories, the highest number of overnight stays throughout the entire period was recorded in four-star hotels. The number of overnight stays in this category increased from 1,233,908 in 2015 to 2,864,391 in 2024, representing a growth of over 130%. The share of this category in the total number of overnight stays has been continuously increasing, so that in 2024 nearly 59% of all hotel overnight stays were realized in four-star hotels. Five-star hotels also recorded significant growth, with the number of overnight stays rising from 215,370 in 2015 to 454,784 in 2024, or by more than 110%. These data indicate a growing demand for higher-quality and more comprehensive accommodation facilities, as well as an improvement in Serbia's hotel offer in the higher-category segment.

Three-star hotels also recorded an increase in the number of overnight stays, but at a slower pace. Their number of overnight stays increased from 1,084,011 in 2015 to 1,230,737 in 2024. However, their relative importance in the overall structure of hotel overnight stays has been gradually declining due to the faster development of higher-category hotels. At the same time, two- and one-star hotels have recorded a pronounced decline in market share. The number of overnight stays in two-star hotels decreased from 431,715 to 283,761, while one-star hotels recorded a drop from 185,927 to only 36,190 overnight stays. These results indicate a shift in tourist preferences, with tourists increasingly choosing higher-quality accommodation facilities and a higher level of service.

Based on the presented data, it can be concluded that during the period 2015–2024, a significant transformation of the hotel accommodation structure in Serbia took place. The dominance of four-star hotels, the growth in overnight stays in five-star hotels, and the simultaneous decline in the importance of lower categories confirm the trend of modernizing the hotel offer and improving service quality. At the same time, the increase in the number of overnight stays indicates not only a higher number of tourists, but also longer stays in higher-quality hotel facilities, which represents a positive indicator of the competitiveness and development of Serbia's hotel industry.

There is a mutually dependent relationship between the development of the hotel industry and the growth of tourist flows. A higher number of tourists stimulates the construction of new accommodation capacities and the entry of international hotel chains into the domestic market, while at the same time the development of modern hotels, improved service quality, and more efficient promotional and sales activities further increase Serbia's attractiveness as a tourist destination. The results achieved in 2024, when record tourism indicators were recorded, confirm that promotion, sales, and

the development of the hotel offer are important factors in the further growth of the tourism sector in the Republic of Serbia (Vujadinović, 2022).

CONCLUSION

Modern hospitality operates under conditions of intense competition, rapid technological development, and increasingly demanding tourists, which is why the promotion and sales of hotel services play a key role in achieving the business objectives of hotel enterprises. The study indicates that effective management of these marketing instruments represents an important factor in attracting guests, improving the market position of hotels, and increasing competitiveness in the tourism market. Of particular importance are modern forms of marketing communication, digital marketing, social media, and online reservation systems, which enable direct communication with potential customers and increase the accessibility of hotel offerings in both domestic and international markets. At the same time, proper management of sales channels contributes to better occupancy rates and more efficient use of available resources.

The analysis of tourist flows in the Republic of Serbia for the period 2015–2024 showed that the number of tourists and overnight stays recorded continuous growth until 2019, followed by a significant decline caused by the COVID-19 pandemic. However, already from 2021, the tourism sector began to recover, while in 2024 the best results of the observed period were achieved in terms of both the number of tourists and overnight stays. A particularly significant increase was recorded in the number of foreign tourists, indicating the growing international recognition of Serbia as a tourist destination. These results can be linked to the improvement of promotional activities, the development of digital sales channels, as well as continuous investments in hotel infrastructure and the enhancement of service quality.

Based on the conducted research, it can be concluded that the promotion and sales of hotel services represent indispensable elements of successful hotel business operations and a significant factor in the development of tourism in the Republic of Serbia. The growth of tourist flows, the increase in the number of foreign guests, and the development of the hotel sector confirm the need for continuous improvement of marketing activities and adaptation to modern trends in the tourism market. In the future period, further development of digital technologies, innovative promotional tools, and modern sales channels will represent an important prerequisite for strengthening the competitiveness of domestic hospitality and ensuring the sustainable development of tourism in Serbia.

REZIME

ZNAČAJ PROMOCIJE I UPRAVLJANJA PRODAJOM HOTELSKIH USLUGA U SRBIJI

Predmet ovog istraživanja je upravljanje promocijom i prodajom hotelskih usluga kao značajnim faktorima poslovnog uspeha hotelskih preduzeća i razvoja turizma u Republici Srbiji. S obzirom na činjenicu da savremena hotelska industrija posluje u uslovima intenzivne konkurencije i brze digitalizacije, posebna pažnja je posvećena analizi promotivnih aktivnosti i kanala prodaje koji utiču na tržišnu poziciju hotelskih objekata.

