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Social Media and Contemporary Business

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SOCIAL MEDIA AND CONTEMPORARY BUSINESS

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SOCIAL MEDIA AND CONTEMPORARY BUSINESS

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ABOUT FINIZ 2024 CONFERENCE

It is our great pleasure to introduce the proceedings of the International Scientific Conference FINIZ 2024, which is held at Singidunum University on 5 December 2024. Considering that in contemporary business practice, the utilization of social media platforms is regarded as indispensable, this year's conference title is: **"Social Media and Contemporary Business"**.

Social media has been widely accepted for years as a predominantly two-way communication channel, increasingly used by the social environment. Phenomenologically speaking, social media is also an important business tool in the contemporary business environment, which companies today almost invariably use to achieve their business goals. As the popularity of these communication channels grows, so does their value for companies; business environment actors increasingly use social media for various business purposes: from promotional activities related to the offer addressed to potential consumer audiences, to working conditions or benefits addressed to potential new employees, and through content that increases employee involvement, to, for example, feedback channels through which they can gain better understanding of their target audience.

All in all, the role of social media in the daily operations of modern companies is no longer in question – it is an important, everyday, strategically and tactically relatively intensive activity. After all – if one post on social media can significantly decrease or increase the share price within a few minutes, or if one short online video can influence the growth or decline of an entire industry, then this certainly deserves the due attention of the wider business community.

The following sections outline how papers contribute to the application of the "Social Media and Contemporary Business" by thematic areas of conference (accounting, accounting and audit, evaluation and risk, banking, corporate finance, marketing and management, green economics and human resource management).

The international scientific conference FINIZ 2024 is an ideal opportunity for all its participants to present their work and results to the general public and exchange experiences and ideas with other distinguished experts from relevant fields. Four papers, in the expanded form (30%), will be selected and proposed for publication in The European Journal of Applied Economics (M51) in an accelerated procedure.

All the accepted papers have undergone a thorough review process, performed by the reputable members of the Conference Organizing and Scientific Committee.

The overall statistical data on the conference are as follows:

- The total number of submitted papers/abstracts: 24
- The total number of full papers submitted: 24
- The total number of accepted papers: 21
- The total number of rejected papers: 1
- The total number of withdrawn papers: 2

The number of papers according to their related field:

- Evaluation and Risk 2
- Accounting and Audit 5
- Banking 3
- Corporate Finance 2
- Marketing and Management 4
- Green Economics 1
- Human Resources Management 4

The total of 51 authors from 12 countries has taken part in this year's conference. The number of authors according to their country of origin: Canada: 1, Croatia: 1, Jordan: 1, Montenegro: 1, Netherlands: 1, Nigeria: 2, Oman: 1, Serbia: 36, Slovenia: 1, Turkey: 1, United Arab Emirates: 4, United Kingdom: 1.

All the accepted papers are published on the Conference portal. Each paper is assigned its DOI number, a reference on Google Scholar, and the Conference Proceedings have an ISBN number.

Organizing Committee of the
International Scientific Conference FINIZ 2024

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INVITED PAPERS

INVITED PAPERS

There are 4 invited papers in the areas of Evaluation and Risk (2), Accounting and Audit (2). The first invited paper in the field of evaluation and risk titled *Investigating the impact of dual momentum strategies on global ETF portfolio performance* notes that there are numerous options when it comes to investing due to increasing availability of financial products. While institutional investors have the required expertise to address the issue of data abundance and complexity, many retail investors need a simpler solution. One option is to use a market index ETF which provides exposure to market risk while retaining a significant degree of diversification in a cost-efficient manner. Nevertheless, the authors suggest that better results on a risk-adjusted basis might be achieve with the use of simple strategies. The paper utilized a dual momentum investing approach for different global sector ETFs, including a "flight-to-safety" mechanism represented through the notion of risk-free assets. The results showed that the risk-adjusted performance of analyzed strategies that include the "flight-to-safety" mechanism can be superior over passive index investing.

The second invited paper in the field of accounting and audit titled *The impact of digitalization on statutory auditing in Serbia* highlights that digitalization of audit operations in Serbia is significantly enhancing the efficiency, accuracy, and speed of audit processes. The authors examine how digital tools and technologies are reshaping traditional audit methodologies, including the integration of data analytics, automated systems, and blockchain technology. Furthermore, the authors investigate the evolving skill requirements for auditors who must now navigate complex digital environments and address emerging challenges such as cybersecurity threats and the need for continuous improvement. The paper emphasizes that while digitalization offers substantial benefits, such as increased data precision and streamlined workflows, it also needs substantial adaptation. The authors suggest that firms must invest in innovative technologies, upgrade their infrastructure, and focus on skill development to fully leverage these advancements and effectively address the associated challenges.

The third invited paper in the field of evaluation and risk titled *Enchancing operational risk management in scientific research organization* assesses whether the implementation of Integrated Management Systems (IMS) with the COSO Enterprise Risk Management (ERM) model fosters a sustainable business context within the scientific research organization. Following PDCA (Plan-Do-Check-Act) cycle, the authors strive to improve organizational responses to demands, operational risks, and strategic planning. The primary study was conducted between March 31, 2023, and February 8, 2024, on a sample of 146 employees, with a response rate of 71.23% (104 respondents) and served as a basis for SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. The results suggest that IMS, guided by the COSO ERM model, supports proactive risk identification and assessment, confirming a sustainable organizational context.

The fourth invited paper in the field of accounting and audit titled *Biological assets management: Valuation and disclosure* highlights a distinction between biological assets and agricultural products by noting that agricultural activities are regulated by a separate standard - International Accounting Standard 41 – Agriculture. The paper aims to evaluate the representation of biological assets in the financial reporting of public companies in the territory of the Republic of Serbia. The research was conducted on a sample of 582 public companies from the Belgrade Stock Exchange during 2017, of which 29 are from the agricultural sector. The results of the research indicate that in the sector of agriculture, forestry and fisheries, the most common item is the value of biological assets, where 17 public companies disclosed the value of biological assets according to IAS 41.

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INVITED PAPERS
Evaluation and Risk
Original paper

INVESTIGATING THE IMPACT OF DUAL MOMENTUM STRATEGIES ON GLOBAL ETF PORTFOLIO PERFORMANCE

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Abstract:

Modern-day investors have a plethora of options to choose from when it comes to investing, as financial products are becoming increasingly available. While institutional investors have the required expertise to tackle the problem of data abundance and complexity, many retail investors need a simpler solution. One possibility is to use a market index ETF, in order to obtain exposure to market risk while retaining a significant degree of diversification in a cost-efficient manner. However, it might be possible to achieve better results on a risk-adjusted basis by using simple strategies. This study used a dual momentum investing approach for different global sector ETFs, including a "flight-to-safety" mechanism represented through the notion of risk-free assets. The results showed that the risk-adjusted performance of analyzed strategies that include the “flight-to-safety” mechanism can be superior over passive index investing.

Keywords:

global ETFs, dual-momentum strategy, portfolio performance measurement, sector investing.

1. INTRODUCTION

As a relatively new form of investment, ETFs have drawn the attention of investors, and the process of the cash flow migrations from traditional investments, such as direct investment to stocks or indirect via mutual funds have been gradually replaced by ETF investments (Korenak, Stakić, & Vesić, 2023). To simplify the investment process, but retain the diversification benefits, many investors are turning to the ETFs, often through holding a market index ETF. Recent studies showed that investors can achieve superior results by using a simple sector momentum strategy rather than the mean-variance optimization or holding a benchmark index ETF (Korenak & Pavlovic, 2023). While these results can already be used by investors, there is a question that remains: is there a way to further improve the momentum strategy? Just like in the mentioned studies, we would like to only examine if this goal is attainable through a decision-making process that can be easily deployed by any investor, including retail investors who cannot perform complex analyses. The proposed strategy is analysed in order to investigate whether it is possible to reduce the losses that occasionally occur as a consequence of positive market exposure by “fleeing to safety“, i.e. by holding the risk-free asset if the market or some sectors are in a downturn. If successful, it could be used by investors to improve the performance of their portfolios.

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The remainder of the paper is structured as follows: Section 2 furnishes extant literature on momentum investing, with an emphasis on dual momentum. Section 3 specifies the data and employed methodology for the empirical analysis. Section 4 discusses the results obtained from various models. In the end, the conclusion, research limitations, as well as future prospects are addressed.

2. LITERATURE REVIEW

The rise of the ETF fund industry largely rests on its business fundamentals, based on the application of Fama's Efficient Market Theory and Markowitz's Modern Portfolio Theory, through the use of passive investment strategies such as indexing (Pavlović, Korenak, & Stakić, 2024). On the other hand, ETF's market versatility has provided a plethora of options when it comes to the implementation of different investment strategies, trying to exploit market inefficiencies and generate alpha. The academic body of literature has shown significant interest in those strategies, among which momentum is having one of the most recognizable research outputs. The momentum effect is one of the strongest and most pervasive financial phenomena (Jegadeesh & Titman, 1993). Although not a journal article, the book of Antonacci (2014) is seminal in its detailed explanation of the dual momentum strategy, which combines absolute momentum (trend following) and relative momentum (cross-sectional performance) to enhance portfolio returns and reduce risk. In addition to cross-sectional or relative strength momentum, momentum also works well on an absolute, or time series basis, in which an asset's own past return indicates its future performance (Moskowitz, Ooi, & Pedersen, 2012).

Momentum has exhibited international presence across different asset classes (Rouwenhorst, 1998 & 1999; Asness, Liew, & Stevens, 1997; Moskowitz & Grinblatt, 1999; Okunev & White, 2003), with the notion of the idea that financial market momentum offers significant explanatory power concerning future financial market returns. However, momentum has also had the worst crashes, making the strategy unappealing to investors who dislike negative skewness and kurtosis, with the risk of momentum being highly variable over time and predictable (Barroso & Santa-Clara, 2014).

With respect to dual momentum (or relative strength) investing strategies, different findings imply return outperformance over passive index investing. Antonacci (2017) showed significant performance improvement in four areas - equities, credit risk, real estate, and economic stress, as well as with an equally weighted composite portfolio of all the modules. A dual momentum approach bears market risk when it makes the most sense, i.e., when there is positive absolute, as well as relative, momentum. Furthermore, Seokkeun and Fabozzi (2022) found that the dual momentum strategy at the asset allocation level outperforms the benchmark for a historical simulation, however with the limitation that the statistical significance of outperformance is not strong in all formation periods.

3. DATA AND METHODOLOGY

The investment opportunity set is limited to 11 sector ETFs, one risk-free asset, and a benchmark market index ETF. For the sector ETFs, we used 10 iShares Global Sector ETFs[1] as well as iShares International Developed Real Estate ETF[2]. The risk-free asset is represented by PIMCO Global Bond Opportunities Fund (PGBIX), and the benchmark ETF is Vanguard Total World Stock ETF (VT). We constructed 13 portfolios based on this investment opportunity set. The 13th portfolio was the benchmark portfolio that consisted of buying and holding the Vanguard Total World Stock ETF over the whole period. The portfolios were rebalanced monthly, and the research covered the period starting in January 2009 and ending in September 2024.

There are 11 portfolios that follow a dual-momentum strategy, each with a different number of winning sectors (from 1 to 11). Each of these strategies follows the same steps:

- identifying one or more sectors (depending on the number of winners for every sub-strategy) that achieved the highest return(s) over the previous three months,
- comparing the returns of the winning sectors with the return of the risk-free asset,
- investing all the available funds in the winning sectors (1 to 11) with geometrically decreasing weights, except when they had negative excess returns in comparison to the risk-free asset over the same period,
- if the winning sectors underperformed, redirecting the funds that were meant to be invested in those ETFs to the risk-free asset.

Additionally, there was a portfolio that was constructed as an equally weighted portfolio of all 11 sectors. However, it also included the “flight-to-safety" mechanism, as it replaced the underperforming sectors with risk-free assets.

1 iShares Global Comm Services ETF, iShares Global Consumer Discr ETF, iShares Global Consumer Staples ETF, iShares Global Energy ETF, iShares Global Financials ETF, iShares Global Healthcare ETF, iShares Global Industrials ETF, iShares Global Materials ETF, iShares Global Tech ETF, iShares Global Utilities ETF.

2 Real Estate was the only sector being analyzed for developed markets due to a lack of data for global real estate ETF products.

4. RESULTS AND DISCUSSION

Graph 1 presents the performance of all portfolios. At first glance, only one momentum sub-strategy, targeting a winning sector, marginally outperformed the benchmark ETF (with a compound annual growth rate of 10.98% versus 10.91%). The other momentum sub-strategies delivered slightly lower but comparable returns, ranging from 10.39% to 10.73%, while the equally weighted portfolio lagged significantly, earning just 8.21%.

Positioned alongside the benchmark Vanguard Total World Stock ETF, the equally weighted portfolio across 11 sectors demonstrates cumulative underperformance relative to various momentum-based portfolios. Given that all portfolios maintained long-only exposure, their performance was heavily shaped by broader market dynamics. Notably, momentum-based strategies began to perform exceptionally well starting in 2020, capitalizing on rapid market recoveries in the wake of the COVID market correction, which resulted from widespread uncertainty and economic disruptions due to the pandemic. The 2022 market correction further highlighted the resilience of these strategies amid rising interest rates, rampant inflation, and geopolitical tensions, which contributed to increased market volatility.

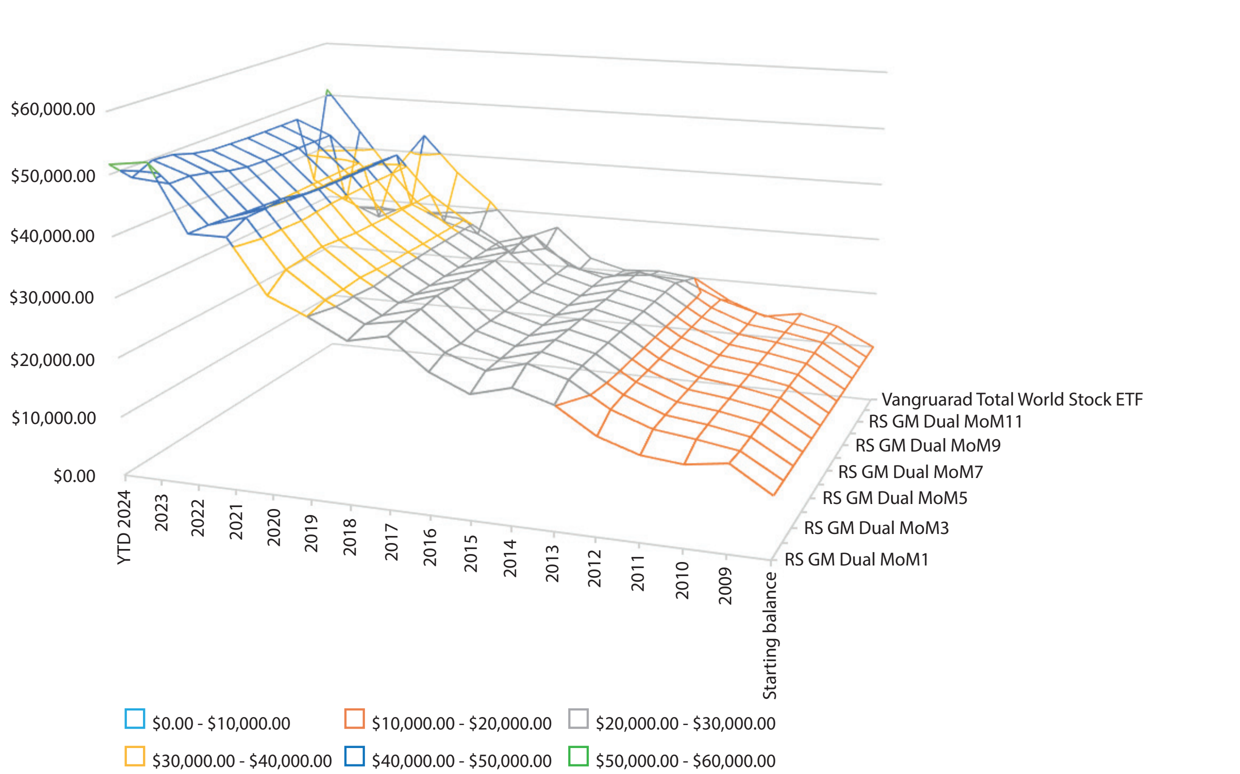
Additionally, the dual momentum strategy demonstrated a strong performance during "in-market" periods, with a portfolio of three winning sectors achieving positive excess returns 83% of the time, resulting in an average excess return of 0.83%. In contrast, when the strategy was "out of market" 9.5% of the time, it underperformed the benchmark by -10.08%. During the "partially in-market" phase, which accounted for 7.5% of the time, the strategy produced the highest excess return of 1.46%.

However, analysing the performance on a risk-adjusted basis gives a different impression. Every single momentum portfolio outperformed the benchmark portfolio when it comes to Sharpe, Sortino, Treynor and Calmar ratios (Graph 2). Moreover, the equally weighted portfolio with a "flight-to-safety" mechanism achieved the highest values of Sharpe, Sortino and Treynor ratios. Still, its Calmar ratio was among the lowest, as only the dual-momentum strategy with 2 winners and the benchmark portfolio attained lower scores.

On the other hand, the equally weighted portfolio exhibited better Sharpe and Sortino ratios, primarily due to its substantially lower standard deviation. However, it faced a significant relative drawdown, resulting in the lowest Calmar ratio among all observed momentum strategies.

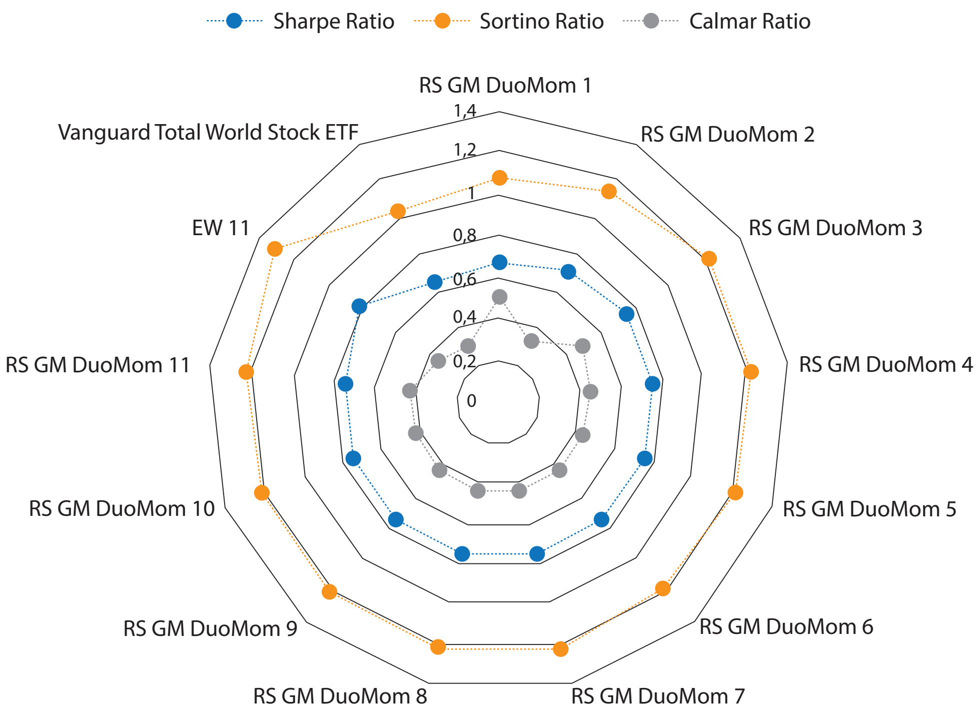
Overall, while the duo momentum strategy delivered a slightly lower compound annual growth rate, for the previously mentioned example of the portfolio with three winners, of 10.73% compared to the benchmark's 10.91%, it achieved this with a lower standard deviation of 13.44% versus 16.04%. This resulted in superior performance metrics, including the Sharpe, Sortino, Treynor, Calmar, and Modigliani–Modigliani ratios.

Graph 1. Hypothetical Performance of a $10,000 Portfolio Across Different Investment Strategies.



Source: Authors' data.

Graph 2. Investment Performance Appraisal Metrics for Different Investment Strategies.



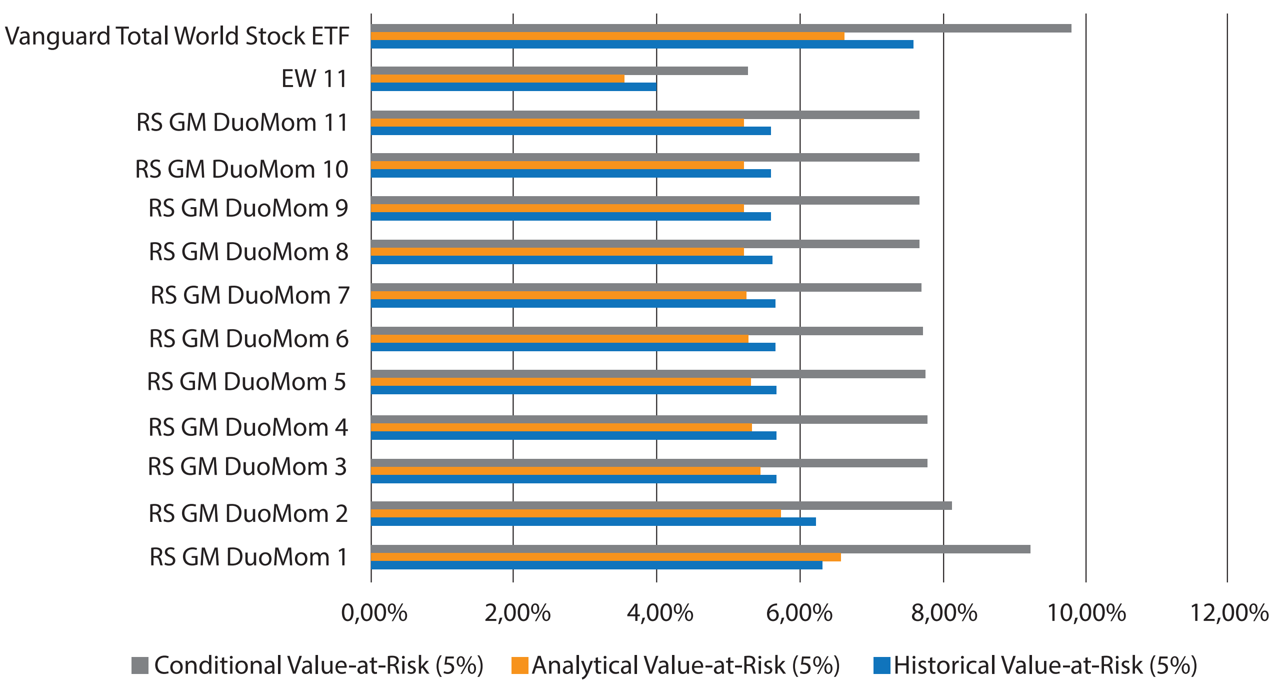
Source: Authors' data.

Table 1. Treynor Ratio for Different Investment Strategies

RS GM DuoMom 1	RS GM DuoMom 2	RS GM DuoMom 3	RS GM DuoMom 5	RS GM DuoMom 7	RS GM DuoMom 9	RS GM DuoMom 11	EW 11	Vanguard Total World Stock ETF
16.37%	15.84%	16.22%	16.05%	15.95%	15.96%	15.97%	16.77%	10.61%

Source: Authors' data.

Graph 3. Value-at-Risk (VaR) Measures for Different Investment Strategies.



Source: Authors' data.

When total risk was replaced with systematic risk, the outperformance on a risk-adjusted basis became more pronounced, as evidenced by the Treynor ratio (Table 1). The Treynor ratio is an important measure to consider when evaluating the investment unit of a fund managed by these strategies for inclusion in a well-diversified global portfolio. It offers valuable insights into the fund's performance relative to systematic risk, highlighting its potential contribution to overall portfolio efficiency.