Cilj ovog rada je da se utvrdi značaj efikasnog upravljanja promocijom i prodajom hotelskih usluga, kao i njihov doprinos povećanju turističkih tokova u Srbiji. Istraživanje koristi analizu sadržaja relevantne domaće i međunarodne literature, deskriptivnu metodu i statističku analizu podataka o dolascima i noćenjima turista u Republici Srbiji tokom posmatranog perioda. Rezultati istraživanja ukazuju da savremeni promotivni alati, posebno digitalni marketing, društvene mreže i sistemi za onlajn rezervacije, imaju značajan uticaj na povećanje vidljivosti hotelskih preduzeća i privlačenje gostiju. Štaviše, efikasno upravljanje kanalima prodaje doprinosi većoj popunjenosti smeštajnih kapaciteta i poboljšanju poslovnih performansi. Može se zaključiti da promocija i prodaja predstavljaju ključne funkcije hotelskog menadžmenta, čije kontinuirano unapređenje doprinosi jačanju konkurentnosti hotelskog sektora i povećanju turističkih tokova u Republici Srbiji.

Ključne reči: hotelska industrija, promocija hotelskih usluga, prodaja hotelskih usluga, digitalni marketing, turistički tokovi, noćenja turista, Republika Srbija.

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DUE DILIGENCE AND THE ROLE OF INTERNAL AUDIT IN PUBLIC PROCUREMENT RISK MANAGEMENT WITHIN THE SERBIAN HEALTHCARE SYSTEM

ABSTRACT: Modern healthcare systems face continuous challenges driven by rising costs and the increasing complexity of medical technologies, rendering public financial management exceptionally vulnerable. Public procurement within the healthcare system of the Republic of Serbia has traditionally been constrained by a rigid, compliance-based legal approach, where oversight primarily focuses on the *ex-post* verification of procedural legality. However, formal compliance with the law does not guarantee that a procurement decision was economically optimal, nor that the acquired asset will deliver the expected clinical and public value. This paper investigates the feasibility, justification, and modalities of introducing the concept of due diligence as a preventive, multidisciplinary assurance mechanism integrated into the existing Financial Management and Control (FMC) system and internal audit of healthcare institutions. The purpose of the proposed model is to shift the control focus from administrative conformity to the substantive quality and economic justification of the decision before budget resources are irreversibly committed. The paper delineates two potential scenarios: first, the implementation of a preventive due diligence mechanism for high-risk public procurement to significantly reduce institutional operational and financial

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losses; and second, an analysis emphasizing that integrating this principle into the domestic healthcare system is institutionally feasible and justified despite existing barriers. Through a comprehensive literature review and normative framework analysis, this paper proposes a practical model for selective application based on a multidimensional risk matrix, enabling constrained control and internal audit resources to be directed exclusively toward procurements exhibiting the highest synergy of financial, technical, and clinical risks.

Keywords: Due diligence, Public procurement, Internal audit, Risk management, Serbian healthcare system, Financial Management and Control (FMC).

INTRODUCTION

Modern healthcare systems face continuous pressure driven by rising costs, technological advancements, and increasing demands for quality care, rendering public financial management in this sector exceptionally complex. The current legal framework in the Republic of Serbia, primarily defined by the Public Procurement Law, is established to ensure transparency, stimulate competition, and mitigate corruption risks (Zakon o javnim nabavkama, 2019). However, within the practical framework of the healthcare system, these procedures are traditionally viewed through the prism of legal-procedural compliance. Consequently, the primary focus of management structures often becomes the satisfaction of formal legal requirements and administrative procedures rather than achieving economic expediency and the principle of value for money (Kancelarija za javne nabavke, 2018).

Nevertheless, such procedural formats overlook the fact that public procurement represents a key mechanism through which allocated public funds are transformed into tangible medical resources, high-tech equipment, and sustainable services. The mere fact that a specific procedure was conducted in full compliance with the law does not guarantee that the resulting decision was economically optimal, nor that the acquired asset will deliver the expected clinical value for patients. An analysis of public financial management in the healthcare system of the Republic of Serbia highlights a pronounced issue of so-called "procedural formalism," where public procurement processes are predominantly executed to fulfill administrative-legal norms and protect against external audits, rather than to maximize economic efficiency (Milosavljević et al., 2023). Existing research confirms that in domestic practice, the principle of best value for money is not yet

integrated as a primary factor in the successful management of public funds; as a result, strict adherence to legal forms does not automatically guarantee that the decision made is economically and medically optimal (CPES, 2022). These expert consensus points indicate that resource allocation processes in Serbian healthcare require a transformation toward evaluating the quality and long-term viability of the economic and medical decision itself before budget resources are irreversibly committed.

A normative framework comprising Financial Management and Control (FMC) and internal audit has been established and developed in the Republic of Serbia as the twin pillars of Public Internal Financial Control (PIFC). Nonetheless, official reports and strategic documents indicate that internal oversight in practice often operates reactively and *ex-post*, where focus is directed at mere regulatory compliance and the retrospective detection of errors rather than preventive operational risk management (Ministarstvo finansija, 2021). Conversely, contemporary international standards and governance guidelines for the public sector increasingly emphasize the need to introduce the analytical apparatus of due diligence and *ex-ante* risk assessment prior to making key public resource allocation decisions (SIGMA, 2023). Implementing these preventative measures within healthcare public procurement does not imply creating a new administrative apparatus, but rather a qualitative upgrade of existing FMC capacities. This enables the timely evaluation of supplier reliability, total lifecycle costs, and technical asset sustainability. Implementing this concept into high-risk public procurement within healthcare institutions does not entail building a new, parallel bureaucratic framework; instead, it involves the qualitative upgrade and supplementation of the existing capacities of internal control mechanisms. This facilitates preventive, risk-based action that evaluates technical sustainability, supplier reliability, total lifecycle costs, and vendor lock-in dependencies.

The subject of this theoretical-analytical paper is the investigation of the feasibility, justification, and modalities of integrating a due diligence mechanism into the public procurement and internal control systems of Serbian healthcare. The primary problem addressed in this study is reflected in the existing gap between the formal legality of procurements and their substantive economic and clinical expediency. While the legal framework insists on transparency and equal treatment of bidders, healthcare institutions frequently confront hidden maintenance costs, incompatible equipment, or vulnerable supply chains, which directly threaten the continuity of healthcare delivery, particularly in emergencies (Griffore, 2023). The constrained capacities of internal controls within healthcare institutions further complicate comprehensive oversight. Therefore, using tools such as the Kraljic matrix, a model could be developed to enable the selective direction of resources toward

those decisions where the synergy of financial, technical, and operational risks is highest (Kraljic, 1983).

The primary objective of this paper is to formulate a realistic and applicable model for improving the healthcare public procurement system in Serbia by introducing a preventive due diligence assurance mechanism. The study aims to answer a pivotal question: how to shift from asking "was the procedure legal?" to asking "was the procurement decision sufficiently verified, justified, and risk-based relative to the public value it is intended to generate?". To achieve this objective, the paper posits two core assumptions. First, the introduction of a multidisciplinary and preventive due diligence mechanism into high-risk public procurement processes can significantly reduce the operational and financial losses of healthcare institutions compared to exclusively formal-legal control. Second, the integration of due diligence principles into the existing internal control and management system in Serbian healthcare is institutionally feasible and justified, despite current barriers regarding professional capacities and the rigidity of the traditional approach to tendering procedures.

EVOLUTION AND APPLICATION OF DUE DILIGENCE IN THE EUROPEAN UNION PUBLIC SECTOR

The process of due diligence originally emerged within corporate law as an investor protection instrument during private sector corporate acquisitions and mergers. Over the past two decades, driven by globalization and the increasing complexity of global markets, this concept has undergone a significant evolution, expanding from a voluntary financial verification mechanism into a legally binding procedure within the public sector and public procurement systems of the European Union, which was formalized by the adoption of Directive (EU) 2024/1760 (European Union, 2024). The key driver behind this transition was the realization that public buyers, while spending budget resources, must bear accountability not only for the immediate economic justification of a procurement but also for the social, environmental, and ethical consequences of their suppliers' operations. Consequently, the contemporary European legal framework enables public authorities to directly integrate compliance with due diligence standards into contract award criteria and contract performance conditions, thereby transforming public procurement from an administrative process into a strategic public policy tool (OECD, 2024).

The integration of due diligence principles into the public sector was formalized through the European public procurement directives, which enabled Member States to incorporate social, environmental, and qualitative

requirements into all stages of tendering procedures, shifting the focus from the lowest price to the most economically advantageous tender for the community (European Union, 2014). Public healthcare systems, being among the largest consumers of budget funds, have become a vital field for implementing these expanded verifications of supply chain integrity and stability. The healthcare sector has proven to be particularly sensitive to systemic risks, which encompass the procurement of inadequate medical devices, corruption pressures, and potential disruptions in the delivery of vital medicines and consumables (SIGMA, 2021). As a result, the traditional evaluation of bids based exclusively on the lowest price is gradually being replaced by more complex risk analysis models that scrutinize the financial stability, technical reliability, and operational resilience of suppliers before a contract is finalized.

In the contemporary practice of European Union Member States, the application of due diligence in healthcare represents an increasingly important operational procedure aimed at crisis prevention and ensuring ethical standards in the procurement of digital and medical technologies. With the adoption of Directive (EU) 2024/1760 on Corporate Sustainability Due Diligence, a legal mechanism was created that links the right to participate in public tenders to the responsibility and integrity profile of the company itself across its entire supply chain over the long term (European Union, 2024). In the practical framework of healthcare systems, these mechanisms, supported by official European guidelines for socially responsible public procurement, imply that hospitals and central procurement funds verify the origin of goods, environmental compliance of production processes, and the absence of hidden conflicts of interest within ownership structures through structured checks (European Commission, 2021). This evolution demonstrates the transformation of due diligence from a reactive legal mechanism into a proactive public policy tool, the ultimate goal of which is ensuring the stability, safety, and transparency of critical public systems such as healthcare.