All dual momentum strategies exhibited lower values for Analytical VaR, Conditional VaR, and historical VaR, indicating a reduced level of risk (Graph 3). Among these strategies, the equally weighted portfolio achieved the lowest measures across all VaR categories. This finding suggests that the equally weighted approach not only mitigates potential losses and strengthens overall risk management but also results in lower returns, which may be less appealing for investors seeking higher performance in volatile markets.

The lower VaR metrics highlight the portfolio's resilience against extreme losses, which is particularly advantageous for those aiming to maintain a well-balanced and robust investment strategy. Given these benefits, dual momentum strategies emerge as an optimal solution for global equity investors seeking a favorable risk-return profile while effectively addressing market challenges.

5. CONCLUSION

The study aimed to demonstrate that there are ways to improve the investment results for retail investors through a simple decision-making process. It analysed the performance of 12 strategies in comparison to holding a benchmark market index ETF, which is a popular choice for many investors.

The results showed that the risk-adjusted performance of strategies that include the "flight-to-safety" mechanism can be superior. This pertains both to the momentum sub-strategies, as well as to the equally weighted portfolio. However, the absolute returns were generally lower than those achieved by the benchmark. This result is different from the ones obtained in the previous studies (Korenak & Pavlovic, 2023), where the "flight-to-safety" mechanism was not considered. Therefore, it can be concluded that using this additional step might be suitable for investors who value safety and better risk-adjusted performance but should be avoided by those who are seeking the highest absolute returns.

This study has its limitations. It only considers a specific set of rules, which could be changed to achieve different results (for instance using different time intervals to assess the winning sectors, changing the weighting method or changing the "flight-to-safety" trigger). Additionally, it covers a limited time period and a limited investment opportunity set. Further studies could be performed to address some of these limitations.

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THE IMPACT OF DIGITALIZATION ON STATUTORY AUDITING IN SERBIA

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Abstract:

Digitalization is profoundly transforming audit operations in Serbia, significantly enhancing the efficiency, accuracy, and speed of audit processes. This paper investigates how the adoption of digital tools and technologies is reshaping traditional audit methodologies, including the integration of data analytics, automated systems, and blockchain technology. It examines the evolving skill requirements for auditors, who must now navigate complex digital environments and address emerging challenges such as cybersecurity threats and the need for continuous improvement. While digitalization offers substantial benefits, such as increased data precision and streamlined workflows, it also necessitates substantial adaptation. Firms must invest in innovative technologies, upgrade their infrastructure, and focus on skill development to fully leverage these advancements and effectively address the associated challenges.

Keywords:

digitalization, audit, Serbia, technology, skills, cyber security.

1. INTRODUCTION

Digitalization is transforming modern business by improving operations, productivity, and adaptability. As part of the Fourth Industrial Revolution, advancements in big data, artificial intelligence (AI), blockchain, and automation are redefining traditional tasks, including auditing.

Auditing, which ensures the integrity of financial statements and identifies risks, is significantly changing due to digitalization. Traditional methods relying on manual verification are increasingly inadequate in an environment with vast amounts of data and the need for swift decision-making. Digital tools enable auditors to analyze large datasets with greater accuracy, detect patterns and anomalies, and minimize human error.

In Serbia, the process of digitalization of audit services is still in the development phase, but it shows significant potential for improving the quality of audit services. According to national and international research, an increasing number of audit firms in Serbia are starting to integrate digital technologies into their operations, recognizing the benefits they offer. However, this transition is not without its challenges. Auditors must continuously upgrade their digital skills, adapt to new tools and techniques, and address issues related to data protection and cybersecurity.

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The aim of this paper is to explore in detail the impact of digitalization on the performance of audit activities in Serbia, with a special emphasis on the following aspects:

1. Changes in work methodology – How digital tools and technologies are transforming traditional audit methods and what original approaches are being implemented.
2. Auditor Skills Requirements - What new skills and knowledge are required for auditors in the digital environment, and how they can effectively adapt to these changes.
3. Benefits of digitalization – How digitalization contributes to increasing the efficiency, accuracy, and security of audit processes.
4. Challenges and risks – What are the main challenges that auditors face in the digital transformation process, including issues related to data protection, cybersecurity, and regulatory frameworks?

The work will rely on a combination of qualitative and quantitative research methods, including the analysis of secondary data, surveys, and interviews with audit experts. The results of the research will provide a comprehensive overview of the current state of digitalization of audit operations in Serbia, identify key challenges and strengths, and propose strategies for further development and improvement of audit practice in the digital age.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. THEORETICAL FRAMEWORK

Digitalization, as the process of integrating digital technologies into business processes, is transforming the ways in which various tasks are performed in organizations. In the context of auditing, digitalization involves the use of advanced analytical tools, automation, and artificial intelligence to enhance audit activities. The theoretical framework of this paper is based on several key concepts:

Theory of Technological Diffusion – According to Rogers' theory of diffusion of innovation, the adoption of modern technologies in organizations occurs in stages: innovators, early adopters, early majority, late majority, and laggards. In the context of auditing, this framework helps to understand how and why the audit firms in Serbia adopt digital technologies.

Theory of Organizational Change – Lenin's model of organizational change (unfreezing, changing, freezing) explains how organizations can successfully implement change, including digitalization. This model provides insight into the stages that audit firms undergo during their digital transformation.

Resource Justification Theory – According to this theory, an organization's competitive advantage stems from the unique resources and capabilities it possesses. In digital auditing, key resources include technology infrastructure, employees' digital skills, and access to relevant data. (Barney, 1991)

2.2. LITERATURE REVIEW

The literature on digitalization highlights the importance of technologies such as big data analytics, artificial intelligence, and blockchain. Research indicates that these technologies enable auditors to analyze large amounts of data more quickly and accurately, allowing them to identify anomalies and risks that may be overlooked by manual methods (Alles, 2015; Casterella et al., 2019).

Big Data Analytics – Big data analytics allows auditors to process and analyze huge data sets, identifying patterns and anomalies that indicate potential risks or anomalies (Vasarhelyi et al., 2015).

Artificial Intelligence – AI is used to automate repetitive tasks, such as transaction analysis and anomaly identification. It also facilitates predictive analytics, which helps auditors proactively identify risks (Brown-Liburd et al., 2015).

Blockchain technology – As a decentralized and transparent technology, blockchain provides auditors with the ability to verify the authenticity and integrity of data in real-time, thereby reducing the need for manual verification (Dai & Vasarhelyi, 2017).

Digitalization requires auditors to acquire new skills and knowledge, especially in the areas of data analytics, programming, and cybersecurity (Byrnes et al., 2018). Studies show that the successful digital transformation of audit firms depends on the continuous education and development of employees' digital skills (Kokina & Davenport, 2017).

The benefits of digitalization in auditing include increased efficiency, accuracy, and process security (Issa et al., 2016). However, challenges such as data protection, cybersecurity, and regulatory requirements represent significant hurdles that need to be overcome (Appelbaum et al., 2017).

Data protection and cyber security – Digitalization increases the risks related to data protection, and it is necessary to establish strong cybersecurity measures to protect confidential customer data (Feng et al., 2014).

Regulatory requirements – The adoption of digital technologies in auditing must be aligned with existing legal and regulatory frameworks, which can pose additional challenges for audit firms (Kokina & Blanchette, 2019).

The challenges and advancements in the digitization of audits in Serbia – This exploration highlights how technology is transforming auditing practices, emphasizing the need for adaptation to maintain efficiency and accuracy in the evolving financial landscape. M. Perić, M. Kaličanin, Z. Kaličanin, and M. Kljajić have addressed the critical issues surrounding the digitization of audits thoroughly examining the challenges and implications for auditing practices in Serbia.

The literature on the digitalization of audit work clearly shows that technology has the potential to significantly improve audit processes. However, successful implementation requires careful planning, continuous education, and adaptation to innovative technologies and regulatory frameworks. This theoretical framework and literature review serve as a basis for further research into the impact of digitalization on auditing in Serbia.

3. METHODOLOGY

The aim of this research was to explore the impact of digitalization on the performance of audit work in Serbia. To achieve this goal, a quantitative method of collecting data through questionnaires was applied. This approach allowed for the collection of specific and relevant information from audit professionals, providing insight into the changes, challenges, and benefits brought by digitalization.

The research was designed as a descriptive study with a quantitative approach. A questionnaire was used as a basic data collection tool, focusing on various aspects of digitalization in auditing.

The research sample consisted of 22 respondents, including auditors and other experts in the field of auditing who worked in different audit firms in Serbia. The aim was to ensure representativeness of the data by including respondents from various parts of the country and with diverse levels of experience.

The collected data were analyzed using descriptive statistical methods, which represented the sample's basic characteristics and the response distribution. The analysis focused on identifying trends and insights regarding the impact of digitalization on audit work.

The research was conducted in compliance with all ethical standards, ensuring the anonymity and confidentiality of all data subjects. The participants were informed of the research's purpose, and their free consent to participate was obtained.

This methodology enabled a comprehensive examination of the impact of digitalization on audit work in Serbia, providing relevant insights that could contribute to the further development and improvement of practice in this field.

4. DATA ANALYSIS

The analysis of the data collected through the questionnaire enables the identification of key trends and insights regarding the impact of digitalization on auditing in Serbia. This analysis will focus on the distribution of responses and the identification of key patterns among respondents, as well as the relationships between different variables.

4.1. ANALYSIS OF DEMOGRAPHIC DATA

The demographic data collected from the first question allow the classification of respondents according to their position in the audit firm and the size of the organization. The results are as follows:

- Partner: 36.4%
- Audit Assistant/Junior: 22.7%
- Audit Supervisor: 18.2%
- Semi Senior/Senior in Revision: 9.1%
- The remaining percentage is equally distributed among the Audit Director, Senior Audit Manager, and Audit Manager.

4.2. THE IMPACT OF DIGITALIZATION ON WORK EFFICIENCY

Most respondents (54.5%) stated that the application of digitalization has significantly improved work efficiency, while 40.9% believe that work efficiency has improved. A minority of respondents (the rest of the percentage) reported that efficiency has remained at a high level without significant changes.

4.3. FACILITATING DATA COLLECTION AND ANALYSIS

Most respondents (81.8%) believe that the use of digital tools and software has significantly facilitated and reduced the time and effort required to collect and analyze substantial amounts of data. A smaller proportion (18.2%) indicate that the relief is moderate.

4.4. THE IMPACT OF DIGITAL TOOLS ON THE ACCURACY OF ANALYSIS

- Significant increase in the accuracy of analyses: 54.5%
- Moderate increase in the accuracy of analyses: 36.4%
- No effect on the accuracy of the analysis: 9.1%

These results indicate that most respondents believe the use of digital tools contributes to an increase in the accuracy of analyses and the identification of irregularities.

4.5. THE EFFECTIVENESS OF AUDITING IN THE FIELD

Digitalization has significantly reduced the time auditors spend in the field, as reported by 59.1% of respondents, while 22.7% of respondents indicated that time has been reduced. A smaller percentage (13.6%) believe that while digitalization has made it easier to perform routine tasks, it has not affected the engagement time in the field. The remaining respondents stated that digitalization had no impact.

4.6. THE IMPACT OF DIGITALIZATION ON AUDIT WORK AND RESULTS

- Improvement in customer control performance and results: 81.8%
- No progress in performance and control results: 13.6%
- Downgraded work and result control due to the need for additional training: remaining percentage

4.7. THE IMPACT OF DIGITALIZATION ON COMMUNICATION WITH CUSTOMERS

Most respondents (68.2%) said that digitalization has significantly facilitated communication with customers and access to information. Further, 22.7% believe that digitalization has facilitated and improved communication with customers, while a smaller proportion (9.1%) believe that there has been no impact.

4.8. THE IMPACT OF DATA DIGITALIZATION AND ANALYTICS ON DATA SECURITY

- Improvement in information security through access controls: 22.7%
- Improvement in information security through data analysis to detect threats: 31.8%
- Improvement in information security through the implementation of internal policies and procedures: 31.8%
- Digitalization and data analytics have no impact on data security: 4.5%
- Reduced security due to increased risk of hacking: 27.3%
- Reduced safety due to the risk of malware: 9.1%

4.9. STRATEGIES FOR THE ADOPTION OF DIGITAL TECHNOLOGY

Respondents were given the opportunity to select multiple strategies applied when adopting digital technology in their audit firms. The results are as follows:

- Detailed analysis of the needs of the audit firm: 36.4%
- Setting goals to achieve with digitalization: 40.9%
- Market research of available digital tools: 27.3%
- Implementation Planning: 31.8%
- Employee Engagement, Training, and Support: 54.5%
- Monitoring and evaluation of achieved results: 27.3%
- Cooperation with experts and consultants: 22.7%

The analysis of the collected data indicates a significant positive impact of digitalization on the efficiency of work, the accuracy of analyses, communication with clients, and data security in auditing operations. However, there are also challenges, such as the increased risk of cyber threats, which must be addressed through adequate strategies and training.

5. RESULTS

The results of the survey show a diverse distribution of respondents according to their positions in audit firms. Partners accounted for 36.4% of respondents, audit assistants/juniors for 22.7%, supervisors for 18.2%, semi seniors for 9.1%, while the remaining percentages were evenly distributed among audit directors, senior managers, and audit managers. Most respondents (54.5%) believe that the application of digitalization has significantly improved work efficiency, while 40.9% cite an improvement in efficiency. The remaining respondents believe that efficiency has remained at a prominent level without significant changes.

When it comes to data collection and analysis, 81.8% of respondents believe that digital tools have significantly facilitated and reduced the time required for these activities, while 18.2% feel that this facilitation is moderate. Additionally, 54.5% of respondents indicated that the use of digital tools has significantly increased the accuracy of the analyses, while 36.4% felt that the accuracy has increased; only 9.1% stated that there was no effect on the accuracy of the analyses.

Digitalization has significantly reduced the time it takes for auditors to engage in the field, according to 59.1% of respondents, while 22.7% believe that the time has been reduced. Additionally, 13.6% of respondents stated that digitalization made it easier to perform routine tasks but did not reduce time spent in the field. The remaining respondents felt that digitalization had no impact. Regarding the impact of digitalization on the work and results of the audit, 81.8% of respondents cited an improvement in the performance and outcomes of client control, while 13.6% stated that there has been no progress. A smaller percentage of respondents indicated that digitalization has hindered the work and result of control due to the need for additional training.

Digitalization has made it easier to communicate with customers for 68.2% of respondents, while 22.7% report improved communication. A smaller percentage (9.1%) believe that digitalization has not affected communication with customers. Regarding data security, 22.7% of respondents believe that digitalization has improved information security through access controls, 31.8% through data analysis for threat detection, and 31.8% through the implementation of internal policies and procedures. A smaller percentage of respondents (4.5%) believe that data digitization and analytics have no impact on data security, while 27.3% cite reduced security due to the increased risk of hacking, and 9.1% due to the risk of hacking.

Strategies applied in the adoption of digital technology include a detailed analysis of the audit firm's needs (36.4%), setting digitalization goals (40.9%), market research on available digital tools (27.3%), implementation planning (31.8%), employee engagement, training and support (54.5%), monitoring and evaluating the achieved results (27.3%), and cooperation with experts and consultants (22.7%).

The research results indicate a significant positive impact of digitalization on work efficiency, accuracy of analyses, communication with clients, and data security in auditing in Serbia. At the same time, challenges, such as the increased risk of cyber threats, have been identified, underlining the need for adequate strategies and training. The implementation of digital technologies requires careful planning, employee engagement, and continuous monitoring of results to ensure optimal outcomes.

6. DISCUSSION

The research results indicate that digitalization has a notably positive impact on various aspects of auditing in Serbia.

One of the key findings is that digital tools have significantly streamlined data collection and analysis, which is essential for enhancing the quality of audit services. This improvement in the efficiency of data collection allows auditors to focus on data analysis and interpretation, rather than on manual and repetitive tasks. Additionally, the increased accuracy of analyses achieved through digital tools contributes to the identification of irregularities and risks, which is crucial for the reliability of audit reports.

However, despite these advantages, the results indicate that a certain percentage of respondents believe digitalization has not affected the accuracy of analyses or reduced engagement time in the field. This suggests that the implementation of digital tools may not always be equally successful across all firms, or that further training and process adaptation may be necessary to fully realize benefits of digitalization.

The issue of data security presents a significant challenge in the process of digitalization. While many respondents believe that digitalization enhances information security through improved access controls and data analysis for threat detection, a notable percentage also feel that digitalization increases the risk of cyberattacks, such as hacking.

Digital adoption strategies vary among audit firms, but many respondents emphasize the importance of a detailed needs analysis, goal setting, market research of available tools, implementation planning, employee engagement through training and support, as well as monitoring and evaluating the results achieved. These strategies are crucial for the successful implementation of digital technologies and maximizing their benefits.

In conclusion, digitalization represents a valuable opportunity to enhance audit processes and achieve greater efficiency and accuracy. The implementation of digital tools requires careful planning and continuous monitoring to ensure that the desired results are achieved and that organizations adapt to the dynamic digital environment.

7. CONCLUSION

Research has shown that digitalization has a significant positive impact on the performance of audit activities in Serbia. Digital tools and software improve work efficiency, streamline data collection and analysis, increase the accuracy of analyses, and facilitate better communication with clients. Most respondents recognize these advantages, which confirms the importance of digitalization in modernizing audit processes.

However, the research has identified challenges, particularly regarding data security, which poses increased risks of hacking. This underscores the need for ongoing investment in cybersecurity and protective measures.

The research results indicate that, despite the challenges, digitalization can significantly improve audit processes and contribute to better audit outcomes. To achieve this, it is crucial that audit firms recognize the importance of digital transformation and invest in adequate resources and strategies that will enable them to adapt to the dynamic digital environment.

In conclusion, digitalization is a necessary step towards the modernization of auditing operations, aimed at achieving greater efficiency, accuracy, and security. With adequate access and investment, audit firms in Serbia can successfully integrate digital tools into their processes and achieve significant benefits for their business and clients.

One of the main limitations of this study is the small sample size of 22 subjects, which may affect the generalization of the results. While the data collected provide useful insights into the impact of digitalization on the performance of audit work in Serbia, the sample size may limit the reliability and accuracy of the statistical conclusions.

To overcome these limitations in future research, it is recommended to use a larger sample, as well as include different types of audit firms. This approach would provide a more comprehensive understanding of the impact of digitalization on audit work. A larger sample would also allow for a more detailed analysis of the different variables and their interactions, contributing to a deeper understanding of this phenomenon.

Future research on the impact of digitalization on auditing jobs should focus on several key aspects to broaden the understanding of the topic and yield more comprehensive results. First, it is advisable to use a larger and more diverse sample of respondents, including auditors from companies of various sizes and with different levels of experience. This approach would enable researchers to gain deeper insights into the variations in the application of digital tools and their impact on audit processes.

Research should also prioritize longitudinal studies to track the long-term effects of digitalization on audit work. This approach would allow an assessment of the impact of digital tools on efficiency, accuracy, and security, and how auditors adapt their strategies to technological advancements.

Additionally, future research could focus on specific digital tools and software used in auditing, analyzing their strengths and weaknesses in various contexts. Comparative studies and investigations into how audit firms select and implement these technologies could further enhance the understanding of the factors influencing successful digitalization.

Finally, research can also include qualitative methods, such as in-depth interviews with auditors and digitalization experts, to gather deeper insights into subjective experiences and perceptions that quantitative approaches may not fully capture. This approach would help create a more comprehensive framework for understanding the impact of digitalization on audit processes and identifying potential areas for improvement.

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ENHANCING OPERATIONAL RISK MANAGEMENT IN THE SCIENTIFIC RESEARCH ORGANIZATION

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Abstract:

This study evaluates whether the implementation of Integrated Management Systems (IMS) with the COSO Enterprise Risk Management (ERM) model fosters a sustainable business context within the scientific research organization[1]. Aligned with the PDCA (Plan-Do-Check-Act) cycle, the research aims to enhance organizational responses to demands, operational risks, and strategic planning. The primary research, based on which a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis was conducted, was carried out between March 31, 2023, and February 8, 2024, on a sample of 146 employees, with a response rate of 71.23% (104 respondents). The findings indicate that IMS, guided by the COSO ERM model, supports proactive risk identification and assessment, confirming a sustainable organizational context.

Keywords:

operational risks, COSO, ERM, (IMS), PDCA cycle, SWOT analysis.

1. INTRODUCTION[1]

Nowadays, risks are an integral part of every business environment. According to Barjaktarovic (2015), the rational nature of humans leads to taking action, i.e., managing risk. Risk management, in a broad sense, is the art of making decisions in an unpredictable environment. Every economic entity develops its own internal risk management guidelines, which are approved and adopted by the competent management bodies of the economic entity (Barjaktarović, 2015).

ERM is defined as the culture, capabilities, and practices integrated with strategy setting and performance, on which organizations rely to manage risk in creating, preserving, and realizing value (Site COSO ERM, 2017). A detailed look at the definition of enterprise risk management emphasizes its focus on managing risk through:

- Recognizing culture;
- Developing capabilities;
- Applying practices;
- Integrating with strategy setting and performance;
- Managing risk in relation to strategy and business objectives;
- Connecting with value.

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1 To ensure data protection, the authors have decided not to disclose the name of the scientific research organization in this study. Going forward, the term 'scientific research organization' or the 'Institute' will be used throughout the text.

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Considering the fact that the research is about managing operational risks, operational risk is defined by Mestchian (2003) as the risk caused by inadequate or incorrect internal processes, people, and systems, as well as external events.

Moosa (2007) pointed out that the key characteristics of operational risk are:

- Greater diversity and variety;
- Absence of risk-return trade-off;
- Exclusively negative impact of risk;
- Non-systematic, or idiosyncratic nature;
- Inability to precisely determine the extent of risk exposure.

Source of Operational Risk according to Segal (2006) are:

- people - operational risks originating from people can arise from areas such as information disclosure, health and safety issues, and internal fraud,
- processes - human errors and process failures are common sources of operational risk,
- technology - operational risks can stem from problems and failures in hardware, software, security, systems, and telecommunications.
- external events - risks can also come from external fraud, natural disasters, and man-made disasters like theft, money laundering, data and property destruction, floods, hurricanes, earthquakes, terrorist attacks, and wars.

The rapid development of technology, increasingly aggressive competition, and globalization expose the Institute that falls under a scientific research organization to growing operational risks. The subject of this research is to determine whether the implementation of Integrated Management Systems (IMS) according to the COSO (Committee of Sponsoring Organizations) Enterprise Risk Management (ERM) model provides a sustainable business context for the scientific research organization. The aim of the research is to understand and improve the context of the scientific research organization, enabling better responses to demands, risks, and strategic planning. To effectively manage operational risks, it is necessary to use comprehensive methods of analysis and continuous improvement, such as SWOT (Strengths, Weakness, Opportunities and Threats) analysis and the PDCA (Plan-Do-Check-Act) cycle.

According to the above, the main hypothesis of the work is:

H0: The implementation of the IMS according to the COSO ERM model for risk management, combined with SWOT analysis and the PDCA cycle, can significantly improve performance for managing operational risks and opportunities in the scientific research organization.

The scientific research organization, in which the primary research - SWOT analysis was conducted according to the COSO ERM model has an IMS consisting of:

- Q(L)MS - Quality Management System (ISO 9001) and Laboratory Accreditation (ISO/IEC 17025);
- EMS - Environmental Management System (ISO 14001);
- OMS - Occupational Health and Safety Management System (ISO 45001).

The paper is structured into four chapters. The first chapter provides an introduction to the study. The second chapter outlines the methodology employed. The third chapter presents the results of the primary research. Finally, the fourth chapter presents the conclusion.

2. METHODOLOGY

To conduct primary scientific research on the improvement or optimization of operational risk management in a scientific research organization, the following methods were used: observation method, employee interviews, monitoring, anonymous closed-ended questionnaires, quantitative method in the preparation of the SWOT analysis, illustrative method for presenting the results of primary research, PDCA cycle and deductive method. To prepare the anonymous questionnaire, which forms the basis for the SWOT analysis, the following were used: observation method, employee interviews and monitoring. It was designed to capture the attitudes, opinions, and perceptions of employees on key business aspects and contain 35 questions divided into four parts. The first part of the questionnaire on the potential strengths of the internal business context of the scientific research organization contains 10 questions. The second part of the anonymous questionnaire relates to the potential weaknesses of the internal business context of the scientific research organization and has 9 questions. The third part indicates potential opportunities in the external business context of the scientific research organization and contains 9 questions. The fourth part of the questionnaire relates to potential threats in the external business context of the scientific research organization and consists of 7 questions. Anonymous closed-ended questionnaires have their limitations. One of them is that respondents answer each question by choosing one from five provided answers, and there is no flexibility in the responses. Participants responded using a five-point Likert scale, where 1 indicated strong disagreement, 2 disagreement, 3 partial agreement, 4 agreement, and 5 absolutely agree. A SWOT (stands for Strengths, Weakness, Opportunities and Threats) analysis is a framework to help assess and understand the internal and external forces that may create opportunities or risks for an organization (Site Corporate Finance Institute, 2024).

SWOT analysis is a key instrument that helps a scientific research organization align its goals with the current business conditions. Based on the survey conducted, using the quantitative method, a SWOT analysis was carried out to improve and better understand the context of the scientific research organization and minimize possible operational risks. The results obtained from the SWOT analysis were presented using an illustrative method. The PDCA cycle enables continuous process improvement through the phases of planning, doing, checking, and acting, thereby continuously improving operational activities and mitigating operational risks. The deductive method forms the basis for drawing conclusions. Data collection lasted from March 31, 2023, to February 8, 2024. The survey, SWOT analysis, was sent to 146 employee addresses, and 104 respondents answered, i.e., 71.23% of the participants in the survey. The report on the context of the scientific research organization - the conducted SWOT analysis was presented on April 10, 2024. The results of the SWOT analysis in the scientific research organization are presented in the following illustrations.

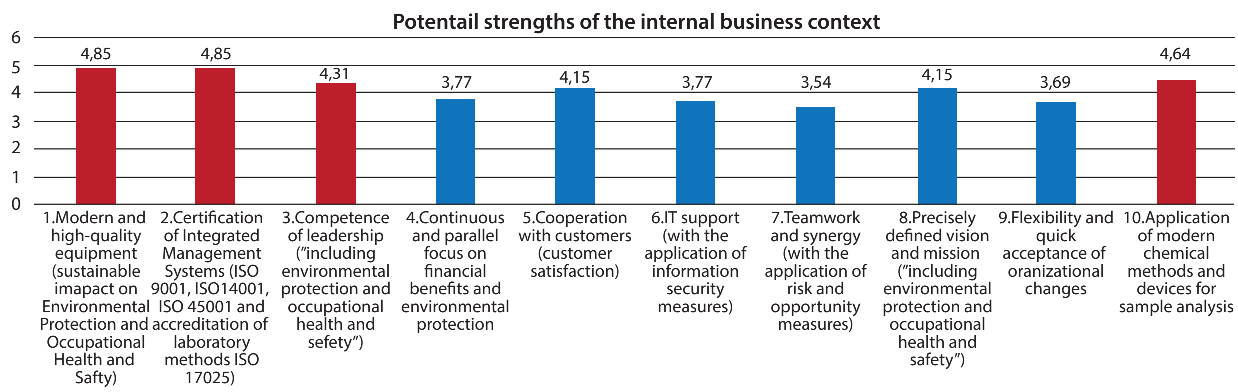
3. RESULTS AND DISCUSSION

The results from the SWOT analysis, based on the primary research to identify potential strengths and weaknesses within the internal context, as well as opportunities and threats in the external context of the scientific research organization, are illustrated in Figures 1, 2, 3, 4 and Table 1. These figures were created by the authors based on the primary research data.

Figure 1 illustrates the potential strengths of the internal business context.

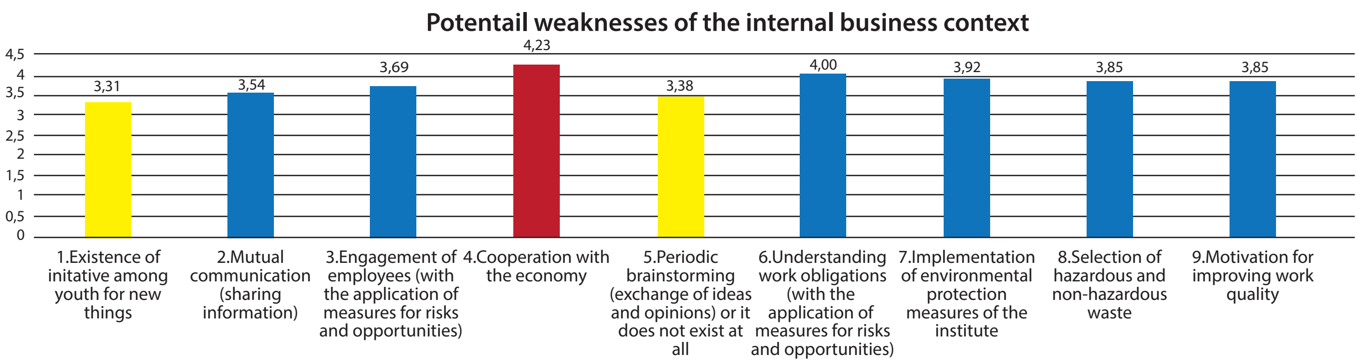
The Institute demonstrates a robust internal business context with an average survey rating of 4.15. The highest rating of 4.85 is achieved for the quality of modern and high-quality equipment, which positively impacts environmental sustainability and occupational safety and health. The same high rating is also given for IMS certification, including ISO 9001, ISO 14001, ISO 45001, and ISO 17025. However, the lowest rating of 3.54 for teamwork and synergy suggests a need for improvement in these areas. To address this, it is recommended to conduct workshops focusing on the importance of teamwork and flexibility in accepting organizational changes.

Figure 1. Potential strengths of the internal business context[2].



Source: Authors' data.

Figure 2. Potential weaknesses of the internal business context[3].



Source: Authors' data.

2 Legend: Possible strengths: >4.20; Sustainable context: >2.60<4.20; Possible weaknesses: <2.60

3 Legend: Possible strengths: >4.20; Sustainable context: >2.60<4.20; Possible weaknesses: <2.60

Figure 2 illustrates the potential weaknesses of the internal business context.

The survey on potential weaknesses indicates a generally sustainable internal business context with an average rating of 3.75. The lowest rating of 3.31 is given for the initiative among young people for new ideas, highlighting a need to foster innovation and idea exchange among younger employees. Conversely, the highest rating of 4.23 for cooperation with the industry suggests strong external partnerships. To mitigate the identified weakness, the scientific research organization should explore strategies to encourage young employees to take initiative and share their ideas. When it comes to possible weakness, performance can be improved by applying the PDCA cycle (questions no. 1 and 5, Figure 2), which can eliminate potential threats within the timeframe provided for the implementation of necessary measures and conduct a new SWOT analysis during 2025.

Figure 3 illustrates the potential opportunities of the external business context.

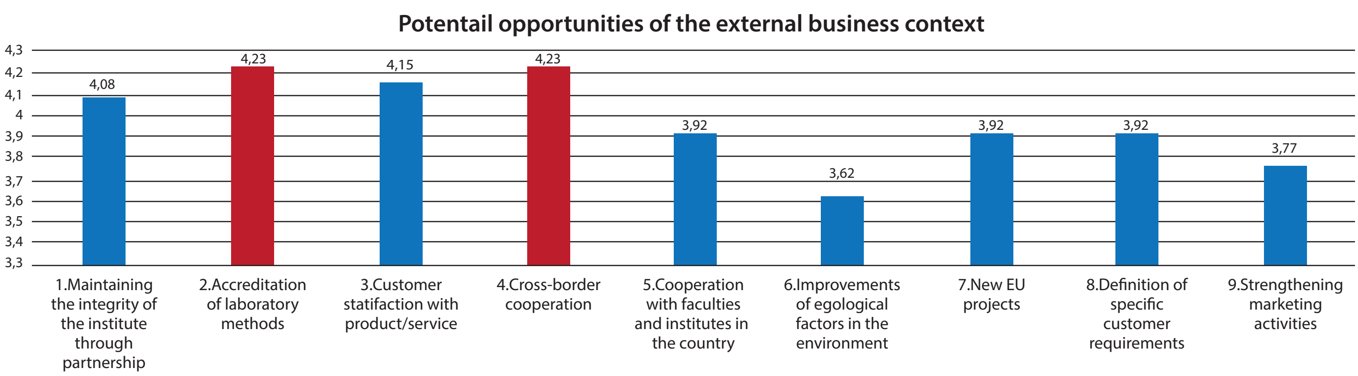
In terms of external business context, the Institute has an average survey rating of 3.98, indicating significant potential for growth and improvement.

The highest rating of 4.23 was given for the accreditation of laboratory methods and cross-border cooperation, reflecting strong opportunities in these areas. However, the lowest rating of 3.62 for improving environmental factors in the surroundings suggests room for enhancement. The scientific research organization should leverage its strengths in accreditation and cooperation to address environmental challenges and capitalize on external opportunities.

Figure 4 illustrates the potential threats of the external business context.

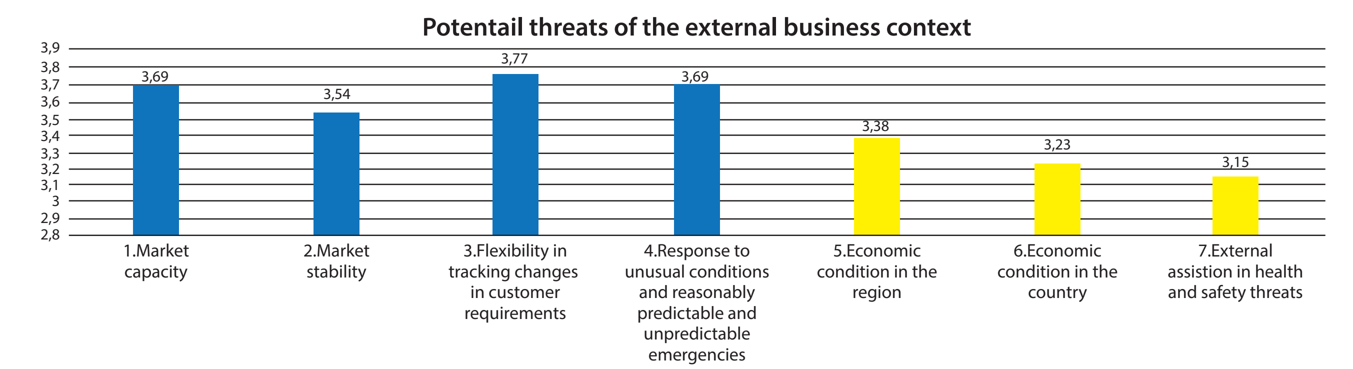
The survey on potential threats in the external business context reveals several key points. The highest score 3.77 is given for the question on flexibility in tracking changes in customer requirements. This indicates that the Institute is relatively well-prepared to adapt to changing customer needs. The lowest score of 3.15 is given for the question on external assistance in the event of health and safety threats. This suggests a significant area for improvement, as external support in such critical situations is currently perceived as inadequate. The average score of 3.46 indicates that while some external threats are beyond the Institute's control, there is a need to develop strategies to mitigate these risks.

Figure 3. Potential opportunities of the external business context[3].



Source: Authors' data.

Figure 4. Potential threats of the external business context[4].



Source: Authors' data.

4 Legend: Possible strengths: >4.20; Sustainable context: >2.60<4.20; Possible weaknesses: <2.60
5 Legend: Possible strengths: >4.20; Sustainable context: >2.60<4.20; Possible weaknesses: <2.60

This could involve establishing agreements with local municipalities and broader communities to enhance resilience against external threats. To address potential weaknesses, the PDCA cycle can be applied to questions 5, 6, 7. This approach aims to eliminate the identified weaknesses (risks) within the designated timeframe for implementing the necessary measures and conduct a new SWOT analysis during 2025. Table 1 illustrates the conducted SWOT analysis.

The conducted SWOT analysis achieved an average score of 3.85, reflecting a sustainable business environment for the scientific research organization. This validates hypothesis H0, which asserts that the adoption of the IMS aligned with the COSO ERM model for risk management, together with SWOT analysis and the PDCA cycle, enhances the organization's performance in managing risks and opportunities.

In conclusion, the authors emphasize that the IMS in the scientific research organization where the primary research was conducted is crucial due to its customized adaptation of procedures to specific processes and activities. Both SWOT analysis and the PDCA cycle were used to improve risk assessment and management in this primary research. Consequently, the operational risk management process is meticulously tailored to meet the unique needs of the organization.

4. CONCLUSION

Based on the identified weaknesses/risks in all four parts of the anonymous questionnaire that constitute the SWOT analysis, the risk management sector of the scientific research organization has taken measures to eliminate or mitigate the weaknesses/risks (conducting training on the identified weaknesses/risks), as well as re-evaluation through the PDCA cycle and conducting a new SWOT analysis during 2025. Overall, the scientific research organization shows a sustainable and strong internal business context with excellent capabilities in recognizing and leveraging its strengths. However, there is a need to improve teamwork, encourage young employees to take initiative, and enhance environmental factors in the external context. By addressing these areas, the Institute can further strengthen its position and achieve sustainable growth. The Institute demonstrates a strong ability to adapt to changing customer requirements and maintains a favorable working environment. Also, there are critical areas for improvement, particularly in enhancing external assistance for health and safety threats and increasing preparedness for emergency situations. By addressing these areas through targeted training and strategic agreements with external entities, the scientific research organization can further strengthen its resilience and operational effectiveness. The hypothesis of this primary research is confirmed by the fact that the SWOT analysis shows a sustainable business context and confirms that the implementation of the IMS according to the COSO ERM model for risk management, in combination with the SWOT analysis and PDCA cycle, can significantly improve performance for managing operational risks and opportunities

Table 1. SWOT Analysis-operational context report of the scientific research organization.

SWOT Analysis		
	STRENGTHS	**WEAKNESSES**
Internal context	• Modern and high-quality equipment (sustainable impact on Environmental Protection and Occupational Health and Safety) (4,85) • Certification of Integrated Management Systems (ISO 9001, ISO 14001, ISO 45001 and accreditation of laboratory methods ISO 17025) (4,85) • Application of modern chemical methods and devices for sample analysis (4,46) • Competence of leadership ("including environmental protection and occupational health and safety") (4,31)	• Existence of initiative among youth for new things (3,31) • Periodic brainstorming (exchange of ideas and opinions) or it does not exist at all (3,38)
	OPPORTUNITIES	**THREATS**
External context	• Accreditation of laboratory methods (4,23) • Cross-border cooperation (4,23)	• Economic condition in the region (3,38) • Economic condition in the country (3,23) • External assistance in health and safety threats (3,15)

Source: created by the authors based on the survey conducted.

in a scientific research organization. The active role of management is crucial for identifying and assessing risks, as well as determining the effectiveness of measures and their alignment with the business policy of the scientific research organization, laws, standards, and regulations. By applying the IMS according to the COSO ERM model and the procedure based on the PDCA cycle, the organization can effectively manage operational risks and reduce the likelihood of unforeseen losses and their impact on the financial effects of business operations. Future research directions would focus on identifying critical points and risks in the operations of scientific research organizations, as well as their mitigation. The research should include an analysis of the risk management sector's reports on the context of the scientific research organization's operations (the conducted SWOT analyses and the implemented measures, as well as the results of corrective actions carried out using the PDCA cycle) for the period from 2021 to 2024. The goal is to fully align business moves and operational plans with the strategy, mission, and vision of the scientific research organization.

5. ACKNOWLEDGEMENTS

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INVITED PAPERS
Accounting
Original paper

BIOLOGICAL ASSETS MANAGEMENT: VALUATION AND DISCLOSURE

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Abstract:

Agricultural activities, due to several specific characteristics, are regulated by a separate standard - International Accounting Standard 41 - *Agriculture*, which makes a clear difference between biological assets and agricultural products. The purpose of this paper is to consider the representation of biological assets in the financial reporting of public companies in the territory of the Republic of Serbia. The research was conducted on a sample of 582 public companies from the Belgrade Stock Exchange during 2017, of which 29 are from the agricultural sector. The results of the research show that in the sector of agriculture, forestry and fisheries, the most common item is the value of biological assets, where 17 public companies disclosed the value of biological assets according to IAS 41.

Keywords:

agricultural sector, fair value, IFRS, IAS, financial reporting.

1. INTRODUCTION

Agriculture is among the earliest human activities and, as such, plays a vital role in the global economy (Fischer & Marsh, 2013; Mates, 2008). In contrast to other sectors, there is constant need for agricultural products, while other sectors are characterised by volatility. From the perspective of the market in the Republic of Serbia, agriculture represents an important economic activity distinguished by many specific characteristics that arise because of the biological transformation of resources. Biological transformation essentially refers to the process of producing biological resources and, consequently, agricultural products. Companies engaged in agricultural activities will need to document accounting changes associated with agricultural operations over the course of the year, indicating that financial reporting must be adjusted to these circumstances. In particular, the specific characteristics of agricultural activities require a specialized accounting framework for a more efficient use of agricultural resources (Vukmirović et al., 2012). At the international level, the field of agriculture is regulated by the provisions of the International Accounting Standard (hereinafter IAS) 41 – *Agriculture*. Given that the application of the International Financial Reporting Standards (including IAS 41) is mandatory for public companies in the Republic of Serbia according to the Law on Accounting, those involved in these activities will need to become acquainted with this standard and implement it in their operational reporting. The aim of implementing IAS 41 – *Agriculture* is to enable the comparison of agricultural activities on a global level, which prescribes the accounting treatment and disclosure in reports.

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This should help public companies in Serbia to become more competitive on the international level and, consequently, operate more successfully. The aim of this paper is to analyze the presence and disclosure of biological assets in the financial reports of public companies listed on the Belgrade Stock Exchange. The following section of the paper will outline the fundamental legal and professional regulations regarding financial reporting related to biological assets. A literature review will be provided afterwards, along with the methodology and findings of the research. Following a brief discussion, the main conclusions and potential avenues for future research will be outlined.

2. BASIC PROVISIONS OF IAS 41 – AGRICULTURE

It should be highlighted that agriculture is defined in a slightly different manner in IAS 41, as compared to the official register of economic activities. Namely, according to the mentioned standard, agricultural activity involves managing biological transformation or collecting biological assets for sale, converting them into agricultural products, or generating additional biological assets (Deloitte, 2019). This definition can also be associated with the definition of biological assets; specifically, these assets represent a category of an entity's property and include resources such as living plants and animals. It could be highlighted that biological assets belong to renewable resources. The aim of the aforementioned standard is to establish accounting standards for agricultural activities, specifically the management of the biological transformation of biological assets into agricultural products. Biological transformation encompasses growth processes, changes in characteristics, production, and reproduction that result in qualitative and quantitative changes in the biological asset. On one hand, as previously mentioned, biological assets refer to living plants and animals, while on the other hand, agricultural products represent the harvested or collected outputs of biological assets. In this context, IAS 41 – *Agriculture* applies to agricultural products, particularly the harvested outputs of biological assets, and is applicable only at the time of harvest, whereas IAS 2 – *Inventories* or other relevant standards apply to products after harvest (IFRS, 2019; Fischer & Marsh, 2013; Deloitte, 2019). Based on the previous discussion, it can be concluded that, from the perspective of the standard, agricultural activities include only those that impact growth, development, and degeneration of biological assets, while other activities cannot be classified as agricultural. For instance, hunting wild animals or fishing in open waters cannot be classified as agricultural according to this standard, and, as such, the standard is not applicable to these activities (which is in contrast to the official register of economic activities of the Republic of Serbia).

A biological asset or agricultural product can be recognized in situations where reporting entity holds an asset under control resulting from prior actions. In addition, it is likely that future economic benefits will be received by the entity. Also, it is required that fair value or cost can be measured reliably. The standard assumes that the fair value of a biological asset can always be reliably determined, except when market price data is unavailable and when alternative fair value estimates are deemed unreliable. If an active market exists for a biological asset or agricultural product, the price established in that market serves as an appropriate basis for determining the fair value of the asset. The standard also permits the valuation of biological assets based on the concept of historical cost, which refers to the the acquisition value or cost price (Savić & Obradović, 2020). The valuation of a biological asset is conducted during the following stages: initial recognition, the end of each reporting period, and at fair value less selling cost, unless fair value cannot be measured reliably. Additionally, agricultural products are measured at fair value less selling cost, but only at the point of harvest (IFRS, 2019; Deloitte, 2019).

3. LITERATURE REVIEW

Despite being an important sector in global economy, agriculture has been overlooked by regulatory authorities for long period of time. The standard previously mentioned, dedicated exclusively to the agricultural field, was published relatively recently, in December 2000. A substantial number of studies have examined the effects of implementing IAS 41 – *Agriculture* on the national economy, along with the advantages and disadvantages of transitioning from historical cost to fair value. In the following paragraphs, some of the most significant studies in the mentioned field will be presented. There are studies that have examined the ideological role of IAS 41 – *Agriculture* in legitimizing social conflict, particularly concerning companies that are required to adopt a fair value measurement model (Elad, 2007), or the increased volatility, manipulation, and subjectivity of reported earnings according to this standard (K. Herbon & J. Herbon , 2006; Penttinen et al., 2004; Dowling & Godfrey, 2001).

Dowling and Godfrey (2001) and Elad (2004) oppose measuring biological assets at fair value; therefore, they recommend using historical cost measurement for biological assets. Herbohn (2006) believes that the fair value used to measure a company's biological assets is inappropriate and overly academic. Elad (2004) emphasizes that the radical departure from the historical cost method leads to certain theoretical and practical issues that may affect its widespread acceptance, creating significant challenges in the implementation of various national regulations.

On the other hand, Barlev and Haddad (2003) and Athanasios et al. (2010) argue that valuing biological assets using fair value provides complete disclosure that aligns with transparency. These authors also emphasize that reports based on fair value draw shareholders' attention to the value of their capital and enhance management functions.

However, one of the common criticisms of this standard is the lack of clear provisions regarding the timing of the valuation of biological assets during the reporting period. Mates and Grosu (2008) previously confirmed and emphasized that IAS 41 – *Agriculture* does not provide specific information regarding how often biological assets should be assessed, concluding that evaluations must occur at each reporting date, as there are no existing regulations to mandate more frequent assessments of biological assets. Additionally, Aryanto (2011) points out that IAS 41 – *Agriculture* provides a generalized assessment of fair value for all biological assets, even though they serve different purposes, which often results in inaccurate information and consequently impacts the quality of financial reporting. In the context of territorial studies, Argilés and Slof (2001) note that the historical cost method is the predominant approach for measuring biological assets in the EU. Nevertheless, these authors advocate for the use of the fair value method for assessing biological assets. Argilés et al. (2009) analyzed the agricultural sector in Spain and indicated that there were no significant differences in the revenues of entities that use fair value to measure biological assets as compared to those that assess them based on historical costs, nor was there an increase in their volatility. The mentioned research gives additional infomration of incorrect accounting practices in the application of the historical cost method within the agricultural sector and summarizes that the fair value method seem to be an appealing tool for predominantly small farms in the European Union's agricultural sector. Koiv (2001) examined the effects of the standard on Estonia's agricultural sector, particularly addressing the difficulties encountered while developing financial reporting guidelines for the agricultural industry in Estonia. Sedláček (2010) examined the valuation of biological assets and agricultural production for companies operating in the Czech Republic, analyzing two approaches: the Czech approach and the international approach. The international accounting standards favor the principle of fair presentation, while the Czech financial reporting prefers the principle of prudence. The study also indicates that the historical cost method established in Czech financial reporting serves as an objective standard for the biological valuation of assets only at the time of purchase, while in subsequent periods, it operates asymmetrically. From the perspective of international reporting, IAS 41 – *Agriculture* advocates for the fair value model, which is regarded as the appropriate method for assessing biological assets and agricultural product.