NORMATIVE AND INSTITUTIONAL FRAMEWORK OF PUBLIC PROCUREMENT AND INTERNAL AUDIT IN SERBIA

The current normative system governing the expenditure of public funds in healthcare institutions of the Republic of Serbia rests upon two critical pillars: the Public Procurement Law and the Public Internal Financial Control (PIFC) framework, within which Financial Management and Control (FMC) and internal audit play a central role. The Public Procurement Law is primarily focused on ensuring the legality, transparency, and competitiveness of the

procurement procedure itself (Zakon o javnim nabavkama, 2019). Conversely, healthcare management in practice confronts complex clinical and operational risks that rigid statutory regulations cannot always independently anticipate. For this reason, it is generally accepted within public finance and public sector management theory that formal compliance with legal procedures and administrative conformity guarantees neither an economically expedient procurement nor an optimal price-quality ratio for the acquired resources. Introducing the concept of due diligence within this framework does not require legislative changes; rather, it entails leveraging existing legal mechanisms and the contracting authority's discretionary powers to conduct a comprehensive assessment of hidden risks and costs prior to making a final procurement decision.

In the public procurement of medical equipment and specialized services, internal control in domestic practice is frequently reduced to completing administrative checklists and basic verification of budget lines. Local expert consensus openly highlights the issue of "formalism," wherein Financial Management and Control (FMC) processes are executed primarily to satisfy statutory obligations and legal forms, rather than for their substantive and practical implementation in strategic decision-making. This oversight system lacks a multidisciplinary analytical tool —such as due diligence mechanisms and *ex-ante* evaluations— which would enable a comprehensive verification of equipment technical sustainability, supplier reliability, and long-term financial liabilities before initiating tendering procedures. By integrating due diligence principles into FMC processes, healthcare institutions could transition from the passive and bureaucratic registration of risks to their active prevention through proactive market and contract condition analysis.

Internal audit within the Serbian healthcare system is established as an independent function that provides assurance to management regarding the adequacy of internal control systems. However, the traditional role of internal audit in the Serbian public sector remains predominantly oriented toward the *ex-post* review of completed transactions and the retrospective detection of procedural errors. When internal audit analyzes a public procurement after the contract has been signed and the equipment delivered, the scope for corrective action is minimal, and the potential damage to the institution's budget has already occurred. For internal oversight to become a genuine partner to management in public procurement risk governance, a methodological shift toward preventive action is required. By applying a risk-based due diligence approach that incorporates a detailed verification of supply chain integrity and sustainability, control mechanisms could provide preventive assurance for critical and high-risk procurements, focusing on the justification of the

decision itself and the total lifecycle costs of the procurement (European Commission, 2024).

The existing institutional framework in Serbia creates a paradox where institutions can be fully compliant with the law while simultaneously making decisions that jeopardize their long-term financial and operational stability. Although the Public Procurement Law permits the application of the most economically advantageous tender (MEAT) criterion, which incorporates lifecycle costs and quality, domestic practice predominantly relies exclusively on the lowest-price criterion. This reliance stems from a pervasive fear of external audits, bidder appeals, and the potential annulment of tenders (Milovanović et al., 2021). This fear of formal errors paralyzes strategic procurement decision-making. Due diligence provides a systematic methodology that enables management and internal controls to document and justify quality- and risk-based decisions, thereby establishing a much-needed balance between legal form and economic substance in healthcare public procurement.

MANAGEMENT INTEGRATION MODEL

Establishing a sustainable public procurement model within the healthcare system requires a clear methodological integration of the due diligence mechanism into existing Financial Management and Control (FMC) structures. To prevent organizations from falling into the trap of administrative overburdening and the duplication of procedural steps, integration must rely on the principles of compatibility and coordination within the Public Internal Financial Control system (Milovanović et al., 2021). The model does not aim to replace FMC checklists; rather, it seeks to upgrade them with analytical depth at precisely defined critical points in the process. Positioning this mechanism within the institution's first and second lines of defense ensures that risk identification is viewed not as a passive, isolated act, but as a dynamic process directly linked to the institution's strategic decision-making (OECD, 2024). This synergy is achieved by utilizing FMC as a permanent screening network for detecting general operational threats, while due diligence acts as a focused, preventive intervention mechanism for procurements that exceed predefined risk tolerance thresholds.

To operationalize this process, it is necessary to establish clear and measurable quantitative and qualitative criteria that automatically trigger due diligence and risk assessment within the financial management and control system. The financial value of a procurement is a primary, but not the sole, indicator of risk; the complexity of the healthcare environment demands the use of multidimensional models that combine financial aspects with technical

and specific market factors. The first, quantitative criterion is a high estimated value of a lot or the entire tender, which requires strict mapping within prescribed risk management guidelines (Ministarstvo finansija Republike Srbije, 2019). The second, qualitative criterion encompasses technological complexity and the so-called risk of technological dependency on a single supplier (vendor lock-in). The third critical criterion involves the introduction of entirely new and complex digital systems or medical equipment with which the institution and its operational staff have no prior experience; in such cases, an inadequate choice of equipment or the neglect of equipment lifecycle costs can cause direct negative consequences for operational stability and the efficiency of public resource spending.

Based on these criteria, the model provides for the formation of a risk matrix that classifies public procurements into three categories, adapting risk management models used in crisis and critical infrastructure systems. Procurements that fall into the high-impact and high-probability zone of a negative event must mandatory undergo a multidisciplinary due diligence process before a formal request is submitted to the public procurement department to launch the tender.