Mates et al. (2015) and Feleagă at al. (2012) emphasize that financial reporting in agricultural companies operating in Romania is oriented in two directions. In this regard, there are companies here that implement IAS 41 – *Agriculture* retroactively and those that follow national accounting standards. The authors point out that the flexibility in choosing the method of valuing biological assets in Romania leads to further difficulties in ensuring comparability and objectivity in financial reporting for this category of assets. Regarding the Republic of Serbia, Savić i Obradović (2020) point out that there are considerable shortcomings in the recognition and accounting treatment of biological assets, particularly when applying the fair value concept as the basis for measurement. In addition, the authors note that the presentation of information in financial reports is not conducted in a reliable or relevant manner.

4. METHODOLOGY AND RESEARCH RESULTS

According to the defined objective of the paper, research included all public companies listed on the Belgrade Stock Exchange at the certain moment and their financial statements for the 2017 reporting period. The research sample consisted of 582 public companies for which financial statements were publicly available. The financial statements were obtained from the website of the Business Registers Agency of the Republic of Serbia. The companies were classified into one of 18 sectors according to their registered activities. Subsequently, the values from the financial statements were converted to euro as a stable currency, using the average exchange rate of the National Bank of Serbia as of December 31, 2017.

The previously mentioned and explained biological assets are presented in the financial statements through several balance sheet categories, including Biological assets, Biological assets in preparation, and Advances for biological assets, Forests and perennial plantations, and Breeding stock. The following table presents the total disclosed values of the aforementioned categories categorized by sectors for public companies in 2017.

Table 1. Share of the total value of biological assets in euros in the financial reporting of public companies for the year 2017.

Sector	Biological assets	Biological assets in preparation	Forests and perennial plantations	Breeding stock	Total biological assets	Percentage share
A - Agriculture, forestry, and fishing	481,054	78,270	82,519	320,265	962,107	87.42%
B - Mining	8	0	8	0	17	0.00%
C - Manufacturing Industry	64,024	5,330	57,542	1,152	128,048	11.64%
F - Construction	2,852	0	2,836	16	5,704	0.52%
G - Wholesale and retail trade and repair of motor vehicles	319	11	308	0	638	0.06%
L - Real estate	87	0	0	87	173	0.02%
M - Professional, scientific, innovative, and technical activities	1,913	0	1,913	0	3,827	0.35%
Total	550,257	83,611	145,126	321,520	1,100,514	100.00%

Source: Authors' data.

As it can be observed, the most represented sector in terms of the value of biological assets are agriculture, forestry, and fishing, while the second position is held by the manufacturing sector. Other sectors either did not disclose the value of biological assets, leading to their exclusion from the table, or reported insignificant amounts. Regarding individual companies, 35 disclosed the value of biological assets, while 10 companies reported biological assets under preparation. On the other hand, 21 companies disclosed the value of forests and perennial plantations, while 13 disclosed the value of breeding stock. Out of the companies mentioned, 17 companies are from the agriculture, forestry, and fishing sector, representing half of the companies that report on biological assets. The category Advances for biological assets was not represented among the sampled companies in 2017. After analyzing the Notes to the financial statements, the research findings indicate that all legal entities that disclosed the value of biological assets utilized fair value for their valuation, along with additional explanations regarding fair value and the methods of measuring it. In addition, all companies disclosed information in accordance with IAS 41 – *Agriculture* requirements.

5. DISCUSSION

Based on the research conducted using the data from 2017, it can be presumed that public companies in the Republic of Serbia utilize fair value for the valuation and disclosure of biological assets. This is in accordance with IAS 41 and other regulations. In this regard, the results differ from the study conducted in the EU (Koiv et al., 2001). Certainly, the importance of accounting regulations in the valuation and disclosure of this particular accounting group cannot be overstated (Beke-Trivunac, 2019). Reporting transparency in agricultural activities increases investor trust, leading to improved conditions for financing agricultural activities from both private and public funding sources (Cvetković & Marić, 2019).

6. CONCLUSION

This paper focused on biological assets as one of the accounting groups for which financial reporting is mandatory. The paper highlights the main provisions of IAS 41 – *Agriculture* concerning the recognition, valuation, and disclosure of information related to biological assets. The results show that information regarding biological assets is mainly disclosed by public companies operating in the Agriculture, Forestry, and Fishing sector, along with a few companies from the Manufacturing sector. From the perspective of valuing biological assets, the sampled companies employ fair value less estimated selling costs for their valuation, which aligns with professional and legal regulations. However, this is not the most commonly used valuation method in the region and the rest of Europe. Future research could explore how the transition from historical cost to fair value impacts small and medium-sized enterprises in the agricultural sector and whether alternative valuation methods might address some of the challenges identified in this study. Furthermore, broadening the scope of research to include other periods and more sectors could provide a more comprehensive understanding of the application of IAS 41 in practice. In conclusion, while significant progress has been made in the valuation and reporting of biological assets in Serbia, continuous improvement in regulatory guidance and company practices will be essential to further enhance the quality of financial reporting in the agricultural sector.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE

PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE

There are 17 papers related to the thematic area of the conference. Authors' research interests were related to Accounting and Audit (3), Banking (3), Corporate Finance (2), Marketing and Management (4), Green Economics (1) and Human Resources Management (4).

There are three papers in the ACCOUNTING AND AUDIT section. The goal of the first paper is to emphasize the need for standardized ESG frameworks to enhance transparency and stakeholder trust, as well as overall performance of reporting entity. The paper suggests that modern business requires encompassing Environmental, Social, and Governance aspects into financial reporting to ensure business transparency and responsibility. Both qualitative and quantitative disclosures are required to compare performance against set goals and risks. The post-2008 financial crisis studies and recent COVID-19 research demonstrate that companies with high ESG ratings have better financial and market returns and attract loyal investors. The International Sustainability Standards Board, established in 2021, issued IFRS S1 and S2 standards in June 2023, effective January 2024, to improve global sustainability reporting. The findings show that the early adopters of comprehensive and effective ESG reporting have demonstrated superior performance in the global economy, and this trend is expected to persist.

The second paper investigates the use of Altman's Z-Score index as a tool for detecting possible cases of financial results manipulation among business entities in the Republic of Serbia. In recent years, concerns regarding the integrity of financial reporting have intensified, requiring robust methods for identifying irregularities and safeguarding investor interests. Drawing upon a research sample consisting of 56 year observations of business entities, observed in 2018 and 2019 reporting periods, the authors employ quantitative analysis techniques to evaluate the financial health and stability of sampled companies. By calculating Z-scores and matching results with issued auditor opinion type, deviations from expected values, potential anomalies indicative of manipulation are identified and scrutinized. Results show that calculated score matches audits opinion type in app. 71.35% of cases. Findings enrich the existing body of knowledge on financial fraud detection and corporate governance by showcasing the effectiveness of Altman's Z-Score index in the context of Serbian corporations.

The third paper notes that accounting engineering involves rethinking the profession in way of technological advancement such as digital transformation, artificial intelligence, and the 4th Industrial Revolution (I4.0). While many of these changes have been theoretically integrated into scientific literature, their practical application in business operations is lacking. Therefore, the paper aims to accentuate the aforementioned issues through the lens of implementing the achievements of digital transformation and to provide a clearer understanding of accounting engineering and its impact on the profession in the digital age. In doing so, the paper offers practical insights into the relationship between digital advancements and labor market trends for accounting professionals.

BANKING section features three papers. The first paper aims to demonstrate contemporary instruments of fraud in the banking industry that small businesses use with the case study of PayCheck Protection Program. The paper notes that the modern lending institutions are having to move from traditional ways of financing and innovate based on globalization, digitalization, and internationalization processes. With the skyrocketing competition, lenders are facing challenges, whereas additional requirements and checks could cause them to lose business if the additional measures are not applied; there is a chance for potential fraud; hence, the lenders are left with a dilemma. Their choice is becoming more complex as there is a rising number of players entering the market, therefore creating substantial competition. Ultimately, there is an opportunity for fraud that can be relatively easily committed, and small businesses are presented as a byproduct of the contemporary economic conditions, impacting the need for even economic and social development.

The aim of the second paper is to analyze the banking sector of the Republic of Serbia from 2019 to 2023. In recent years, there have been significant changes in this sector. Therefore, the paper primarily focuses on mergers and acquisitions in the banking industry over the past five years. Given the decrease in the number of banks operating in the Republic of Serbia, the paper will utilize key concentration indicators, such as concentration ratios and the Herfindahl-Hirschman Index, to provide a comprehensive analysis of the sector. Additionally, the basic profitability indicators, ROA and ROE, will also be examined.

The third paper notes that due to rapid IT technology development, many people and enterprises are now active users of social networks. Traditional banking communication channels have become insufficient to meet the demands of modern business conditions. To respond to the evolving preferences of both existing and potential clients, in the conditions of intense competition, banks have had to implement digital technologies and reorganize their approaches to conducting business, connecting, and communicating with clients. Digital changes have given clients a distinctive experience and strengthened the banks' position in the financial market. Today, banks are increasingly present on social networks across the world, including Serbia. The paper analyzes the presence of banks in Serbia on social networks using content analysis and the comparative method. The research identifies trends in the use of social networks for bank promotional strategies and to give recommendations for their improvement.

There are two papers in the CORPORATE FINANCE section. The first paper aims to analyze the role of the World Trade Organization (WTO) in regulating international trade, examining contemporary challenges, and evaluating potential reforms to enhance its relevance and equity for all member states. Namely, the WTO ensures compliance with trade rules, with a particular focus on protecting the interests of smaller nations, and addresses a wide range of issues, including intellectual property and agriculture. However, the organization faces significant challenges, such as the rise of the digital economy, the impact of climate change, and increasing protectionism, underscoring the need for reform. Critics argue that the WTO often favors developed countries, to the detriment of developing nations. To remain relevant, the WTO must modernize its processes which will be considered in this paper.

The second paper highlights the growing integration of social media into corporate finance and accounting practices is reshaping traditional communication methods and influencing market dynamics. Platforms such as Facebook, LinkedIn, and Twitter are increasingly being used by companies to engage with stakeholders, enhancing financial transparency and corporate governance. This paper explores the role of social media in disseminating financial information, shaping investor behavior, and facilitating corporate decision-making. It highlights both the opportunities and challenges presented by social media, including its ability to reduce information asymmetry and improve access to capital, while acknowledging the risks of misinformation, market volatility, and regulatory uncertainties. The paper synthesizes current research on the subject, addressing the implications for corporate social responsibility reporting, investor relations, and stock market performance.

There are four papers in the MARKETING and MANAGEMENT section. The first paper examines the impact of social networks on the decision-making process when choosing a tourist trip. The goal of the paper is to show how and in what ways something that we consume on social networks can play a role in creating our opinion about something, and even making the final decision. The authors conducted a survey in order to understand the extent to which social networks are used in creating our image of a product – tourist trips. The authors explain how important it is nowadays to be on social networks for anyone who wants to market one of their services or products.

The second paper uses a systematic review of the existing literature to analyze the impact of diversification strategies on firm performance. Various studies on diversification were analyzed, leading to the conclusion that the related diversification is beneficial in the short term, while the unrelated one may lead to a loss of focus and the increased costs. The research results confirm the inverted U-shape theory in relation to diversification and firm performance, suggesting a need for careful management of diversification and consideration of contextual factors. The findings emphasize the importance of understanding the dynamics of diversification and its impact on firm performance and indicate the need for further research in strategic management to better comprehend effects of different diversification strategies.

The third paper examines workplace stress-reduction strategies for women. A descriptive cross-sectional research design was used, employing surveys and purposive sampling to gather data. A total of 150 Nigerians, representing each geopolitical zone and Abuja, were randomly selected from the country's 200 million population. Data was collected quantitatively through a confirmed structured questionnaire, with samples obtained via email. Strategies for minimizing job stress included avoiding stressful situations, sleeping, talking with coworkers, seeking professional help, and meditation. However, some strategies were less effective in preventing burnout. Most participants reported relaxing with family and enjoying their work, which helped lower stress levels. Women specifically relieved job stress by resting, taking breaks, listening to music, using social media, watching movies, talking with others, and eating.

The fourth paper focuses on the role of masstige marketing on the internet, with a particular emphasis on social media as a key tool for attracting consumers. Masstige marketing, which combines the prestige of luxury products with broader reach and accessibility, leverages social media to create a unique market position. These platforms enable brands to utilize influencers, corporate advertising, and content marketing to enhance visibility and engage consumers.

Influencer marketing plays a pivotal role, relying on authenticity and transparency to build trust and loyalty among consumers. Additionally, the Masstige Mean Index (MMI) is introduced as a tool for measuring perceptions of mass prestige, providing brands with insights into their marketing success. This paper analyses how masstige marketing, through digital platforms, can balance exclusivity and accessibility, adapting to the evolving needs and expectations of modern consumers.

Paper in the GREEN ECONOMICS section points out that modern organizations use keywords that describe sustainable and environmentally friendly behavior to meet promises made to green consumers and gain an advantage over competitors. Organizations may face reputational damage due to issues such as complaints from customers, legal cases, or actions that harm the environment. It is not rare that public statements of organizations toward their green behavior are not supported with their credible actions, so phrases "climate neutrality", "net zero commitment" and others are just claims that follow the trend to be eco-friendly and acceptable in ESG standards. If organizations only follow the trend and use marketing campaigns to show that they are committed to sustainability, there is a high likelihood that we will engage in the greenwashing practice of those organizations. The paper provides a breakdown regarding notable global greenwashing examples focusing on litigation cases which take origin from social media ads.

HUMAN RESOURCES MANAGEMENT section features four papers. The first paper analyzes the role of HR in creating an agile culture and encouraging upskilling to retain IT talent. The authors examine how various HR strategies, such as education and training programs, launching innovation initiatives, and flexible working options, impact team agility, innovation, and employee motivation. Through a comparative analysis of existing research, the paper identifies key challenges and opportunities within HR practices, underscoring the necessity for continuous adaptation and innovation in HR strategies to support organizational success in a dynamic global business environment. The paper concludes with practical recommendations for HR professionals in the IT sector, aiming to improve their strategies for attracting and retaining skilled IT professionals through effective upskilling programs and agile practices.

The second paper emphasizes the crucial role of HR in designing and implementing strategies to create an appropriate work environment for hotel experts. The paper conducts the literature review which confirms that effective performance management practices are crucial for improving employee productivity, engagement, and retention in the hospitality industry. Key strategies include the implementation of technology into recruitment and training, continuous feedback, and recognition for work-life balance. Hotels adopting these practices will be able to increase their quality of service, guest satisfaction, and maintain competitive edge in the market. The strategic alignment of HR practices with industry demands not only addresses immediate challenges but also fosters a resilient work force capable of thriving in a dynamic environment.

The third paper highlights that social media platforms enable leaders to connect with their employees, customers, investors and other stakeholders. The nature of social networks allows leaders to create relationships and inspire positive responses from their followers that benefit the organization. More than 80% of CEOs view social media as a tool for activities and connections that will positively affect their organizations. Interactive and interpersonal features of social media platforms enable CEOs to make themselves more approachable and easier to interact with. The paper provides an overview of nine studies that examined leadership in the context of social media (Twitter and Instagram) and gives suggestions for further research.

The fourth paper reports the findings of the survey on the strategic management of cattle rustling in Sokoto State, Nigeria with 400 respondents. The sociodemographic data revealed that 55% of respondents were male and 45% female. The largest age group was 25-30 years (42.7%), while respondents aged ≥45 made up 9.7%. Most (53%) were married, with only 7% widowed. Farmers comprised 22.7% of the sample, and 37.2% had informal education. The strategies for managing cattle rustling received mean score indices ranging from 2.80 to 4.20, with reporting cases to Village Heads being the most effective. It is recommended that tracking the perpetrators' locations be prioritized as a key control measure. Additionally, government intervention through job creation is essential to reduce unemployment and related social issues.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Accounting
Original paper

TOWARDS A SUSTAINABLE FUTURE: THE INTEGRATION OF ESG IN FINANCIAL REPORTING

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Abstract:

The goal of this paper is to point out the need for standardized ESG frameworks to enhance transparency and stakeholder trust, as well as overall performance of reporting entity. Modern business requires encompassing Environmental, Social, and Governance aspects into financial reporting in order to provide business transparency and responsibility. Both qualitative and quantitative disclosures are required in order to compare performance against set goals and risks. Literature review shows that post-2008 financial crisis studies and recent COVID-19 research show companies with high ESG ratings have better financial and market returns and attract loyal investors. The International Sustainability Standards Board, established in 2021, issued IFRS S1 and S2 standards in June 2023, effective January 2024, to improve global sustainability reporting. Early adopters of comprehensive and effective ESG reporting have demonstrated superior performance in the global economy, and this trend is expected to persist.

Keywords:

ESG reporting, financial reporting, environmental, social, governance.

1. INTRODUCTION

Traditionally, dominant quantitative, and past-oriented financial reporting is becoming increasingly insufficient for the main stakeholders of a business. Contemporary business encourages social responsibility, encompassing the sharing of non-financial information on social and personnel issues, environmental protection, human rights, and anti-corruption efforts, among other aspects (Arvidsson & Dumay, 2022). ESG reporting is the process of compiling and disclosing reports by a reporting entity related to the effect of its processes on the environment (Environmental), the social environment (Social), as well as on how it manages the organization (Governance) (Raghavan, 2022). It encompasses both qualitative and quantitative disclosures related to all three aspects, usually presented in the form of a separate report. The report includes a comparison of the reporting entity's performance with previously defined goals, strategies, and ESG risks (Cohen, 2023). In industry practice, the terms ESG (Environmental, Social, and Governance), sustainability, and the terms CSR (Corporate Social Responsibility) reporting are often used interchangeably (Raghavan, 2022). Research has revealed that public companies with high ESG ratings experienced higher stock market returns following the 2008 financial crisis (Yin et al., 2023; Lins et al., 2017). Comparable studies were conducted following the onset of the COVID-19 pandemic, with consistent outcomes (Engelhardt et al., 2021). Common to both groups of studies is that there is the strongest connection between the Governance element and achieved returns and/or profitability (Gianfrate et al., 2021).

Namely, public companies with quality ESG reporting attract investors and business partners who are more loyal and who will provide financial support in times of crisis; and/or successful public companies (less indebted and with more free cash flows) will have enough resources to finance quality ESG reporting, and such companies typically respond well in times of crisis. In addition to the aforementioned, global companies are incorporating the Sustainable Development Goals (SDGs) into their corporate social responsibility (CSR) objectives, particularly focusing on ESG issues. To address the world's social and environmental concerns, they establish precise goals with corresponding targets and indicators.

2. LITERATURE REVIEW

Generally, companies aim to maximize profit as their primary objective. Achieving this goal is often seen as a measure of success. They continually strive to enhance their value, as an increase in value reflects strong performance. This, in turn, boosts market confidence, which is based not only on current achievements but also on future prospects (Azahra & Hasnawati, 2024). In the contemporary business environment, investors increasingly consider a company's sustainability practices before making investment decisions. One such consideration is ESG disclosure, which has emerged as a key factor for investors. Over the past decade, numerous researchers have examined various aspects of ESG such as: information (Du Rietz, 2014), reporting (Camilleri, 2015), risk-adjusted performance (Ashwin Kumar et al., 2016), transparency of ESG reporting (Tamimi & Sebastianelli, 2017), investment decisions (Sultana et al., 2018), earnings management (Velte, 2019), financial performance (Velte, 2020), company value (Adhi & Cahyonowati, 2023; El-Deeb & El Banna, 2023; Wong et al., 2021), price inefficiency (Naeem et al., 2022), and brand impact (Puriwat & Tripopsakul, 2023).

ESG research has expanded into diverse industries including mining (Alandejani & Al-Shaer, 2023), banking (Bashatweh et al., 2021; Bax et al., 2020), manufacturing (de la Fuente et al., 2022), transportation (Maaloul et al., 2023), technology (Consolandi et al., 2022), real estate (Luo & Tang, 2022), materials (Ahmad et al., 2021), entertainment (Takahashi & Yamada, 2021), retail (Eliwa et al., 2021), services (Luo, 2022), health (Billio et al., 2021), and tourism (Huang et al., 2022). The continued interest among researchers in the development of ESG issues is evident from the literature.

When it comes to the field of accounting, there is a significant number of authors who have explored the topic with mixed results. Authors' (Zahid et al., 2022) results show a substantial inverse relationship between an organization's financial success, as measured by return on assets (ROA), and ESG. However, since customers reward ESG practices that enhance short-term performance, ESG has a positive effect on entity revenue. Likewise, Aydoğmuş et al. (2022) claim that both the environmental, social, and governance (ESG) scores individually, as well as the overall ESG score, have been shown to positively and significantly correlate with company's profitability. These findings suggest that excellent ESG performance by a company may lead to financial returns in the form of increased value and profitability. Furthermore, disclosure and implementation of ESG strategies can improve the value of an entity's products and increase the desire of buyers and investors to engage with the company, leading to better performance and higher revenues. ESG initiatives improve corporate image and revenue. In addition, research findings indicate a notable positive correlation between ESG and dividend payouts (Zahid et al., 2023). Consequently, companies demonstrating strong ESG practices showcase their commitment to stakeholders and shareholders, ensuring the continuity of dividend payments.

3. PROFESSIONAL REGULATION IN ESG

Sustainability considerations are becoming integral to investment decision-making, leading to a growing demand for entities to offer globally comparable, high-quality information about the risks and opportunities associated with sustainability. As a response, in November 2021, the International Sustainability Standards Board (ISSB) was established. Acknowledging the importance of current frameworks and the necessity for market streamlining, the International Sustainability Standards Bord amalgamates and utilizes the efforts of investor-oriented reporting endeavors, including (SASB Standards, 2024): SASB Standards; Task Force for Climate-related Financial Disclosures (TCFD) Recommendations; Integrated Reporting Framework; and Climate Disclosure Standards Board (CDSB) Framework.

The ISSB creates IFRS Sustainability Disclosure Standards with the aim of meeting the information requirements of investors and facilitating the efficient communication of decision-relevant information by companies to global capital markets. In March 2022, discussions began regarding issuing two new standards. The IFRS S1: General Requirements for Disclosure of Sustainability-related Financial Information and the IFRS S2: Climate-related Disclosures were released in June 2023. The proposed start date for applying these standards to financial reporting is January 1, 2024. In the following section the main requirements laid out by IFRS S1 and IFRS S2 will be presented.

3.1. THE REQUIREMENTS OF IFRS S1 AND IFRS S2

The following figure will illustrate the significance of SASB Standards in IFRS S1 and IFRS S2.

According to IFRS S1, organizations must report all sustainability-related risks and opportunities that may have an immediate, medium-term, or long-term impact on the reporting entity's cash flows, funding sources, or capital costs. Conversely, IFRS S2 mandates entities to divulge details about risks and opportunities in relation to climate. This disclosure aims to aid primary users of general-purpose financial statements in allocating resources to the reporting entity.

Companies can provide investors with the necessary information to understand the risks and opportunities associated with sustainability by integrating IFRS S1 and S2, along with additional resources such as the SASB Standards. The TCFD Recommendations are fully integrated into both IFRS S1 and IFRS S2. Companies that adhere to the TCFD Recommendations and the SASB Standards will be compiled according to the IFRS S1 and IFRS S2. As preparers and investors transition to adopting ISSB Standards, the ISSB actively encourages them to do so and will continue to maintain and enhance the SASB Standards as long as they are in use.