A fundamental step in integrating the control systems is translating identified specific threats into measurable Key Risk Indicators (KRIs), which, according to global enterprise risk management standards (COSO, 2017), serve as early warning systems aligned with organizational strategy and performance. In the context of healthcare institutions, these indicators are primarily classified into three key groups: financial indicators (which monitor price deviations and forecast unbudgeted costs throughout the equipment lifecycle), operational indicators (which measure technical compatibility, supply chain stability, and the reliability of pharmaceutical deliveries), and legal-regulatory indicators (which monitor regulatory compliance and identify the risk of anti-competitive practices or dependency on a single bidder). In this manner, through a previously structured market consultation, the institution's management receives an objective and quantified insight into how a specific procurement will impact the institution's liquidity, sustainability, and operational capacity prior to initiating the tendering procedure.

The institutional positioning of this analytical model requires a shift in organizational culture and a clear allocation of responsibilities within the healthcare institution, in alignment with the statutory duties of the executive director who bears primary responsibility for updating and operating internal controls. According to the bylaws regulating internal control in the public sector, the head of the institution appoints an FMC coordinator, thereby establishing the institutional framework for forming expert teams tasked with the due diligence of high-risk processes (Ministarstvo finansija Republike Srbije, 2019). The findings of such a team are formally documented in the

form of a justification and threat assessment report, which represents more than a descriptive internal analysis; it becomes an integral component of the FMC documentation and the risk register. This report serves as an objective foundation that internal and external oversight bodies utilize during subsequent audits to verify the expediency and economy of expenditure. This closes the managerial loop, enabling management to assume conscious, informed, and evidence-based responsibility for the financial and operational risks undertaken, ultimately protecting the institution against inefficient resource allocation over the long term.

JUSTIFICATION AND FEASIBILITY ANALYSIS

The introduction of the due diligence concept into the public procurement system of the healthcare sector in the Republic of Serbia must not be viewed strictly through the prism of theoretical idealism; rather, it demands an in-depth and realistic analysis of institutional feasibility, administrative barriers, and actual staffing capacities. From the standpoint of justification and necessity, the application of this model is undeniably essential. Efficiency analyses of public resources in healthcare permanently indicate that the greatest risks and losses are not necessarily generated through direct violations of the law, but through economic and operational failures. These include purchasing equipment for which adequate professional staff is unavailable, excessive maintenance costs, or operating systems that fail to achieve full functionality due to incompatibility with existing infrastructure (Kancelarija za javne nabavke, 2018). Conversely, when considering the realistic feasibility of implementation within a system as complex as the Serbian healthcare sector, serious institutional and operational constraints emerge, necessitating a cautious and phased approach.

The first and most pronounced challenge is reflected in the chronic shortage of specific professional competencies within healthcare institutions. While the average hospital in Serbia possesses a legal department trained in executing standard tendering procedures, it typically lacks multidisciplinary experts—such as bioengineers, IT architects specialized in complex medical systems, or forensic auditors capable of conducting deep financial verifications of suppliers. Relying on existing FMC coordinators or internal auditors without providing additional education would cause due diligence to degenerate into yet another formal administrative exercise, thereby completely undermining its substantive role as a preventive filter. For the model to be feasible, a solution could be found in establishing centralized or regional multidisciplinary teams to provide expert support to local healthcare

institutions when conducting complex due diligence analyses for high-risk procurement levels.

The second critical factor is the cultural and institutional resistance within the public administration itself, characterized by a pronounced fear of assuming responsibility. The public sector in Serbia largely operates on the principle of defensive management, where the executive's primary goal is to fully insulate a decision with formal-legal procedures to avoid sanctions from external audit bodies or the budgetary inspection. The criterion of economic expediency and lifecycle cost analysis, though legally permissible, is overwhelmingly avoided in practice because it requires discretionary judgment and professional argumentation that can become the subject of public appeals and suspicions of corruption. Introducing a due diligence report as a mandatory document provides a legal and analytical shield for management, but only under the condition that oversight bodies accept this document as valid evidence of conscious and risk-based management (Milovanović et al., 2021). Without explicit recognition of this mechanism by regulatory authorities, the model would remain unviable in practice.

Finally, a realistic assessment dictates an analysis of the temporal and financial burdens that this model introduces. Conducting a detailed due diligence procedure requires time, which, under urgent medical circumstances or volatile market conditions, can prolong the procurement process and jeopardize the continuity of supply unless clear regulatory exceptions are established. For this reason, the application of due diligence in Serbian healthcare is viable and justified exclusively if it is executed in a strictly selective manner that is proportional to the identified threats. The model is feasible only if its mandatory application is confined to strategic investments, high financial thresholds, and specific high-risk contracts, while the existing, simplified control system is retained for day-to-day, routine procurements.