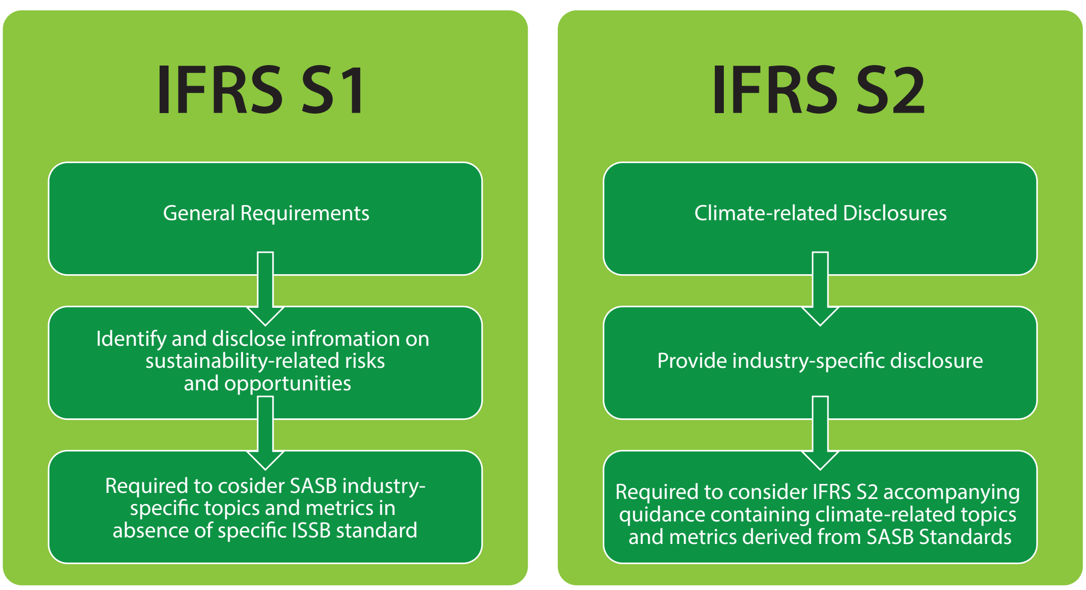
3.2. LEGAL REGULATIONS IN THE REPUBLIC OF SERBIA

Under the Law on Accounting of the Republic of Serbia, Article 34 (Official Gazette of RS No. 73/2019 and 44/2021 - other laws), 2024) companies are required to disclose information about investments aimed at environmental protection within their Annual Business Report. According to Article 37 of the same law, entities required to submit non-financial information are substantial, publicly-interested entities employing more than 500 people on average during the reporting period as of the balance sheet date. The non-financial report includes data necessary to understand the evolution, performance, position, and outcomes of its operations. This data pertains, among other things, to environmental preservation, social and human resource concerns, observance of human rights, efforts to combat corruption, and matters related to bribery. In addition to the mentioned regulations, the Global Reporting Initiative (GRI) standards are the most often utilized sustainability reporting guidelines in Europe (GRI Standards, 2024). The next section will have these standards in focus.

3.3. THE REQUIREMENTS OF GRI STANDARDS

These standards enable organizations of all sizes, whether public or private, to assess their effect on the environment, economy, and society comprehensively and reliably. In addition, previous will enhance transparency regarding their contributions to sustainable development. Such norms are highly advantageous to a broad spectrum of stakeholders, including capital markets, investors, legislators, civil society, and corporations alike (GRI Standards, 2024).

Figure 1. The significance of SASB Standards in IFRS S1 and IFRS S2.



Source: (SASB Standards, 2024).

The Standards (the Universal Standards, the new Sector Standards, and the topic Standards) are crafted as a user-friendly modular system, providing a comprehensive view of an organization's significant topics, their impacts, and the methods used to manage them. The revised Universal Standards are applicable to all organizations and now include due diligence on environmental and human rights reporting, aligning with intergovernmental standards. The new Sector Standards facilitate more uniform reporting on sector-specific impacts. The Topic Standards, modified for use with the revised Universal Standards, outline disclosures applicable to specific topics.

4. ESG REPORTING IN PRACTICE

An organization's ESG performance and effects are communicated through the ESG report, although the format, content, and target audience of these reports can vary. Many companies are gradually embracing ESG reporting to fulfill stakeholder demands for information and to demonstrate their commitment to managing ESG risks. The increasing demand for global disclosure standards and high-quality data is being propelled by investors' and regulators' growing need to evaluate how ESG concerns impact a company's enterprise value. While voluntary reporting frameworks and guidance exist, the absence of common standards has led to confusion among stakeholders. As a result, stakeholders have requested that the IFRS Foundation leverage its expertise in producing worldwide accounting standards to develop globally standardized sustainability reporting. Table 1 below provides an overview of selected examples of ESG reporting by the United States of America's companies across various sectors.

The table demonstrates a growing trend among corporations to integrate ESG reporting into their business practices, reflecting global changes regarding responsible and sustainable corporate operations. However, the varying approaches and lack of uniform standards indicate a need for further development and standardization in ESG reporting frameworks. Companies that excel in providing transparent and reliable ESG information are likely to gain a competitive advantage in attracting investors and maintaining stakeholder trust.

Table 1. Utilization of ESG, GRI, and SDGs in financial reporting of selected companies.

Company	Reporting
Compass Minerals	The business has taken steps towards sustainability, as indicated by its yearly ESG report complying with the standards established by GRI and SASB.
Eli Lilly	Its corporate social responsibility reporting traces back to 2012 and integrates the SDGs*.
Energy Recovery	In its yearly report, the company emphasizes the utilization of energy recovery tools to mitigate carbon emissions.
Etsy, Inc.	The 2019 annual reports featured ESG information, with external third-party validation of its ESG metrics.
IDEA	The company has established a multidisciplinary ESG team to address ESG issues comprehensively, and it plans to release its inaugural annual ESG report in 2020.
Johnson and Johnson	On a yearly basis, dashboards assess advancements made toward achieving SDGs.
Kimberley-Clark	The company has implemented GRI principles and aligns its objectives with SDGs.
Nestle	The 2018 report demonstrates adherence to the SDGs.
Nike	It employs the GRI framework in its Sustainable Business Report, with a particular emphasis on addressing SDGs.
Proctor & Gamble	Since 1999, the company has been publishing Corporate Citizenship Reports, with an emphasis on addressing SDGs.
Tex-Isle Steel company	Independent consulting firms have verified the company's dedication to sustainability.
Unilever	It utilizes the GRI framework and aligns with the SDGs.
UBS Group AG	The 2019 Sustainability Report, incorporates an independent assurance report following the guidelines of the International Standard on Assurance Engagement 3000.
Vornado Realty Trust	The accounting firm conducted an audit engagement following SASB Standards, along with a review engagement for sustainability disclosures aligned with GRI Standards.

* More on these SDG standards can be found here: https://unece.org/trade/wp6/standards-sustainable-development-goals-sdgs
Source: Adjusted from Raghavan (2022)

5. CONCLUSION

ESG reporting seeks to unveil a company's ESG impacts to all stakeholders. Employing contemporary technologies for ESG accounting and reporting, alongside a robust framework tied to the SDGs, can meet investors' informational demands and empower management in strategic decision-making. This approach mandates corporations to reveal both direct and indirect impacts, encompassing ramifications on economy and society. Inferior ESG performance relative to peers might lead to a competitive disadvantage in financial markets, consumer engagement, and talent acquisition. Pioneers in comprehensive and effective ESG reporting have witnessed success in the worldwide arena, and this pattern is anticipated to endure.

6. LITERATURE

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USING ALTMAN'S Z-SCORE FOR DETECTING CASES OF FINANCIAL RESULTS MANIPULATION IN SERBIAN PUBLIC COMPANIES

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Abstract:
This study explores the use of Altman's Z-Score index as a tool for detecting possible cases of financial results manipulation among business entities in the Republic of Serbia. In recent years, concerns regarding the integrity of financial reporting have intensified, requiring robust methods for identifying irregularities and safeguarding investor interests. Drawing upon a research sample consisting of 56 year observations of business entities, observed in 2018 and 2019 reporting periods, this study employs quantitative analysis techniques to evaluate the financial health and stability of sampled companies. By calculating Z-scores and matching results with issued auditor opinion type, deviations from expected values, potential anomalies indicative of manipulation are identified and scrutinized. Results show that calculated score matches audits opinion type in app. 71.35% of cases. The results of this study enrich the existing body of knowledge on financial fraud detection and corporate governance by showcasing the effectiveness of Altman's Z-Score index in the context of Serbian corporations.

Keywords:
audit report type, financial reporting, fraud, financial health.

1. INTRODUCTION

The subject of research in this paper is the Z-score which is used by default for estimating the probability of opening bankruptcy proceedings in certain business entity. To this day, this indicator is considered very reliable and valid in revealing the financial difficulties of companies and up to 3 years unmatched. All evidence supported by global market research gives credibility to this index. Today, more than ever, corporate fraud is a public threat to the financial system, as well as to validity and the credibility of the financial reports made available to the public. Therefore, authors try to find the best model to detect financial results management and some of them used Altman Z-score for those purposes. Research by Spathis (2002) utilized Z-Scores alongside other methods on data from seventy-six companies, demonstrating the capability of Z-Scores to identify fraudulent financial statements (FFS). The same researcher showed that Z-Scores attained an accuracy rate of over eighty-four percent in categorizing the entire sample, with their overall indicators being associated with FFS in the chosen companies (Mehta & Bhavani, 2017). Conversely, the Beneish model failed to identify any instances of fraud, while the Altman Z-Score suggested potential issues in the company's financial statements. Although the Beneish model is widely used for predicting fraudulent financial statements, the findings of this study did not confirm its effectiveness (Bhavani & Amponsah, 2017). Numerous previous experiments have tested the effectiveness of this model, including studies by Loebbecke (Summers & Sweeney, 1998). The findings of these studies affirm the dependability of this model in detecting financial deficiencies, which are considered key drivers of fraudulent behavior

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(Saleh et al., 2021). Building on the previous points, the research question can be articulated as follows: "Is Altman's Z score appropriate to use in detecting financial result management against financial reporting legislation on Serbian public companies?" Paper will be structured as follows. Firstly, existing literature from the field will be analyzed, which will be followed by research methodology. Finally, research results will be presented before final conclusions and recommendations for future work.

2. LITERATURE REVIEW

There are a lot of examples in literature where Altman Z-score was used along with the M-score for detecting financial results manipulation to a greater or less success. In addition to the most known example, the Toshiba Corporation, which can be taken as dominant because the Z-score showed an advantage over the M-score, there are other research papers that show similar results (Spathis, 2002; Dalnial et al., 2014; Ujal, 2012). Several authors used the synergy of M-score in combination with Z-score because Z score is very effective but in combination with other benchmarks as well as audit reports (Kukrejaet al., 2020).

The main purpose of Beneish M-score is to discover financial fraud. The main issue with this index is that it can't be used in all countries, because each country has different financial reporting system. Investors gravitate towards markets they are acquainted with and have higher trust in nations that have embraced and applied international standards for financial reporting. Consequently, it is the shared interest of all nations to actively engage in the harmonization process of international financial reporting standards to facilitate the growth and enhance the competitiveness of their companies in the global market (Ćehaet al., 2023). For this reason, other scores are used more often. The Z-score provides a valuable tool for identifying various financial issues within a company. According to Jolly and Chandani (2020), it can be used to detect accumulated losses. Kukreja, Mohan Gupta, Sarea, and Kumaraswamy (2020) suggest that the Z-score can reveal instances where a fictitious financial year may have been added to artificially enhance financial results and obscure potential bankruptcy risks. Additionally, the Z-score can identify potential financial manipulations and provide a broad assessment of a company's financial well-being (Mohammad et al., 2021). By analyzing various financial ratios, the Z-score can uncover hidden losses that may have accumulated over time, suggesting potential financial instability. It can also uncover fraudulent practices, such as fabricating financial years to enhance the appearance of a company's financial results. This capability to detect manipulative practices underscores the Z-score's significance in financial analysis. Additionally, the Z-score provides a holistic assessment of a company's financial health, enabling stakeholders to make well-informed decisions based on its true financial standing (Jolly & Chandani, 2020; Kukreja et al., 2020).

As credibility of Z-score index, we add some research that showed good results on the account of bankruptcy prediction. We used the example of research conducted in the Balkans, specifically focusing on Croatia. Namely, with business entities that opened bankruptcy proceedings, success rate predictions for one year before are 73.08% and 84.62% which were tested for upper and lower limits. Results for two years before the declaration of bankruptcy suggest model success rates of 71.15% and 86.54% when testing the upper and lower limits, while performance results for the third year on the same occasion testing the upper limit of 71.15%, and somewhat weaker in compared to the second year when testing the bottom limits 78.85%. According to research conducted from 2007 to 2016 on 26 companies, the authors claim that the probability of bankruptcy in the following sectors is as follows (Bareša et al., 2019):

- Agriculture, forestry and fishing – 2 companies – 7.7%;
- Production of food products, beverages and tobacco products – 3 companies – 11.5%;
- Production of textiles, clothing, leather and related products – 2 companies – 7.7%;
- Production of chemicals and chemical products – 3 companies – 11.5%;
- Manufacturing bricks, tiles, and other clay-based baked products for construction – 1 company – 3.8%;
- Manufacturing of primary metals and fabrication of metal products, excluding machinery and equipment – 1 company – 3.8%;
- Production of transport equipment – 1 company – 3.8%;
- Other sectors of manufacturing, repair, and installation of machinery and equipment – 1 company – 3.8%;
- Water supply; waste water removal, waste management – 1 company – 3.8%;
- Construction – 2 companies – 7.7%;
- Wholesale and retail trade, including maintenance and repair of motor vehicles and motorcycles – 2 companies – 7.7%;
- Transportation and storage – 3 companies – 11.5%;
- Activities of providing accommodation and preparing and serving food – 3 companies – 11.5%;
- Legal, accounting, management, architectural activities and engineering and technical examination and analysis – 1 company – 3.8%.

No matter how much some research may attempt to minimize the impact of the Covid-19 pandemic, the International Journal highlighted research that shows significant advantages of this index in predicting bankruptcy according to the obstacles provided by the pandemic in that time. In 2019, with a Z-Score of 1.82, the company exhibited relatively sound financial health and a low risk of bankruptcy. However, by 2020 and 2021, there was a significant drop in the Z-Score values to -7.62 and -7.46, indicating highly unstable financial conditions and a substantial risk of bankruptcy. This drastic decline in the Z-Score values over the past two years underscores severe issues in the company's financial framework, primarily stemming from reduced sales due to the impact of COVID-19 (Miyandini et al., 2023).

In 2019, the company boasted a Z-Score of 1.82, indicating a low risk of bankruptcy. However, by 2020 and 2021, the Z-Score values plummeted to -7.62 and -7.46, respectively, revealing highly unstable financial conditions and a significant risk of bankruptcy. This drastic drop in Z-Score values over the past two years highlights severe financial challenges within the company, largely attributed to reduced sales stemming from the impact of COVID-19 (Miyandini et al., 2023).

Tung and Phung (2019) in their research, conceptualize bankruptcy as a financial status rather than a specific event, implying that a thorough comprehension of bankruptcy risk allows companies to implement suitable management strategies to enhance their financial stability.

We agree with this viewpoint and emphasize the importance for managers, investors, and stakeholders to assess and forecast financial instability. This facilitates the identification of businesses facing probable risks, enabling the prompt development of effective management strategies (Tung & Phung, 2019).

3. RESEARCH METHODOLOGY

Based on the specified research query, a study sample was assembled comprising financial documentation and audit records from chosen corporate entities. Financial statements were needed in order to calculate Altman Z-score, while audit reports were needed in order to classify business entities in two groups. The initial group comprised corporate entities which had disclosures in audit reports that claimed that financial result has been managed due to certain events or occurrences, while the second one did not have disclosures of such kind. Audit and financial reports of the selected entities were sourced from the official website of the Serbian Business Registers Agency -SBRA. The table consists of 56 business entities and they were chosen by chance. Z-score indices were calculated from the selected sample, I used the formula for non-listed companies:

$$Z = 0{,}717 \times X1 + 0{,}847 \times X2 + 3{,}107 \times X3 + 0{,}420 \times X4 + 0{,}998 \times X5 \quad (1)$$

X1 = Working capital / Total assets

X2 = Retained Earnings / Total assets

X3 = Earnings before interest and taxes / Total assets

X4 = Book value of equity / Book value of total liabilities

X5 = Sales / Total assets

Z = Overall Index

4. RESEARCH RESULTS

By comparing the companies whose auditor's opinion showed that they had managed financial results, it can be concluded that out of possible 24 companies, the scores for 7 of them did not indicate manipulation and thus did not coincide with the auditor's opinion, and in this way, we arrive at a percentage of 29.17% accuracy.

The chart pie shows the total number of companies to which audit reports gave adverse opinion, with the Altman index still recognizing them as companies with a clean result, i.e., companies that did not manipulate.

While, if we look at the other 32 companies with unmodified opinion, the program declared 9 as manipulated reports. The reason for the poorer precision for unmodified opinions is that we used a harsher benchmark for drawing the limits of manipulation, and for this reason, reports that potentially fall into the gray zone, in this way, come into the zone of manipulation. In this way, we arrive at a percentage of 28.125%.

The chart pie shows the total number of companies to which the audit reports gave unmodified opinion, with Altman's index still recognizing them as companies with adverse result, that is, companies that carried out manipulation.

Considering that both percentages are close to 30%, we calculated the average value of these two percentages and came to the result of 28.65%, meaning that Altman Z-score classified sampled companies with the remaining – app. 71.35% precision. Also, by listing audit reports, we concluded that overestimated results indicate manipulation. We have constantly seen this in theory with an emphasis on management error where they very often try to increase profits (and it can often be observed in the same way) in order to present the company to investors as attractive and successful as possible.

It is important to emphasize that International Accounting Standards do not include quantitative financial indicators, making them less relevant for detecting manipulations using the Altman index. Consequently, a synergy of qualitative and quantitative methods can yield a more effective solution. Considering a selected sample of 24 companies with adverse audit opinion, we came to further assertions:

Figure 1. Reports with adverse audit opinion.

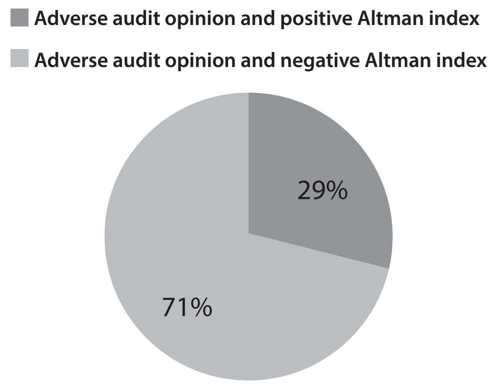
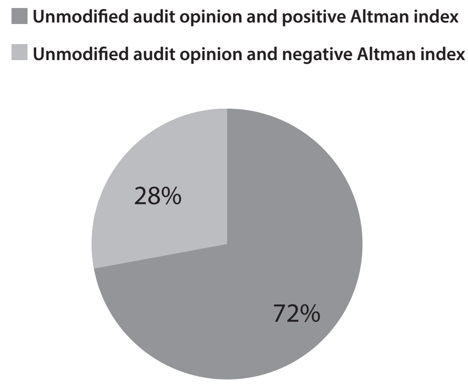


Figure 2. Reports with adverse audit opinion.



- Auditor expressed doubt that the client is capable of continuing operations according to the Going Concern principle, found in 10 reports.
- Frozen bank account was found in 5 audit reports.
- Short-term liabilities exceeded current assets, or negative net working capital, were found in 4 cases.
- Violation of International Accounting Standard 16 - Property, Plant and Equipment was found in 4 reports.

The situation we most often encounter, and which explicitly implies the manipulation of financial results is when the authorized auditor notes that revenues, expenses, and liabilities were overstated or understated with an effect to financial result. There were eight such cases within research sample, where only in one company out of eight had Altman's Z-score value that did not indicate high probability of default / financial result manipulation.

At the end, it is important to bear in mind that Altman's Z score cannot guarantee 100% effectiveness in detecting financial manipulation. While it may identify some cases with potentially adverse forecasts for the future, this does not necessarily imply financial wrongdoing. Combining both methods in research yields the safest and most accurate results because the Altman index lacks the capability to incorporate qualitative methods such as International Accounting Standards into its calculations. Although it comprises numerous quantitative measures that may signal potential issues, it may not capture more nuanced indicators.

5. CONCLUSIONS AND DISCUSSION

Following adequate literature, respecting the views of the world's leading scientists and the creator of the Z-score index himself, and results of this research, it can be verified that "The Altman Z-score can be used as an instrument for detecting potential manipulations of the result. During the writing of the paper and conducting the research, there were some minimal limitations that should not cause the change in results, such as the Covid-19 pandemic or availability financial statements. There is considerable potential for the use and enhancement of this index. Court proceedings can be considered in cases where manipulation is transparently evident, such as when audit reports explicitly state that the results were either reduced or increased. In my analysis, I used almost twice as many limited liability companies as stock companies and observed that reports from 2019 were predominant. The companies are distributed throughout the Republic of Serbia, and in this regard, we did not limit ourselves to any specific territory. Also, the activities of these companies vary from food industry to construction, agriculture, processing industry, gas supply, wholesale and retail trade, transport, and storage. As for the gender of the auditor who audited a given company, they are equally included. It is noticeable that a lot of companies engaged one of the big four audit companies (KPMG), and apart from that, there are no more frequent engagements of other audit firms. In order to enhance and lend credibility to future research, expanding the geographical scope of respondents, starting with the Balkans and potentially extending to a continental level, could be beneficial. Additionally, conducting sector-specific analyses and comparing them with others is also feasible. Furthermore, as utilized in the research (Stanišić 2012) it is important to consider certain parameters such as ROE, as there is a proven moderate correlation with firm indebtedness and company capitalization.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Accounting
Original paper

TRANSFORMING ACCOUNTING THROUGH DIGITALIZATION-A NEW ERA FOR THE PROFESSION

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Abstract:

Digitalization is transforming companies more fundamentally than the business world has ever seen. The accounting industry has created a new trend known as accounting engineering, which involves rethinking the profession in way of technological advancement such as digital transformation, artificial intelligence, and the 4th Industrial Revolution (I4.0). While many of these changes have been theoretically integrated into scientific literature, their practical application in business operations is lacking. In this sense, this paper aims to highlight the aforementioned issues through the lens of implementing the achievements of digital transformation and to provide a clearer understanding of accounting engineering and its impact on the profession in the digital age, offering practical insights into the relationship between digital advancements and labor market trends for accounting professionals.

Keywords:

accounting engineering, digital transformation, artificial intelligence, 4th Industrial Revolution (I4.0).

1. INTRODUCTION

Recent technological revolution in data and communication systems enables us to generate and share data much faster than ever before (Pramanik M.I., 2017). In this new era, the influence of digitalization is evident across nearly all areas of social life. Digital technologies are reshaping every facet of modern existence and professions are compelled to adapt to the global landscape. Due to that fact, businesses must explore new models to remain competitive because digitalization is no longer optional for professions, it has become essential.

Like many other fields, the accounting profession is undergoing significant transformation, and it is undeniable that the future language of accounting will be shaped by digitalization and technology. In response to advancements, the profession must evolve by integrating modern technologies, ensuring that it is well-prepared to meet the demands of the future.

Accounting engineering aims to equip the accounting profession with engineering skills, allowing it to evolve in step with technological advancements. It represents the reimagining of the profession in response to innovations like digitalization, artificial intelligence, and the Fourth Industrial Revolution (I4.0). To prepare for the accountancy profession for the future, Accounting Engineering is redesigning the profession within the framework of engineering ability (Tekbas, 2018).