INSTITUTIONAL AND STAFFING CAPACITIES FOR MODEL IMPLEMENTATION

The implementation of a preventive due diligence model requires a detailed assessment of the existing organizational architecture within the Serbian healthcare system, alongside defining clear steps for its adaptation to new analytical requirements. The current maturity level of internal control mechanisms in the Serbian public sector is predominantly tailored toward verifying procedural legality, whereas capacities for evaluating economic and operational risks remain unevenly distributed. To avoid administrative overburdening at the local level, the institutional development model must be based on an asymmetric approach, recognizing resource disparities between

large tertiary facilities (clinical hospital centers) and primary healthcare institutions (primary health centers). While major centers possess the foundational groundwork to form internal specialized teams, smaller institutions must systematically rely on external platforms and guidelines provided by central state authorities (Milovanović et al., 2021).

Building adequate staffing capacities necessitates the creation of specific professionalization programs for public procurement officers and internal auditors within the healthcare sector. Educational needs in this segment transcend standard training on legal procedures; they encompass acquiring skills in market analysis, supply chain sustainability assessment, and methodologies for identifying fraud indicators within business registries. Strengthening these competencies facilitates the ability of internal controls to identify anomalies in a timely manner, such as undisclosed related parties or unrealistic economic projections submitted by bidders. Adopting advanced guidelines and instruments developed within international frameworks and European hospital modernization projects enables contracting authorities to establish clear standards of technical ethics and professionalism prior to bid opening (OECD, 2024).

At the institutional level, the sustainability of this model depends on establishing clear lines of communication and information exchange between healthcare institutions and central regulatory bodies. Financial Management and Control (FMC) departments and internal audit cannot function in isolation; rather, they must utilize integrated information channels and access up-to-date databases regarding the reliability of economic operators and their prior professional failures in the market. Linking internal control mechanisms with official beneficial ownership registries and bidder integrity verification databases creates a robust preventive shield that mitigates the risk of contracting with unreliable actors (Zakon o centralnoj evidenciji stvarnih vlasnika, 2018; Zakon o javnim nabavkama, 2019). Consequently, the institutional and staffing reinforcement of the healthcare system does not imply expanding bureaucracy, but rather the functional integration of knowledge and information to protect public finances and preserve supply stability.

POTENTIAL BENEFITS, LIMITATIONS, AND RISKS OF IMPLEMENTATION

The systemic integration of a preventive due diligence model into the public procurement framework of the Serbian healthcare sector entails a series of structural transformations manifested through clear economic benefits, alongside realistic operational limitations and specific implementation risks.

Evaluating these factors is essential to strike a balance between theoretical sustainability objectives and the practical capabilities of healthcare institutions on the ground (OECD, 2024). Differentiating between short-term administrative efforts and long-term public value provides the foundation for determining the justification of implementing this model within public internal financial controls.

The most significant economic benefit of applying due diligence lies in reducing hidden costs and optimizing budget allocations within healthcare institutions. While traditional tendering procedures identify exclusively the nominal purchase price, the due diligence process utilizes Total Cost of Ownership (TCO) analysis to preemptively detect unrealistically low bids that subsequently generate excessive maintenance, licensing, or specialized reagent costs (European Commission, 2021). Another key benefit is the drastic reduction in the probability of supply chain disruptions for critical medical goods. Financial and operational vetting of wholesalers and manufacturers ensures that high-value contracts are awarded exclusively to liquid and stable economic operators, thereby protecting the healthcare system from sudden disruptions and shortages of vital medicines (Halmed, 2024). Finally, at the level of public integrity, this model serves as a robust anti-corruption shield, as a substantive verification of beneficial ownership and the bidders' history of prior professional misconduct bars the entry of shell intermediaries and collusive bidding practices.

Conversely, the implementation of this model confronts serious institutional and market constraints that limit its scope. The first major limitation is the inherent dependence on the quality and availability of external data and business registries. If databases concerning corporate beneficial ownership, tax liabilities, or legal disputes are not centralized and up to date, internal control due diligence reports will remain incomplete and ineffective. The second vital limitation stems from the very structure of the pharmaceutical and medical market in Serbia, which is frequently highly monopolized or duopolized. In scenarios where only a single authorized supplier exists across the entire national market for a specific innovative drug or specialized medical device, due diligence findings—even when indicating high operational risks or ethical non-compliance—cannot result in the exclusion of the bidder. Doing so would directly jeopardize patient lives and interrupt the delivery of healthcare services.

Beyond objective constraints, the process of introducing new control mechanisms into the healthcare system creates specific risks that can yield counterproductive effects if mismanaged. The greatest operational risk is reflected in the potential prolongation of tendering procedures, resulting in administrative paralysis. Executing multi-layered verifications requires time, which, within a system where procedures are already chronically burdened by

bidder appeals, can cause delays in procuring equipment or medical consumables (Kancelarija za javne nabavke, 2018). Another more subtle risk is the danger of a so-called "false sense of security," where management and auditors over-rely on formally completed due diligence questionnaires. If verification degenerates into a mere boilerplate collection of supplier compliance statements without actual, substantive verification of data on the ground, the mechanism loses its preventive role and becomes yet another layer of redundant bureaucracy (OECD, 2024).