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The rapid advancement of IT technologies is driving their large-scale integration into accounting systems and business information support, a process that can be facilitated through various engineering tools. However, practical implementation of these tools requires a deep adaptation to the characteristics of the existing accounting and economic procedures, allowing preserving and strengthening the analytical and practical possibilities of information files, to combine them with the legal norms and requirements (Belousov A.I., 2017).

Emerging technologies are reshaping the way of working in ways far beyond improvements, such as robotic process automation which has already streamlined many routine accounting tasks, also the influence of advanced technologies like cloud computing and big data which are set to redefine the future accounting. Among all digital innovations, artificial intelligence is expected to have the most profound impact. AI's ability to analyze vast amounts of accounting data and detect patterns can significantly enhance companies decision-making processes and provide stakeholders with valuable tools for conducting more in-depth financial analyses.

Current studies focus on several key areas: the influence of AI on the accounting profession, the existing limitations of AI for handling specific accounting tasks, and how AI-based accounting systems might redefine the role of accountants in the future. As AI becomes more integrated, accountants will shift from traditional task-based roles to more strategic positions, leveraging technology to add greater value to business operations. Despite AI’s promise, there are ongoing discussions about ethical considerations, potential skill gaps, and the readiness of the profession to fully embrace AI-driven systems.

The purpose of this paper is to examine the current impact of modern technologies and digitalization on the finance and accounting sector. Specifically, it aims to address the present state of digital transformation and assess the agility of businesses in adopting modern technologies and tools. Certain conclusions regarding the impact of technological innovations and digitalization were reached based on research conducted between July-August 2024.

2. LITERATURE REVIEW

In recent years, terms such as 'Big Data,' 'Data Analytics,' and 'Artificial Intelligence (AI)' have become prominent buzzwords in the accounting profession, signaling a significant shift in how accounting is practiced. As technology rapidly advances, the skills of accounting professionals have evolved from basic tools such as pencil and paper, typewriters, and calculators to the use of spreadsheets and sophisticated accounting software. Today, data analytics has emerged as a relatively new but increasingly essential skill set, gaining importance across all areas of the profession.

Big Data, in particular, has transformed the accounting landscape by offering unprecedented volumes of information, which, when properly analyzed, can reveal critical insights into business operations. The ability to sift through massive datasets, identify patterns, and forecast trends is now crucial for accounting professionals. This skill goes beyond the traditional use of numbers, positioning accountants as strategic advisors who can translate raw data into actionable business insights.

As businesses seek to remain competitive in an ever-evolving digital economy, accounting professionals who excel in data analytics and can effectively interpret big data will be at the forefront of the twenty-first-century business world. These individuals will not only help organizations make financial decisions but will also contribute to shaping long-term strategies.

In this new paradigm, accountants are no longer confined to retrospective financial reporting but are becoming proactive partners in shaping business outcomes. Those who master the tools and techniques of data analytics will find themselves in high demand, as their ability to translate complex data into compelling strategic narratives becomes an invaluable asset for organizations navigating an increasingly data-driven marketplace. Therefore, accounting professionals can capitalize on numerous opportunities in this rapidly evolving, disruptive, but ultimately advantageous environment by embracing big data, data analytics, and artificial intelligence (AI) to stay ahead of the competition (Bose S., 2022).

Big data analysis holds significant potential for improving decision-making processes, garnering increasing attention from both academics and practitioners alike. Big data (BD) refers to huge datasets and the software tools used to capture, store, manage, and analyze this information. These datasets are generated from various sources, including customer interactions, social media, transactional data, and operational processes, making BD a vital component across all business functions and industries.

The integration of big data into business operations can lead to more informed and strategic decisions, as organizations are equipped to uncover patterns and trends that were previously obscured in smaller datasets. By leveraging advanced analytics, businesses can gain insights into consumer behavior, market dynamics, and operational efficiencies, thereby enhancing their competitive edge.

In summary, the significance of big data analysis in enhancing decision-making processes cannot be overstated, as it transforms the way organizations leverage information to achieve their goals and respond to the dynamic landscape of modern business.

Examples of big data used cases are fraud detection, log analytics, sentiment analysis and social media, energy sector, risk modeling and management (Omolora A.E., 2018). The expeditious and stupendous increasing rate in applied soft computing worldwide has a major contribution toward the total output of big data application to financial crime detection (Omolora A.E., 2018).

Forensic accounting has become a critical area within the accounting profession, encompassing a range of specialized practices that address various financial irregularities and disputes. This field includes fraud examinations, anti-corruption and anti-bribery efforts, business valuation, litigation support, expert witnessing, and cyber security measures. As organizations increasingly face complex financial challenges, the demand for forensic accountants has grown significantly.

The demand for forensic account services is growing as businesses, regulators and investors have continued to raise concerns about fraud, financial irregularities, corruption, and bribery cases (Rezaee Z, 2018). With the increase in the amount of digital data, there is growing need for providing support for digital forensic in big data application domains (Zawoad S., 2015). Data analytics with the use of Big Data has been employed to transform unstructured data into useful, structured, and relevant information for decision-making (Rezaee Z., 2018).

Big Data refers to data sets that are so voluminous and complex that traditional data processing application software is inadequate to deal with them (Minovski Z., 2020). Generally, Big Data is defined by the key characteristic known as “five Vs”: variety, velocity, volume, veracity, and value. These categories have further several types of challenges that need to be considered by the business organizations and managerial staff members of accounting departments while using big data analytics and other data analytical approaches in business organizations. Velocity and value represent important challenges while working on decision-making processes regarding the use of accounting systems for preparing financial reports with advanced accounting (Aziz, 2023).

Variety. Big Data encompasses a diverse range of sources, including web pages, network and process logs, social media posts, emails, documents, and data generated from various sensors.

Volume. In the era of Big Data, organizations are managing enormous quantities of information, often measured in terabytes and petabytes. The sheer volume of data collected can be overwhelming, requiring advanced storage solutions and analytical tools to process and interpret this information effectively.

Velocity. The speed of data refers not only to the speed at which the latest information is generated from various systems but also to the rapid flow of data within those systems.

Veracity. Veracity pertains to the accuracy and reliability of the information being analyzed. It involves considerations of data quality, governance, and metadata management, as well as addressing privacy and legal issues.

Value. Value refers to the ability to turn the data into a value. The availability of big data can reveal previously unknown insights from data and this understanding leads to the value (Zawoad S., 2015).

Appropriate selection and use of quick data analytics and business intelligence tools can enhance the overall probability of taking effective decisions based on the previous information for future business operations. According to the research findings, an important benefit associated with the use of that analytic is improvement in the accuracy and efficiency of financial reporting systems (Aziz, 2023). The probability of human error in financial accounting systems can be reduced by enhancing accuracy in automated accounting systems by using advanced software and accounting programs (Alshaikh, 2022). Information stored in these software and accounting programs can be used in data analysis for future decision-making processes. While working on manual calculations, managers can have errors and challenges to deal with complex data or information sources regarding a scenario. Apart from all this, manual systems of accounting cannot provide information about fraud and manipulation by the accountants under miscellaneous funds or any inappropriate account. However, such a reduction is possible using advanced accounting systems with data analysis techniques and modern technologies for data storing and management. According to the research findings advanced data analytics provide an opportunity to finance professionals and accountants for higher quality services in their business while working on predictions and forecasting of future market trends (Aziz, 2023).

One of the traditional roles of management accountants has been to interpret and elucidate data, enabling them to grasp the big picture and effectively communicate insights to senior management. This responsibility remains just as important today as it has in the past, necessitating that management accountants not only understand data analytics but also communicate their findings clearly. Examples of activities where management accountants can utilize data analytics (depending on the size and scope of the organization, could be inventory management, production planning, error rates, quality assurance, logistics, market segmentation, price optimization, resource management and so on (ACCA Global, 2023).

Forwarding the obtained information invention of modern technologies is also causing transformation in the accounting systems as companies are now relying more on automation as compared to human resources and finance professionals.

Such a situation can have negative consequences for the economic development of a country as it replaces human employment opportunities with automated systems (Aziz, 2023).

Cloud computing is becoming a powerful and valuable tool for companies and has been identified as one of the key technology trends that accountants should stay abreast of over the next decade (Corkern M. S., 2015). Cloud-based Accounting Information System integrates all essential information required for accounting processes into a single platform. This system allows various stakeholders such as client companies, accountants, and auditors to access the system concurrently, enabling them to collaborate on real-time accounting processes transparently.

Cloud computing in the field of accountancy has many benefits:

- Less costs, 24/7 Accessibility to All Accounting Information, Real-Time Information Updating, Security of Financial Information, Scalability, Automatic Data Back-Up and Restoration, Automatic Software Updates (Minovski Z., 2020).

Artificial Intelligence (AI), can be defined as any machine or device which has the human ability to think, learn, solve problems and take decisions (Rane P., 2020). Artificial Intelligence refers to computer programs designed to think and learn, with the primary objective of creating software that can efficiently and effectively solve specific tasks. AI processes inputs into outputs and can adapt necessary methodologies, analyze information, prepare reports, and automate many tedious processes without relying on predefined commands. In the field of accountancy, particularly within Accounting Information Systems, AI is already being utilized and is progressively advancing in automating various functions, such as saving, retrieving, storing, processing, and analyzing financial data. Artificial intelligence is particularly applicable and with automation can replace routine tasks like accounting (bookkeeping), audit, taxation, analysis, and calculation of indicators etc. In the era of artificial intelligence, with the popularization of intelligent accounting software, accounting presents the characteristics of intelligence and automation (Minovski Z., 2020).

Implementation of AI in Accounting and Finance has to the following benefits for the companies:

- Audit and Reduce Fraud
- Streamline data entry and analysis
- Automation of the processes for the monthly, quarterly, or yearly closing procedures
- Inventory and Supply Chain Management
- Payables and Receivables Management
- Expense Management
- Artificial Intelligence Chatbots for Customer Relationship Management
- Value Creation and Addition (Rane P., 2020)

3. METHODOLOGY

The research data was collected through an online survey conducted between July and September 2024, in which questions were asked about digitalization in finance and accounting. A total of twenty-seven representatives, as employees from different business entities, provided complete responses. The research content and graphics are based on these samples.

The survey incorporates a variety of companies from several industry sectors (Production 14.8%, Trade 18.5%, Services 29.6%, Other 37%). Ownership structure shows the share of the private sector 57.7%, public sector 23.1%, 3,8% foreign ownership and rest of 15.4% other types of ownership.

With a share of 37% companies with more than 250 employees make up most of the sample in the survey. For the rest, 18.5% of the participants come from companies with a workforce of between 50 and 250 employees and remaining 22.2% employ less than 50 people.

Of the participators, 66.7% are from Serbia, 22.2% from Germany, 3.7% from Monte Negro, 3.7% from Croatia, and 3.7% from South Africa.

When it comes to the position of respondents in companies, accountants are represented with 25.9%, heads of accounting and controlling with 11.2%, heads of finance 7.4%, economists 11.1 %, sale specialists 3.7%, auditors 3.7%, students 29.6% and tax specialists 7.4%.

Most participants have more than 10 years of work experience 55.6%, 3,7 % between 6-9 years, 3.7 % between 3-5 years, 14.8 % less than 2 years of work experience. Students are represented in volume of 22.2 %. 40.7 % of participants are in age between 18-30, 14.8 % between 31-40. 29.60% between 41-50, 14.08 % between 51-60.

3.1. SYSTEMS AND TECHNOLOGIES

Companies are consistently pushing forward with their efforts to implement fundamental digitalization elements in finance and accounting and considerable progress has, indeed, already been made in this regard. It has been shown in this survey that companies are having intention for technological innovations and digitalization. On the other hand, AI based solutions have yet to fully take hold across the board.

Only 29.6 % of the companies surveyed are using AI learning systems in-house in business today, 14.8 % are using AI from the third parties, while 18.5 % are planning to implement AI in the near future. Still many companies do not use AI at all (18.5%) or have no intention of using it in the near future (18.5%).

The successful digitalization of the processes can make a significant contribution towards finance and accounting being future-fit. It involves various technologies and tools that can be used to increase efficiency and sustainability in optimizing the processes.

According to the survey´s results, only 37% of respondents actively use BI tolls in practice. Among these, 33.33 % rated their knowledge as average, 7.4 % as above average and 7.4 % as highest level of knowledge. The remaining respondents stated that they knew very little or nothing at all about BI tools.

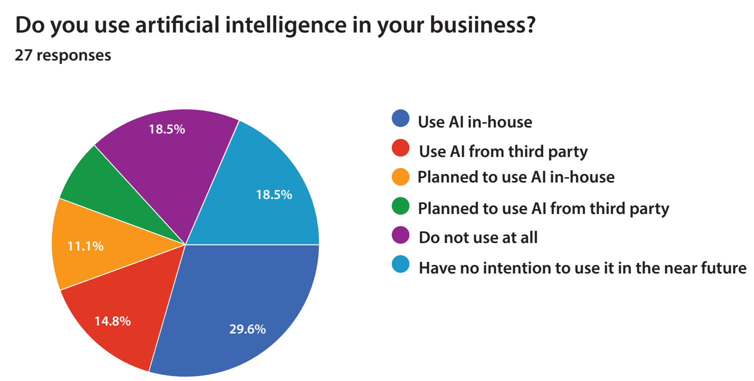
Although the previous result shows that BI tools are not widely used in practice, most respondents still expressed the strong opinion that data analytics and BI tools can automate accounting processes.

Based on the further survey results, it is presented which digitalization projects companies are currently implementing or have already implemented in their finance and accounting department:

- Most of the companies have already implemented automatic readout of invoices and documents for processing (56% of the participants)
- Automation of the payment process has great progress and 59% of the participants already implemented AI support for this process
- Monitoring of posting of data 44%
- Consistently checking of documentation 52% of the participants
- In contrast, automatic readout of the contracts is not yet advanced in their implementation and only 22% of the participants are using AI to automate this process.
- Improvement of the business processes 41% of the participants.
- Predictive analytical statements 44 % of the participants.

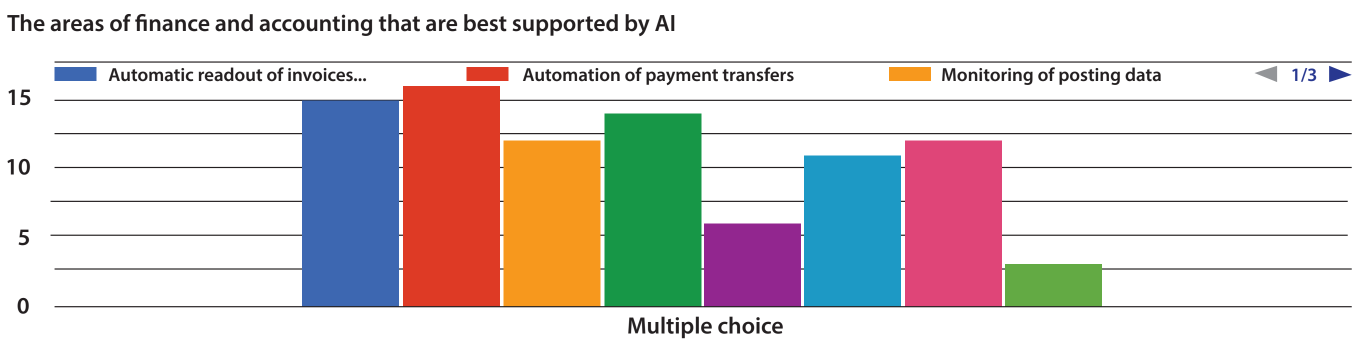
In summary, the greatest progress can be seen in the payment process, automatic readout of invoices and documents for processing and checking documentation, which according to the participant can improve the process in general and reduce different costs. According to the survey´s results 38.5% of the companies are currently reducing the cost of finance and accounting and 30.8 % are planning to reduce the costs in the next two years. Still, a huge part of the participants (34.6%) did not start to take this into account.

Figure 1. AI.



Source: Authors' data.

Figure 2. Digitalization Projects.



Source: Authors' data.

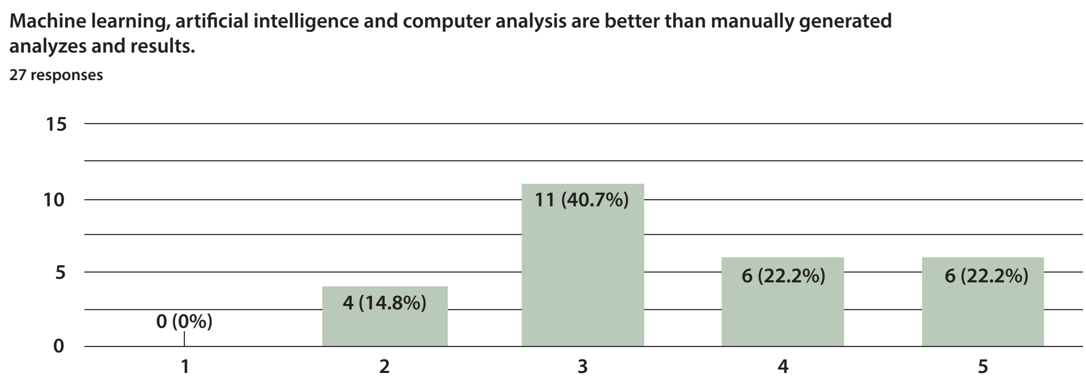
When asked about the strategy of cost saving, only 24% of the companies stated that they are using AI Technology, 24% stated that they are using In-house shared service center, 4% are using outsourcing as a strategy and almost 48% was neutral.

3.2. HOW DOES DIGITALIZATION AFFECT ACCOUNTING?

The effects on costs and time expenditure play a key role when it comes to the question of the aim of digitalization. The results in the next figures show that, for a considerable number of respondents, machine learning, AI and computer analytics are better than manually generated analysis and results.

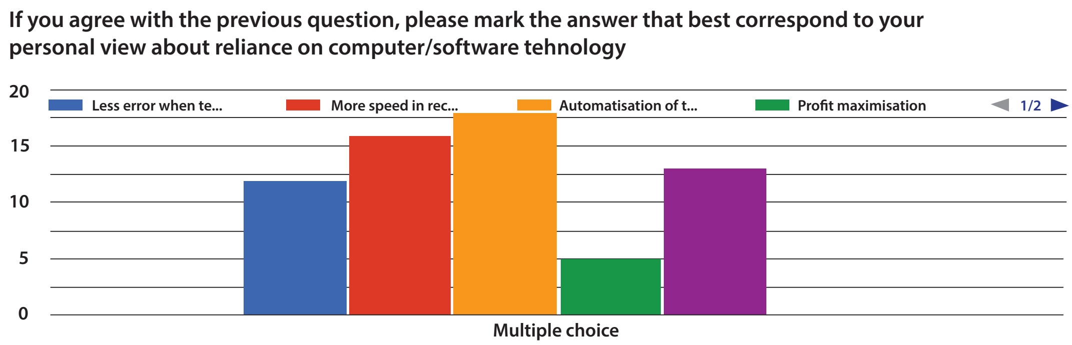
55.6 % of the respondents agreed with this statement, that the application of big data analytics improves the efficiency and effectiveness of finance and accounting processes.

Figure 3. AI in practice.



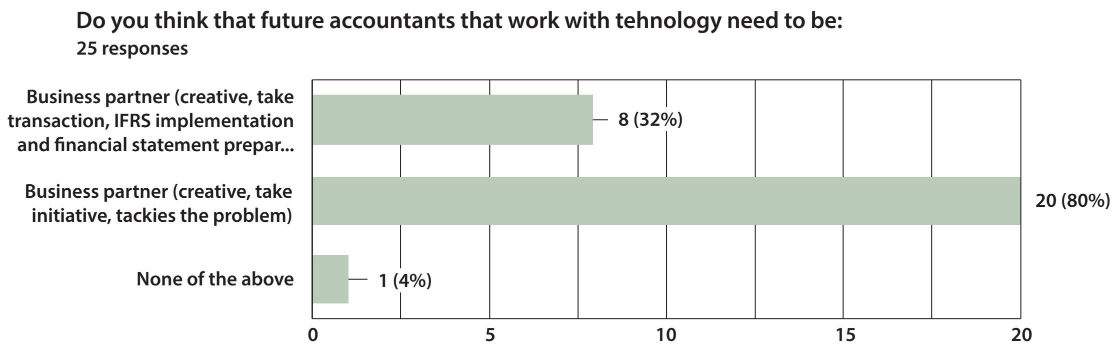
Source: Authors' data.

Figure 4. Digitalization Projects.



Source: Authors' data.

Figure 5. Future Accountants.



Source: Authors' data.

By applying data analytic tools, finance and accounting could receive up-to-date information in financial statements and assertion at any time - most of the respondents stated that they strongly agreed with this.

Digitalization contributes to speeding up the processes- minimizing errors, more speed in recognizing transactions, automatization, cost savings and profit maximation.

Most of the respondents strongly agree that digitalization can replace part of accounting team, while computer software/program is a better solution than engaging the people in recognizing the accounting transactions.

3.3. IMPORTANCE OF DIGITALIZATION IN ACCOUNTING

Digitalization is trending that companies and their departments must deal with now and in the coming years, to remain competitive. It will change the accounting profession. According to participants, future accountants need to see a bigger picture (56 %), need to be keen to take action and able to influence (48%), need to provide insight into the future (48%) and to take initiative proactively (41%). Almost 80% of the participants think that a future accountant needs to take the position of business partner and be creative and tackle the problems.

Not only will accountants need to change, but the CFO role in the future will take a completely different dimension. 80 % of the participants think that the CFO should focus more on adding value to the business and support other managers, than focusing on the transaction processing and reporting only.

4. CONCLUSION

The impact of digitalization on finance and accounting is undeniable, reshaping both industries and professional roles at an unprecedented pace. This study highlights the growing relevance of accounting engineering as a part of digital transformation and implementation of artificial intelligence, big data, and cloud computing into accounting processes. The research findings reveal that while many companies have begun to implement digital solutions, the full potential of AI and other innovations remains untapped in several areas. Digitalization promises enhanced efficiency, cost reduction, and process optimization, as seen in the widespread adoption of automated systems for tasks such as invoice processing and payment automation. However, challenges persist in the full integration of these technologies across all business sectors. The future of accounting will require professionals to evolve, embracing both technical and analytical skills, while companies must continue to adapt to remain competitive. As the digital era progresses, the accounting profession is evolving from its traditional role to becoming strategic business partners, initiating more influence on decision-making and value creation.

This survey offers critical insights into the digitalization of finance and accounting by benchmarking current technology adoption, identifying gaps, and highlighting emerging skill needs. It serves as a valuable reference for organizations to assess their digital transformation progress, informs strategic decisions for finance leaders, and supports the ongoing industry- wide shift toward greater efficiency and competitiveness through digital tools.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Banking
Original paper

UNVEILING FINANCIAL FRAUD: A CASE STUDY OF SMALL BUSINESSES AND THE PAYCHECK PROTECTION PROGRAM

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Abstract:

The aim of this research is to demonstrate contemporary instruments of fraud in the banking industry that small businesses use by using a simple case study of the PayCheck Protection Program. Furthermore, modern lending institutions are having to move from traditional ways of financing and innovate based on globalization, digitalization, and internationalization processes. With the skyrocketing competition, lenders are facing challenges, whereas additional requirements and checks could cause them to lose business if the additional measures are not applied; there is a chance for potential fraud; hence, the lenders are left with a dilemma. Their choice is becoming more complex as there is a rising number of players entering the market, therefore creating substantial competition. Ultimately, there is an opportunity for fraud that can be relatively easily committed, and small businesses are presented as a byproduct of the contemporary economic conditions, impacting the need for even economic and social development.

Keywords:

small-business, lending, fraud, banking, paycheck protection program.

1. INTRODUCTION

In the contemporary business environment, particularly in developed countries, there are limited growth opportunities. Moreover, stable economies have already developed their markets as well as market players and strategies for particular industries. Although, it can be challenging for the developed economy to grow at the same pace as developing economies simply due to the number of opportunities to promote such growth. One such opportunity for all economies, especially developed ones, is the growth of small businesses. Due to their unique structure, small businesses are a limitless opportunity for growth and innovation. Contrarily, big corporations can only grow so much within the country and the industry, and there can only be so many of them in the market at a particular time. However, small businesses can quickly enter the market by taking a small share and growing therein. Taking that into consideration, small businesses in the United States are considered a valid investment opportunity due to their skyrocketing growth and profitability potential. There are numerous players who are interested in working with small businesses and providing them with various sources of funding nowadays. Besides banks, traditional lending institutions, and the government that works on economic development, some of the players in the market are venture capital and private equity firms, as well as investment banks and FinTechs. Throughout the years, there has been a massive interest in funding small businesses, and the market has consequently become more complex. Considering the fact that small businesses now have a plethora of choices to get funding that they need to start and/or further grow their business, and the intense market competition that is strong,

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lenders and investors have to come up with innovative and unique ways to create a competitive advantage for the target clients. Such market conditions where lenders and investors are actually competing against each other in order to win over more clients than has been the case in the past, which causes the market to have different requirements for small businesses to get funding. When the market only consisted of one or two players, institutions such as banks could make their own rules and use all the processes and procedures that they considered prudent lending. Nevertheless, with the increased competition, there is a valid reason for a change, and traditional lenders need to adapt to new market conditions in order to stay relevant to the competition. Initially, banks were the ones that chose the best candidates to be their clients, but nowadays, clients are choosing the best lending institution to be their lender.

2. LITERATURE REVIEW

Banks represent a vital segment of financial markets in the modern economy (Perić & Barjaktarović, 2023). Traditionally, banks were the only option for obtaining financing, and in some countries, they still are. Banking products that include retail and corporate banking (Nóra & Bíró-Szigeti, 2023) face banks with a plethora of private and business clients daily. Moreover, such trust established between banks and their customers is inevitable due to the reputation of bank lenders and players in the financial markets. One of the primary forces driving the modern economy is globalization (Nebozhenko et al., 2023). As a byproduct of globalization, companies will no longer only be limited to the local markets but also include global markets, which would ultimately bring additional profitability, besides other benefits. Although, many of the banks are emerging into different markets and looking for growth opportunities (Tabash et al., 2024). Nevertheless, banks must follow trends of globalization in order to stay relevant in the market, hence offering innovative products to consumers and businesses. While improving the banking products and services that are offered to customers, globalization has also created multiple challenges for the banking industry, including banks having such a superior asset size that they cannot compete in the market. Similarly, local banks and credit unions, in that case, are suffering due to the sheer size of their competitors that operate globally. Also, banks are no longer limited to geographical territory, which allows for rapid growth (Radojević, 2019). Some of the banking products, however, are only applicable in specific markets. Further, the banking industry has experienced major reforms in the business environment in which the business is conducted (Korneev et al., 2023). Traditionally, all bank operations and transactions took place in the physical location. In the contemporary business environment, the process of digitalization that encouraged the transfer of business activities from the physical to the digital environment has gained a skyrocketing importance (Singh et al., 2023). In addition to that, the COVID-19 pandemic has also played a significant role in speeding up the digitalization process for companies that have yet to transition to the online environment (Inascu & Barbu, 2023). Even before the pandemic, the need for digitalization has become apparent, as the digitalization and globalization processes are closely related and interconnected (Van Zeeland & Pierson, 2024). Similar to globalization, the digitalization process has brought a plethora of growth opportunities as well as cost reduction and operational efficiencies (Levy, 2022). for many of the already existing players in the market, but it has also enabled new players to penetrate the market and become direct competitors. As an example, FinTechs are a creation of the digital economy, and the name itself further suggests the immersion of the two, up until now, not connected industries – the financial industry and the technology industry (Garekwe et al., 2024). Finally, the digitalization process provides skyrocketing benefits not only in a time of need but also keeps providing numerous benefits to society and the economy daily (Chauhan et al, 2022). But at the same time, it has also provided base grounds for financial fraud in many different industries, including the banking industry, which has had colossal challenges navigating financial fraud attempts and dealing with their consequences (Mangala & Soni, 2023).

3. US BANKING PRODUCTS – COMMERCIAL AND SBA LENDING

In the United States, there is a plethora of different banking product options. However, the most valuable products for small businesses are commercial and SBA loans. Moreover, they will provide financing for businesses for different types of clients all across the country, no matter if the business is only being started when financing is being obtained, or the business has already been operating and needs additional funds for different purposes. Either way, such lending practices with a focus on various clients within the B2B market have a massive role in economic development and growth since not only does the bank benefit from the additional clients and/or loan facilities but also so are the businesses that are then contributing directly to the economy. Economic development as such is a viable target of all types of lending, not limited to commercial and SBA financing, but also including impact investing and private equities, as well as FinTech lenders and their sources of financing. Albeit, Commercial and SBA Lending are still the most valuable for the bank, and that is not only because of their profitability but also for the above-mentioned greater good that making loan facilities facilitates. On one hand, Commercial Loans are all loans that are not real estate (mortgage) originated, nor are they consumer loans. Furthermore, loans will include those that are fully secured or collateralized and those that are not. Some of the loans will be short-term, and some of them will be long-term, and all loans will require extensive documentation checks to include business and personal financial data. On the other hand, SBA loans represent a unique loan structure that is only present in the United States, where the private-public partnership will allow businesses that otherwise would not qualify for the commercial loan to still get access to the needed capital. SBA (Small Business Administration) is a government agency created in 1953 to protect and advocate for small businesses. Being relatively new, especially compared to traditional banking, which has been around for hundreds of years, small business lending has gained skyrocketing importance for the US economy. The private component of the partnership is found in banks that will source and process applications on the SBA's behalf in return for the SBA's guarantee on the loan processed. After the SBA approves the loan that a lender submitted, they promise to guarantee a major portion of the loan, that is, in all cases, above 50% and, in some cases, up to 90% but never 100%. As a byproduct of such a unique structure and public-private partnership, the credit box is more comprehensive and includes many more businesses that will further be a crucial asset in the contribution towards the greater good (promotion of economic development and prosperity) as well as profitability for both the agency and the bank facilitating the loan facility and doing a loan. SBA loans will also allow for not fully collateralized loans that are not as popular among commercial loans.

4 COVID-19 PANDEMIC AND THE US BANKING INDUSTRY

The start of 2020 was not great for the world since the COVID-19 pandemic had just begun. In early 2020, a pandemic was also declared in the United States (Bailey et al., 2022), followed by the shutdown of many businesses, including banks, therefore adversely affecting their profitability (Peerbhai & Kunjal, 2024). Customers were still able to use ATMs, but the business has been taken online. Traditionally, to open an account or get approved for a line of credit or credit, an individual would typically go to the local branch of the bank of choice to request such services. However, COVID-19 made it impossible to visit the actual location of the bank, forcing the banks to operate in a strictly digital environment. The digitalization process has, nonetheless, started way before the pandemic, but the pandemic itself made it obligatory for the institutions that did not allow digital processing to do so in the shortest timeframe in order not to lose customers and miss out on opportunities. Prior to the pandemic, there were only a certain number of banks that were operating strictly online, with the majority of the banks heavily relying on their geographical presence as their competitive advantage over their solely online competitors. In that sense, the banking industry was able to create additional value for customers so that they would be able to go to the physical location of the bank, aka the branch, and talk to someone in person. Such an advantage over competing industries, such as FinTech, has created a valuable position for banks and has further made it possible for both to operate in their market segments. However, due to the pandemic, banks were forced to switch their business model and become more like their competition – FinTechs. Processes were not digitalized to the full extent, and all operations were done remotely. From the credit application through the approval process and the loan closing, all steps were not remote, even if they previously were not. Again, some of the more advanced banking models and organizations following them have already had such models in place, making it easier for them to adjust to the newly created challenges caused by the pandemic. Applying the FinTech business model, banks faced a new set of challenges not only related to the digitalization process but also developed a greater sense of the issue that has been skyrocketing among the technology competitors, which is financial fraud. Moreover, financial engineering has always been present in the banking industry, and fraud was not an ambiguous term in the industry. Regardless of that, the traditional business model of banks, including the request of hard copies as well as wet signatures and other means of fraud prevention, was keeping the fraud levels under control for the banks. However, going digital created more opportunities for fraud in the banking industry and has caused banks to have to develop a new set of defense mechanisms against fraud that is now not only present in the traditional business environment, but now financial fraud is actually being used as an instrument of the digital economy as well.

4.1. PAYCHECK PROTECTION PROGRAM

During the shutdown, which varied in time by the state, many businesses were forced to change their business model and move the place of business to the online environment (Atkins et al., 2022). Some industries have not had any issues with the transition because they were in either of the following scenarios: already operating in the digital environment, or they were working towards that, again, thanks to the digitalization process. Nonetheless, industries such as restaurants, both limited and full service, have suffered a major loss because they were not able to translate their business model to the digital environment simply due to the nature of the business activities. There was a blatant increase in the demand for food-delivery services, but due to government restrictions, restaurants were not allowed to serve guests but rather only take to-go orders. Such issues were similar for many other industries that were operating by using a business model similar to that of restaurants, including but not limited to other hospitality-oriented businesses such as hotels and manufacturing and retail-oriented businesses. As a response, the US government issued the CARES Act that created the PPP Program (Kickul et al., 2021). PPP program was designed to be the most straightforward loan program that would use government contractors

Figure 1. Number of loans originated versus the number of loans forgiven.

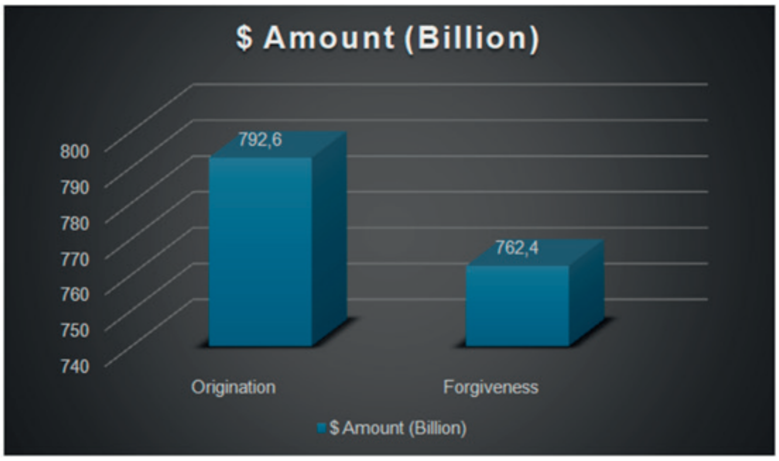
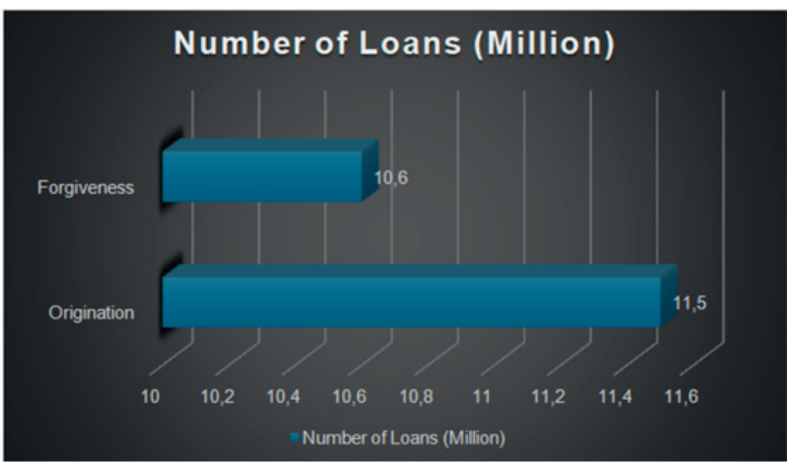


Figure 2. Number of loans originated versus the number of loans forgiven.

Figure 3. Dollar amount of suspected fraud in comparison to the total funds disbursed.



(banks) to source and approve applications on SBA's behalf (Bailey & Sokolowski, 2022), similar to the 7a or 504 programs. The amount to be received was determined by the monthly payroll times two and a half for regular businesses, and the businesses that suffered significant losses during the shutdown that under 72 NACIS code, including restaurants and hotels, qualified for three and half times their monthly payroll for each employee. Cap in terms of the loan amount was $2 million, and applications under $150,000 did not require any documentation, again highlighting the simplicity of the program. Loans that were made in the amount of over $150,000 required the borrower to demonstrate at least a 25% revenue reduction during the pandemic period, as well as to provide financials such as tax returns, financials and bank statements, and payroll statements. Lenders were also encouraged to verify business operations prior to the start of the pandemic, which was collectively marked as February 15th, 2020. Even though the program required SBA's approval (Li & Strahan, 2021), it did not require any collateral, which made it highly unique in the market and the most straightforward. Starting April 3rd of 2020, small businesses and sole proprietors filing under Schedule C were able to apply, followed by the independent contractors and self-employed individuals who were allowed to apply a week later. Since round one was a success, the program was renewed in 2021, starting from January, with fresh funds to be lent in the amount of $284 billion. With the exact requirements and speculations that the program will be renewed for the second round, the 2021 round can also be considered a great success and help small businesses not only to survive the pandemic but also to use the funds to reinvest, pay off any debts and reopen the business after the sanctions have been lifted. PPP loans were initially made to be forgiven if the loan proceeds were used towards eligible expenses, and they were never meant to be paid back or partially forgiven (Fairlie & Fossen, 2022).

5. DISCUSSION

One would notice the correlation between the simplicity of the financing and the level of fraud. Figures 1 and 2 suggest that not all the loans originated are forgiven - $30.2 billion was suggested as the outstanding amount. The primary reason for the loans not being forgiven is the application of the elements of financial fraud when applying for the loan. Consequently, Figure 3 illustrates that $64 billion is suspected of fraud, which represents 8% of the total amount. Even though 8% does not seem to be a high percentage, the dollar amount sounds completely different. Based only on the information currently available and only taking into consideration the loans that were reviewed, these numbers could be higher in the future as more investigations and audits are performed. Lastly, even though the program has provided numerous benefits to small businesses primarily due to the simplicity of the program itself, it has also allowed them a plethora of opportunities for fraud, as suggested in the above figures.

6. CONCLUSION

Even though the fraud level of the PPP program is only 8.8%, $64 billion is not an insignificant amount of money. Taking into consideration that the Office of Inspector General (dealing with financial fraud) cannot have the exact information on the fraud attempt numbers but rather can only report the fraud that was already discovered leaves room for the percentage growth in the suspected fraud. SBA is continuously reviewing all origination and forgiveness applications to try to identify any more fraudulent applications. Anyhow, the simplicity of the applications, scarcity of financial requirements, and lack of collateral for the loans have contributed to the fraud rate. On one hand, the government, as well as private institutions, such as banks, want to help small businesses grow and thrive, but on the other hand, with all that is currently offered to small businesses, there is a high chance of forging documents/applications in order to show numbers that are not realistic or even to create an entire set of false information to gain financial benefits, on the other hand. Lack of measures to check the information provided by small business applicants results in fraud, as the Paycheck Protection Program illustrated in mid-2020 and early 2021. Banks are also in a competitive market where they are no longer the only players in the lending business; therefore, private equities, investment funds as well as FinTechs are all targeting the same market segment, so the timing, as well as the complexity of the application process in addition to the requirements might result in one institution winning over the borrower and closing a loan. Although, banks are forced to have competitive incentives such as not requiring additional financial information that the competitors might not require or doing an unsecured loan where the risk to the bank is greater. Meanwhile, due to the complexity of the process and the timing issues, some of the small business applicants will use the opportunity to provide incomplete or false data that the lending institution might not be able to catch. As a byproduct, simple loan applications are still in the works and will need further development to ensure compliance and protect against fraud. The government is continuously working on reviewing past programs and how they affected the economy since, on one side, a plethora of small businesses were helped during the crisis period, by providing funds from the Paycheck Protection

Program, but on the other side there is ultimately at least $64 billion in fraudulently disbursed funds that could have been used where they were needed. Ultimately, as much as the opportunity to invest in small businesses in the US is significant not only for the contemporary economy but also for society, there is also a colossal threat of fraud and misuse of the funds.

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SERBIAN BANKING SECTOR: CURRENT TRENDS AND PERSPECTIVES

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Abstract:

The aim of this paper is to analyze the banking sector of the Republic of Serbia from 2019 to 2023. In recent years, there have been significant changes in this sector. Therefore, the paper will primarily focus on mergers and acquisitions in the banking industry over the past five years. Given the decrease in the number of banks operating in the Republic of Serbia, the paper will utilize key concentration indicators, such as concentration ratios and the Herfindahl-Hirschman Index, to provide a comprehensive analysis of the sector. Additionally, the basic profitability indicators, ROA and ROE, will also be examined.

Keywords:

banking sector, profitability, concentration.

1. INTRODUCTION

The Serbian banking sector has undergone significant changes in recent years, influenced by global economic trends, regulatory developments, and the evolving needs of customers. There has been a wave of consolidation in the Serbian banking sector, with larger banks acquiring smaller or less profitable ones. This trend aims to increase market efficiency and reduce operational costs. A significant portion of Serbian banks is owned by foreign financial institutions. This foreign presence has brought more stability, modern banking practices, and capital into the sector. The adoption of digital banking solutions has accelerated, driven by customer demand for convenient and accessible financial services. Banks are investing heavily in digital platforms, mobile apps, and online services. Also, banks are collaborating with fintech companies to offer innovative products and services like digital wallets, online lending, and automated financial advice. Serbia is aligning its banking regulations with EU directives as part of its EU accession process. This includes stricter capital requirements, risk management practices, and consumer protection standards. The National Bank of Serbia (NBS) has implemented measures to ensure financial stability, including maintaining adequate liquidity and capital adequacy ratios among banks. Banks in Serbia are increasingly incorporating environmental, social, and governance (ESG) criteria into their operations. The digital transformation will continue to be a central focus, with banks investing in advanced technologies like artificial intelligence, blockchain, and cybersecurity to enhance customer experiences and operational efficiency and to further personalize banking services.

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The trend toward consolidation is expected to persist, leading to a more concentrated market. This consolidation could result in a stronger, more resilient banking sector that can compete better regionally.

2. LITERATURE REVIEW

The Serbian banking sector has undergone significant transformation over the past five years, influenced by global economic shifts, regulatory changes, and technological advancements. Several studies highlight the consolidation process within the Serbian banking sector as a key trend in recent years. Stojanović and Stojanović (2019) examine the wave of mergers and acquisitions that has reshaped the sector. They argue that the consolidation has resulted in a more concentrated banking market, with a few dominant players controlling the majority of assets. This trend has been driven by a combination of factors, including the need for efficiency, compliance with stricter regulatory requirements, and the aim of achieving economies of scale. Foreign ownership remains a significant feature of the Serbian banking sector.

Digitalization has been identified as one of the most transformative trends in the Serbian banking sector over the past five years. Petrović et al. (2021) discuss the rapid adoption of digital banking services, including online and mobile banking, in response to changing consumer preferences and the impact of the COVID-19 pandemic. Their study shows a marked increase in investments in digital infrastructure, with banks prioritizing customer-centric digital solutions to improve the user experience and operational efficiency. Bulatović and Popović (2020) emphasize the role of fintech in driving digital innovation in Serbian banking. They note that banks have increasingly partnered with fintech companies to offer innovative services such as digital wallets, contactless payments, and automated financial advice. The collaboration between traditional banks and fintech firms is seen as a strategy to stay competitive in a rapidly evolving financial landscape.

Ljumović and Dukić (2018) discuss the impact of regulatory changes on the banking sector, noting that the implementation of stricter capital requirements and enhanced risk management practices has contributed to greater financial stability. These changes have been driven by the EU accession process and the need to mitigate systemic risks. The National Bank of Serbia's (NBS) policies have focused on ensuring the sector's stability. The NBS (2020) has introduced measures to maintain liquidity and capital adequacy ratios, making the banking sector more resilient to external shocks. Studies indicate that these measures have improved the overall soundness of the sector, reducing the risks associated with non-performing loans (NPLs) and enhancing credit growth.

Recent literature shows a growing focus on sustainable and green banking in Serbia. Pavlović and Jovanović (2021) explore how banks are increasingly incorporating environmental, social, and governance (ESG) criteria into their operations. They argue that this shift is a part of a broader global trend toward responsible banking and is driven by both regulatory pressure and changing customer expectations. The NBS (2022) has encouraged banks to adopt sustainable finance practices, promoting green loans and investments in environmentally friendly projects. This transition toward sustainability is still in its early stages, but studies suggest it will become a more significant aspect of banking strategies in the future.

Janković and Milošević (2020) discuss the need for further digital transformation, suggesting that advanced technologies like artificial intelligence (AI) and blockchain could enhance customer experience and operational efficiency. However, they caution that banks must also invest in cybersecurity to protect against digital threats. The literature also points to a potential entry of new players, such as digital-only banks and non-traditional financial institutions, which could disrupt the market and increase competition. In this context, traditional banks are encouraged to innovate and adapt to changing market dynamics.

Kaličanin and Terzić (2023) have found that, between 2017 and 2021, Serbia's banking sector is slightly less concentrated than those of Croatia and Montenegro, largely due to recent mergers and acquisitions that have reduced the number of banks in the region.

3. RESULTS AND DISCUSSION

At the beginning of the analysis the banking sector of the Republic of Serbia, it is important to note the changes that occurred in the observed period between 2019 and 2023 and which include mergers and acquisitions of certain banks as well as the obtaining and revocation of the license to operate by the National Bank of Serbia. The mentioned changes directly affect the number of market participants, which in turn has an impact on the market structure itself, which characterizes the banking sector in the observed years. Primarily, with the decrease in the number of banks operating in the Republic of Serbia, the level of market concentration increases and vice versa. The information is taken from reports for the banking sector published by the National Bank of Serbia (NBS) and the annual special issues of the journal Banking published by the Association of Serbian Banks (ASB).

In 2019, OTP bank Serbia a.d. Novi Sad at the end of April 2019 completed the merger process of Vojvođanska bank a.d. Novi Sad and continued to operate as Vojvođanska bank a.d. Novi Sad. After that, OTP bank Serbia a.d. Novi Sad in 2019 bought Societe

Generale bank Serbia a.d. Belgrade and continued to operate as OTP bank Serbia a.d. Novi Sad, which reduced the number to 26 banks.

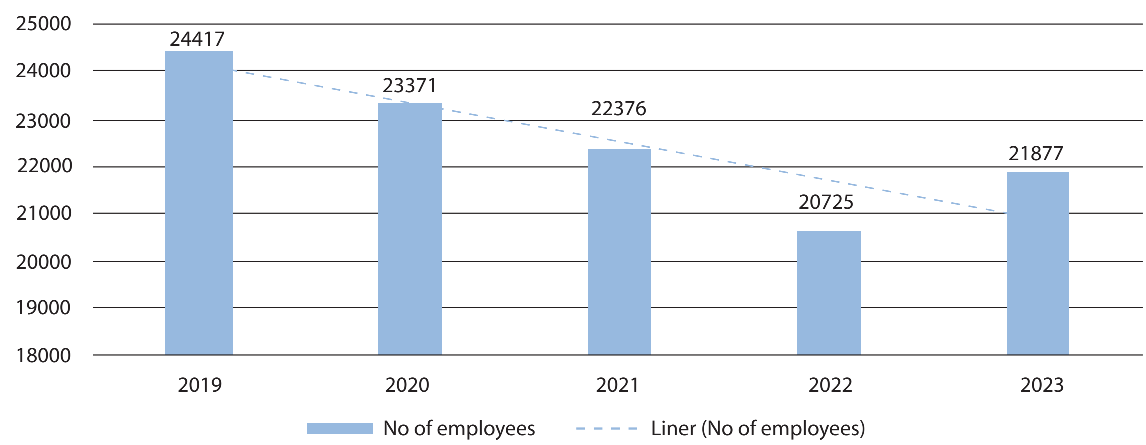
In 2021 there were two acquisitions and one merger. First, Eurobank a.d. Belgrade has acquired Direktna bank a.d. Kragujevac and mts bank a.d. Belgrade was taken over by Bank Poštanska štedionica a.d. Belgrade. Finally, Vojvođanska bank a.d. Novi Sad was merged to OTP bank Serbia a.d. Novi Sad so, at the end of the year 23 banks were left operating.