For this reason, managing this risk demands a strict application of the proportionality principle, whereby the intensity of verifications must be precisely calibrated based on the threat level and the strategic significance of the procurement itself.

AVENUES FOR FURTHER EMPIRICAL RESEARCH

Formulating a theoretical-analytical model for integrating due diligence into the Serbian healthcare system represents the first step toward modernizing the control of public funds; however, its full verification requires systematic empirical research. Future research in this field should primarily focus on quantitatively and qualitatively testing the established assumptions within a real-world hospital environment. A key direction for further empirical work involves conducting comparative case studies across a sample of selected healthcare institutions in Serbia. Through simulated applications of due diligence instruments, these studies would compare actual costs and operational procurement outcomes before and after introducing multidisciplinary verifications (Milovanović et al., 2021). Special focus in these studies should be placed on analyzing historical data concerning capital procurements of medical equipment to precisely calculate the correlation between the absence of preliminary due diligence and the subsequent growth of hidden post-warranty maintenance costs and vendor lock-in dependencies.

Another significant area for empirical verification is mapping and measuring the attitudes, competencies, and readiness levels of immediate actors within the public procurement and internal control systems. Further research should encompass comprehensive surveys and in-depth interviews with healthcare executives, Financial Management and Control (FMC) coordinators, and internal auditors to precisely identify key sources of institutional resistance and structural skill deficits. By quantifying awareness of operational threats and readiness to implement preventive filters, these empirical data would serve as a baseline for designing targeted professionalization programs within the public sector. Additionally, the analytical focus should extend to the market side of the supply chain by

measuring the ESG (Environmental, Social, and Governance) maturity level of domestic wholesalers and distributors, demonstrating the extent to which local firms can meet due diligence requirements regarding sustainability and transparency (Council of the European Union, 2023).

Finally, the prospects for advanced empirical research lie in the digital transformation of oversight and the application of artificial intelligence algorithms to the Public Procurement Portal. Operationalizing sustainability and modern risk management within complex frameworks requires developing advanced internal reporting systems and ESG dashboards. Future academic studies could therefore focus on designing and testing predictive software models based on indicative red flags. In this context, empirical research would involve analyzing large datasets (big data) from executed healthcare tenders in Serbia to determine whether automated due diligence algorithms can leverage parameters such as a bidder's company age, employee count, and financial indicators to generate timely alerts regarding suspicious bids prior to contract award decisions (Kancelarija za javne nabavke, 2018).

DISCUSSION

Considering the introduction of the due diligence process into the public procurement system of the healthcare sector in the Republic of Serbia cannot be viewed in isolation from the broader context of macro-level healthcare reform. Experiences indicate that piecemeal alterations to administrative procedures, absent a fundamental transformation in how hospital systems are planned, financed, and managed, typically fail to yield the anticipated economic and clinical outcomes. For due diligence to become a sustainable and proactive instrument, its application must be an integral component of a new, comprehensive healthcare reform that redefines the relationships among central funds, local contracting authorities, and external suppliers. Such an approach implies transitioning from a rigid control of legality to the systemic management of public value, wherein supply chain stability and quality control of medical technology become the primary objectives of internal controls (OECD, 2024).

A comparative analysis of neighboring countries provides vital practical lessons regarding the scope and challenges of institutionalizing due diligence processes in public healthcare. Within regional frameworks, Slovenia has distinguished itself through specific measures aimed at transitioning from formalistic documentation screening to the substantive verification of market integrity; this emerged as an institutional response to complex risks and scandals involving the overpricing of medical consumables and equipment. Through mechanisms such as deep background screening of

economic operators and monitoring conflicts of interest under the auspices of anti-corruption bodies, the Slovenian system endeavors to ensure the transparency of ownership structures and the verification of bidders' operational ties to public officials (Komisija za preprečevanje korupcije, 2018). Conversely, the Republic of Croatia has primarily developed elements of proactive due diligence in healthcare through the statutory introduction of mandatory preliminary consultation procedures with interested economic operators for all high-value procurements. Integrated into Croatian legal practice, this mechanism functions as a platform for technical and market due diligence, enabling healthcare institutions to critically analyze market capacities, test the justification of criteria, and prevent potential information asymmetry prior to publishing a tender (Zakon o javnoj nabavi, 2016).

Despite advanced normative solutions, the experiences of Croatia and Slovenia point to the presence of serious systemic barriers that are shared by the Republic of Serbia. A critical issue in the practice of these nations is reflected in the fact that, even after implementing due diligence instruments, healthcare contracts are still overwhelmingly awarded based on the lowest price rather than long-term lifecycle costs and the quality of the bid. This gap between legislative intent and practical execution is most frequently caused by the pressure of ongoing budgetary deficits and the fear among local managers of complex appeals procedures that can paralyze institutional operations (Kancelarija za javne nabavke, 2024). Consequently, regional practice clearly suggests that merely transposing European directives or introducing new checklists does not guarantee success. For Serbia, the key lesson is that due diligence mechanisms can transform healthcare procurement only if their application is linked with the digitalization of control processes and the standardization of ethical questionnaires across the entire healthcare system, mirroring contemporary European projects dedicated to the modernization and ethical governance of smart hospitals (Odin Smart Hospitals, 2025; Transparency International, 2023).

CONCLUSION

The research conducted in this theoretical-analytical paper clearly demonstrates that the future development and long-term sustainability of the public healthcare system in the Republic of Serbia crucially depend on the quality of public financial management, with public procurement representing the most critical operational link. Prior practice, which has predominantly relied on strict adherence to formal-legal procedures and retrospective (*ex-post*) oversight, has exhibited profound limitations in achieving economic expediency and genuine public value. By validating the first assumption, this

study has demonstrated that introducing a multidisciplinary and preventive due diligence mechanism into high-risk procurements enables the timely identification of hidden lifecycle costs and operational risks. This, in turn, directly prevents systemic losses before budgetary resources are irreversibly committed. Shifting the focus from the question "was the procedure legal?" to "was the decision sufficiently risk-based and justified?" does not undermine the existing legal framework; rather, it infuses it with the necessary economic and substantive utility.

Conversely, the analysis conducted within the framework of the second assumption introduces a vital note of realism, confirming that integrating due diligence principles into the existing Public Internal Financial Control (PIFC/FMC) framework and healthcare internal audit is institutionally justified, yet simultaneously burdened by serious operational barriers. The chronic deficit of multidisciplinary personnel within healthcare institutions themselves, the lack of specific technical and forensic competencies among oversight bodies, and a deeply entrenched culture of defensive management coupled with a fear of assuming responsibility represent the primary obstacles that could decelerate or compromise the application of this model. Consequently, it is concluded that implementing due diligence within Serbian healthcare public procurement is unviable through radical and comprehensive legislative mandates. Instead, it must be pursued exclusively through a gradual, selective, and institutionally supported implementation based on clear risk matrices and assessments.

Evaluating the future trajectories of this model opens the possibility for the phased introduction of several complementary measures, primarily through the selective application and integration of financial and qualitative criteria into FMC procedures. This approach ensures that mandatory due diligence processes are triggered exclusively for procurements within high-risk zones, such as capital investments or complex IT systems. The long-term viability of these processes could be supported by establishing shared support frameworks within the healthcare and innovation systems, bringing together bioengineers, IT specialists, and economic analysts. Furthermore, a methodological transformation of internal controls toward proactive supply chain threat management, alongside establishing an official dialogue with external oversight bodies such as the State Audit Institution, opens a realistic avenue for the "Due Diligence Justification and Risk Assessment Report" to be formally recognized as valid evidence that management acted with due care. Such systemic modifications could significantly mitigate the prevalence of defensive management and encourage healthcare institutions to apply the most economically advantageous tender (MEAT) criterion over the lowest-price alternative, thereby safeguarding the healthcare system from risks during emergencies.

REZIME

DUE DILIGENCE I ULOGA INTERNE REVIZIJE U UPRAVLJANJU RIZIKOM JAVNIH NABAVKI U OKVIRU ZDRAVSTVENOG SISTEMA SRBIJE

Savremeni zdravstveni sistemi suočavaju se sa permanentnim izazovima rasta troškova i kompleksnosti medicinskih tehnologija, što upravljanje javnim finansijama čini izuzetno osetljivim. Javne nabavke u zdravstvenom sistemu Republike Srbije tradicionalno su opterećene rigidnim pravno-proceduralnim pristupom, gde se kontrola primarno fokusira na naknadnu (ex-post) proveru zakonitosti samog postupka. Međutim, formalna usklađenost sa zakonom ne garantuje da je odluka o nabavci bila ekonomski optimalna, niti da će nabavljeno dobro ostvariti očekivanu zdravstvenu i javnu vrednost. Ovaj rad istražuje mogućnosti, opravdanost i modalitete uvođenja koncepta due diligence (dužne pažnje) kao preventivnog, multidisciplinarnog mehanizma uveravanja integrisanog u postojeći sistem Finansijskog upravljanja i kontrole (FUK) i internu reviziju zdravstvenih ustanova. Svrha predloženog modela jeste pomeranje fokusa kontrole sa administrativne ispravnosti na suštinski kvalitet i opravdanost odluke pre nego što budžetska sredstva budu nepovratno angažovana. U radu su opisana dva moguća scenarija. Prvi je uvođenje preventivnog due diligence mehanizma kod javnih nabavki visokog rizika koji bi značajno smanjio operativne i finansijske gubitke ustanova, drugi, koji naglašava da je integracija ovog principa u domaći zdravstveni sistem institucionalno izvodljiva i opravdana, uprkos prisutnim barijerama. Kroz analizu literature i normativnog okvira, predložen je praktičan model selektivne primene zasnovan na višedimenzionalnoj matrici rizika, koji omogućava da se ograničeni resursi kontrole i interne revizije usmere isključivo na nabavke kod kojih je sinergija finansijskog, tehničkog i kliničkog rizika najveća.

Ključne reči: Due diligence, Javne nabavke, Interna revizija, Upravljanje rizicima, Zdravstveni sistem Srbije, Finansijsko upravljanje i kontrola (FUK).

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