In 2022 NLB Bank a.d. Belgrade and Komercijalna bank a.d. Belgrade merged and continued to operate under the name NLB Komercijalna bank a.d. Belgrade. Sberbank Serbia a.d. Belgrade was taken over from AIK bank a.d. Belgrade. At the end, Credit Agricole bank Serbia a.d. Novi Sad was taken over from Raiffeisen Bank a.d. Belgrade - at the end of the year, a total of 20 banks were operating and the same number was maintained in the following year. The reduced number of banks also affected the number of employees in the banking sector which is shown in the Graph 1.

As it can be seen in the Graph 1 the number of employees has dropped in the observed period. On a yearly basis, there were approximately a thousand employees less in the banking sector. In 2023, there were about twenty-one thousand employees which is about 1000 more compared to 2022. Most of the banks employed more people in 2022 compared to 2022, i.e. only six out of twenty banks had less employees: Erste bank, Eurobank Direktna bank, Yettel bank, 3bank, Unicredit bank and NLB Komercijalna bank.

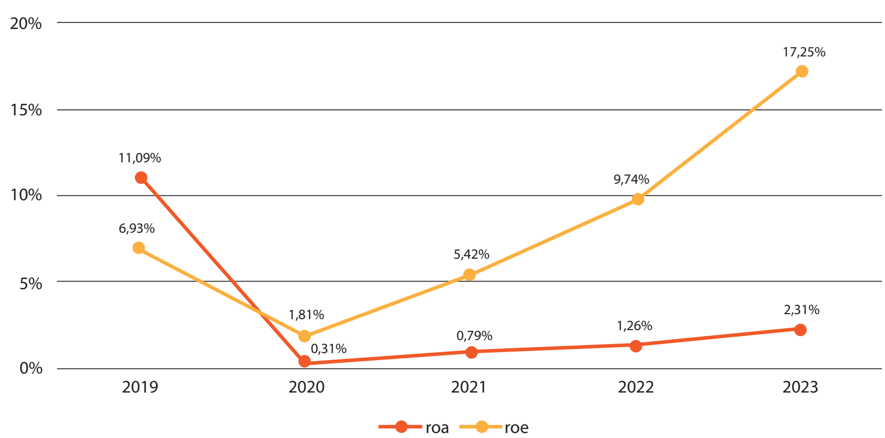
For the first time, in 2023 the banking sector of the Republic of Serbia had a profit of more than one billion euros. This result was achieved despite the limitation of interest rates on housing loans, which was adopted by the NBS in September. Graph 2 shows return on assets and return on equity for the banking sector 2019-2023. For the observed period return on assets reached its minimum value in 2020 – 0,31% and the maximum was reached in 2019 – 11,09%. Considering return on equity, its minimal value was also in 2020 – 1,81% and the maximum value was in 2023 – 17,25%.

Graph 1. Number of employees in the banking sector, 2019-2023.



Source: Authors' using NBS and ASB.

Graph 2. ROA and ROE, 2019-2023.



Source: Authors' using NBS and ASB.

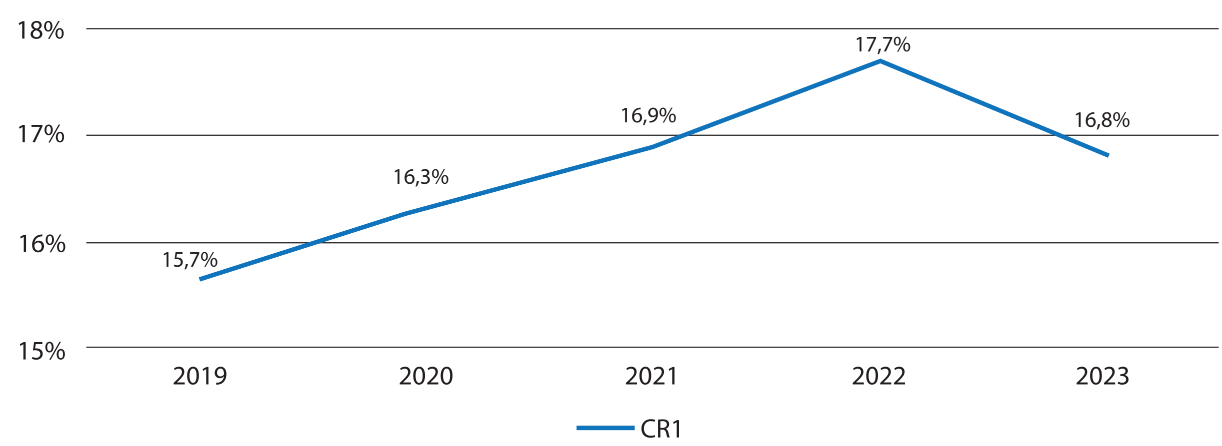
After a series of years with low interest rates and in some years negative Euribor, inflation from mid-2021 forced central banks to raise interest rates. This explains higher profitability in the recent years.

As an indicator that is derived from the total market shares of the biggest companies on the market, the index of shares of n companies, also known as the concentration ratio, is very simple to comprehend (Waldman and Jensen, 2001). It is often used in practice because of its easy application and simplicity and CR1 is primarily calculated to see the market share of market leader - in the case of monopolies, the value of the index is 100 (Grubišić, Kamenković & Kaličanin, 2021). Higher CR reflects a more concentrated market (Stavárek & Řepková, 2011).

If we consider the bank with the highest market share on the market that would be Banca Intesa. But, recently as long as OTP bank expanded their business taking over Vojvođanska bank and Societe Generale and if we consider loans and receivables from clients from the balance sheet, OTP bank has become the leader on the market (Banca Intesa still has the highest value of assets) from 2021. Graph 3 shows the concentration ratio of the leading bank based on loans and receivables from clients for the period between 2019 and 2023. The average value of the ratio for the observed period is 16.7% and the highest market share OTP bank had in 2021 – 17.7%.

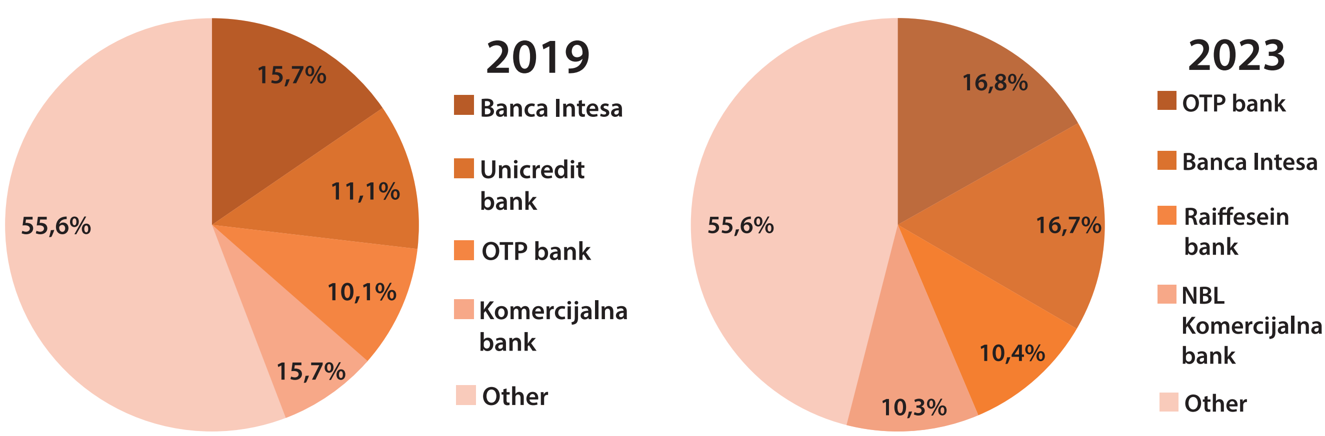
Graph 4 shows the concentration ratio for the four leading banks in the market for the total loans and the other market share up to 100%. As it can be seen in 2019 Banca Intesa was the leader and had 15,7% followed by Unicredit bank – 11.1%, OTP bank – 10.1% and Komercijalna bank – 7.6%. As long as there were 16 banks that operated in 2019 the other 22 banks shared about 56% of the loan market. In 2023 the leader was OTP bank with 16.8% market share followed by Banca Intesa 16.7%, Raiffesein bank – 10.4% and NLB Komercijalna bank 10.3%. Considering decline in the number of the banks that operated, in 2023 the other refers to the number of sixteen banks, i.e. the other sixteen banks in the market shared about 46% of the loan market in the Republic of Serbia.

Graph 3. CR1 for total loans, 2019-2023.



Source: Authors' using NBS and ASB.

Graph 4. CR1 for total loans, 2019-2023.



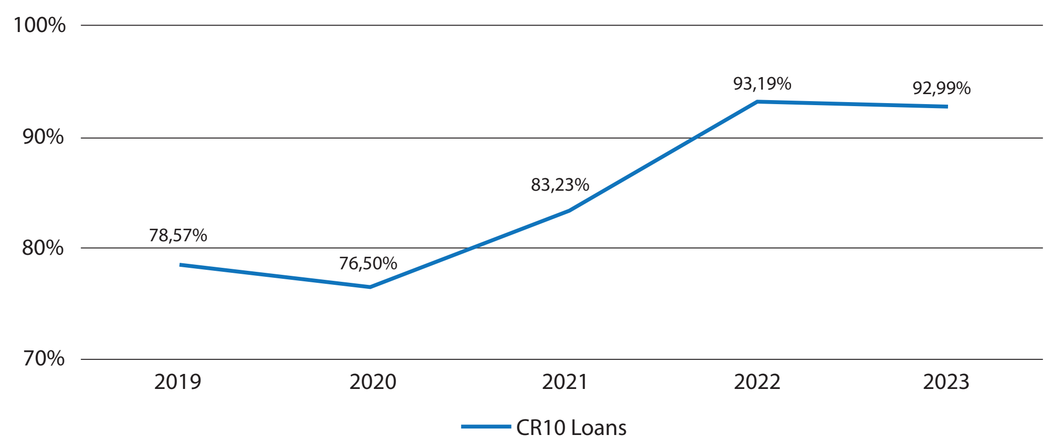
Source: Authors' using NBS and ASB.

As far as the results are concerned, American and European standards differ. The acceptable value for the CR4 is 25 percent of total industry, but it can go up to 30 percent in accordance with European regulations. As per the widely used Keynesian divide in the United States, markets classified as unconcentrated have ratio values less than 25 percent, markets classified as moderately concentrated have values between 25 and 50 percent, and markets classified as highly concentrated have values greater than 50 percent (Đuranović & Filipović, 2021).

Graph 5 shows the cumulative value of the market share of the first ten banks with the highest market share in the banking sector for the observed period. As it can be seen on the graph this ratio has had an upward trend since 2020. Its minimal value was 76.50% in 2020 so it can be concluded that sixteen other banks shared about 24% of total loans. In 2022 and 2023 this ratio was above 90%, so the other ten banks shared less than ten percent of the loan market. It can be concluded that the banks with high market share additionally increased their market share and the group of the banks with small market share decreased its market share.

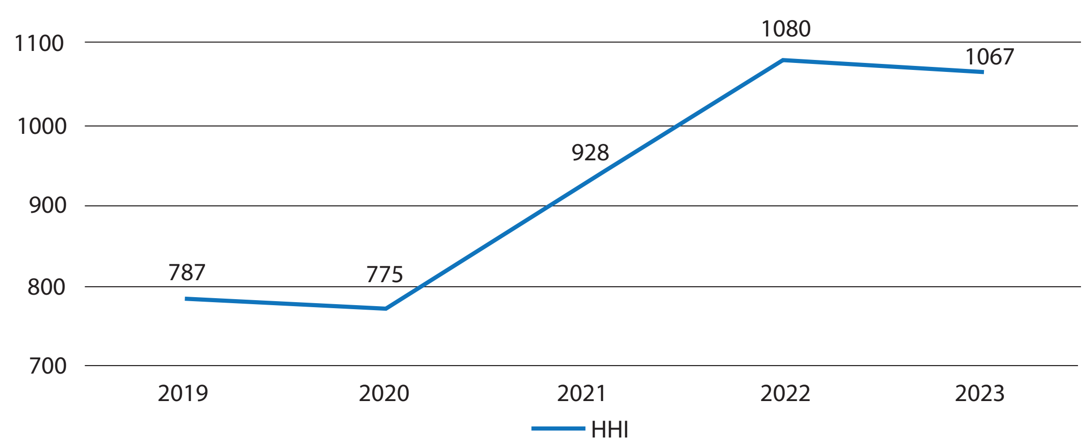
As a consequence of the mergers and acquisitions and downward trend of the number of the banks, the level of the market concentration in the banking sector in the Republic of Serbia has risen. Graph 6 shows the Herfindahl-Hirschman index for the loans and receivables from clients from the balance sheet in the observed period 2019-2023. The banking sector of the Republic of Serbia was characterized by a non-concentrated, i.e. low-concentrated offer - when the HHI value is <1000. The significant growth trend of HHI since 2020 is very noticeable and if we look at the value of the index measured by the total amount of loans to clients, which in the last two years is 1080 and 1067, respectively, it can be concluded that the credit banking market is characterized by a moderately concentrated offer.

Graph 5. CR10 for total loans, 2019-2023.



Source: Authors' using NBS and ASB.

Graph 6. Herfindahl-Hirschman index for total loans, 2019-2023.



Source: Authors' using NBS and ASB.

4. CONCLUSION

As demonstrated by the analysis, significant changes have occurred in the banking sector of the Republic of Serbia. Notably, the number of employees has been declining over the past decade; however, for the first time in 2023, the number of employees have increased compared to the previous year. Additionally, the banking sector's profitability in 2023, which surpassed 1 billion euros, has been a point of interest for experts and researchers. The analysis of profitability ratios showed a notably high ROE of 17.25% in 2023. The reduction in the number of banks, mainly due to mergers and acquisitions, has affected market shares and led to increased market concentration. For the first time, the Herfindahl-Hirschman Index (HHI) exceeded 1,000, indicating a moderately concentrated loan market.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Banking
Original paper

SOCIAL NETWORKS IN ENHANCING THE BANKING SECTOR IN SERBIA

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Abstract:

Due to rapid IT technology development, many people and enterprises are now active users of social networks. Traditional banking communication channels have become insufficient to meet the demands of modern business conditions. To respond to the evolving preferences of both existing and potential clients, in the conditions of intense competition, banks have had to implement digital technologies and reorganize their approaches to conducting business, connecting, and communicating with clients. Digital changes have given clients a distinctive experience and strengthened the banks' position in the financial market. Today, banks are increasingly present on social networks across the world, including Serbia. The presence of banks in Serbia on social networks was analysed in the paper using content analysis and the comparative method. The research purpose is to identify trends in the use of social networks for bank promotional strategies and to give recommendations for their improvement.

Keywords:

social networks, banks, financial services, digital marketing, digital communication channels.

1. INTRODUCTION

The XXI century has brought numerous challenges to the banking sector. Globalization of the financial market, rapid and frequent changes, and increasingly intense competition require continuous and rapid innovations in IT technology, process technology, and sustainable business practices (Marković Blagojević et al., 2024). The ability of bank management to keep up with these innovations and quickly adapt to them has become crucial for the survival and development of modern banks. The significance of digitalization reached its peak during the COVID-19 pandemic when the physical presence of clients in banks became impossible.

In dynamic and highly competitive business conditions, generating and sustaining competitive advantage requires some marketing strategies of banks, which include social media for bank promotion activities and communication with clients to create recognizable experiences. Social media and social networks are used frequently due to their significance for modern banking practice. Social media are present in banking through different models. They can be used as a marketing tool, as a communication channel, as a channel for feedback and reactions, and for transactional social banking (Parusheva, 2017).

Social networks represent "a special interpretation of virtual communities established among people with similar lifestyles, interests and experiences" (Đukić, 2011). Communication content on these networks is determined by the consumers (clients) and adjusted to their needs. They share information and experiences on social networks and use them for communication development and taking advantage of new technologies that enable simple and fast exchange of messages between

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participants. The users of social networks are not only people but also business subjects (Đukić, 2011). According to Jorge Gonzales, people spend 13-16 minutes every hour on social networks, and 77% companies of Fortune 500 have an active Twitter account, 70% have a Facebook account, and 69% have a YouTube account (Milić, 2020).

The use of social networks (Facebook, Instagram, Twitter (now X Network), LinkedIn, YouTube), as communication channels, has an immense potential for the improvement of the operations of the banks, especially their promotional activities (Domazet et al., 2019). Through these networks, it is possible to communicate with clients, build deep relationships, create brand loyalty, and establish long-term cooperation, thus improving Customer Relationship Marketing (Jovićević & Žugić, 2018; Domazet et al., 2019). Furthermore, social networks enable greater visibility, better promotion of products and services, and better positioning concerning competitors. They are a source of information used for promotion and receiving feedback from clients (Becić et al., 2018). Adequate use of social networks stimulates customer reactions and sales of banking products and services and positively affects profitability.

The significance of using social networks in banking is the result of the advantages that marketing has on these networks. The first advantage is the ability to significantly reduce marketing costs compared to the traditional marketing campaign since most social network tools are available free of charge, even when used for business purposes. Second, this form of marketing communication creates a new form of social interaction and intensifies them. Furthermore, social networks provide better access to information and support increased user control. Social networks also make it possible for the audience and clients to be targeted based on their and friends' interests. Finally, they provide customer service (Milić, 2020).

Despite all the mentioned advantages of marketing on social networks observed according to the number of followers on these networks, banks lag in building social ecosystems compared to companies that do not belong to the financial sector (Sakal & Matković, 2016). In some countries, individuals and business entities are not equally present on social networks. This paper analyses the presence of commercial banks in Serbia on social networks and how they use them, intending to define their contribution to promoting baking products and services and giving recommendations for improving the promotion strategies.

The remaining part of this paper is divided into several parts. The first part of the paper presents an overview of relevant research on social networks in banking, as well as the most important social networks in this sector. After that, the methodology used to analyse the representation of social networks in the banks in Serbia is described. The research results, along with a discussion of them, follow. In the final part of the paper, the conclusions, recommendations, and highlighted limitations of this research are summarized.

2. LITERATURE REVIEW

The trend of increasing use of social networks in banking is becoming more pronounced. Domazet et al. (2019) in the research they conducted in 2019 revealed that bank managers have a positive attitude towards using social networks. They believe that social networks have a significant impact on the perception of the quality of banking services and a great potential for improving the promotion of banking products and services. They also point out that social networks play a key role in strengthening the bank's market position.

As significant social networks for bank promotion in Serbia stand out Facebook, Instagram, Twitter/ X network, LinkedIn (Domazet et al., 2019; Anđelić & Jakica, 2023; Zelenović et al., 2018) and YouTube (Zelenović et al., 2018).

Facebook is one of the most influential social networks at the global level and at the level of the Republic of Serbia which allows its users to communicate with each other, share photos, and personal information, comment on a topic, or socialize (Milić, 2020). When users leave a comment or share content on this network it spreads throughout their entire network of contacts. Thus, Facebook represents an important marketing channel for publishing content through new actions and interesting things, then to track the brand, and to obtain feedback from clients (Domazet et al., 2019). Facebook is also the most prominent social network in banking in Serbia (Milić, 2020). The role of this network is not to directly participate in sales but to inform customers (Domazet et al., 2019).

Instagram is a social network that achieves many times greater engagement of the target group (followers) on posted content (posts) compared to Facebook (Domazet et al., 2019). It allows users to share photos and edit them by using filters. Having this in mind, it is important to say that Instagram should be the choice network when creating marketing for brands with strong visual identity (Milić, 2020). The advantage is that content can be easily shared on Facebook, so a comprehensive marketing presence on the Internet is achieved. For the successful use of this network, it is necessary to have continuity in the publication of content and daily interaction with followers (Domazet et al., 2019).

Twitter is a social network known for sending micro messages and reading those sent by other users. It is the most popular in the US. On this network, unlike others, one-sided relationships are possible, while communication is very simple (Domazet et al., 2019). To maintain the interest of the users it is necessary to create profiles with interesting content and ideas and to invest a lot of time and effort in marketing on this network. It allows companies and organizations to connect with customers quickly, so it can be used as a research, marketing, and customer service tool. Through this network, banks strive to interest existing and potential clients in a faster and easier way of communication, to encourage them to take action to come to the branch of the bank, or to open an account through the digital application. Also, this network can be used to build and improve relations with clients (Milić, 2020).

LinkedIn represents the largest professional social network, which is mostly used to build networks, improve credibility, and initiate employment (Milić, 2020). On this network business people exchange various content, individuals present their business biographies and companies present their digital profiles through the profiles they set up (Domazet et al., 2019).

YouTube is a social network that enables cheap broadcasting of promotional videos that can be watched by many users at the same time (Zelenović et al., 2018, p. 60). Banks, for whom these characteristics of social networks are important, can use the official YouTube channel to post promotional videos and thus reach those clients who like these contents.

The application of TikTok in banking can be significant, particularly in the context of digital marketing and communication with younger generations. Banks primarily use TikTok to educate users about financial products and services, as well as to promote their brand creatively and interactively. TikTok allows banks to track trends and adapt their marketing campaigns in real time, contributing to better connectivity with their target audience (Obradović et al., 2023).

Viber is becoming increasingly popular in banking operations, especially in the context of customer support and communication with clients. Banks utilize Viber to provide information about products and services, as well as to resolve customer inquiries in real time. One example is Raiffeisen Bank, which employs a Chabot named Rea, integrated into the Viber platform, to offer users quick and efficient support 24/7 (Buha & Bjegović, 2023). Additionally, Addiko Bank in Croatia has made strides in digitalization by launching a digital product that allows payments through the Viber application (Kovačić, 2020). Research indicates that such digital solutions can significantly enhance customer experience and increase operational efficiency.

3. DATA AND METHODOLOGY

For the research conducted by the author, secondary data was collected from the websites of banks operating within the territory of the Republic of Serbia. The data was analysed using several research methods: desktop research, content analysis, comparative method, as well as analytical and synthetic methods. Desktop research allowed for the collection of information regarding the presence of banks on various social networks, while the content analysis method was employed to assess the strategies and activities of the banks on these platforms. The comparative analysis enabled the authors to compare the results with those from a previous period (the year 2017), thereby testing the hypotheses:

H1: Banks in Serbia use social networks as part of their marketing strategies.

H2: The use of social networks in the promotional activities of banks in Serbia has been increasing over time.

Through the application of the analytical and synthetic methods, the obtained data was consolidated and interpreted to conclude current trends and strategies in the use of digital platforms in the banking sector of the Republic of Serbia.

4. RESULTS AND DISCUSSION

As can be concluded from the discussion presented so far, in the modern business environment, social media plays a crucial role in connecting banking organizations with their customers. Banks in Serbia, of which there are currently twenty operating (NBS, 2024), have recognized the potential of social media as a tool for enhancing customer experience, building brand awareness, and strengthening client relationships. Although traditional banking has been primarily focused on physical branches and direct customer interaction, the ongoing digital transformation—accelerated by the pandemic—has significantly changed how banks communicate and provide their services.

The use of social media in the Serbian banking sector varies depending on the strategy of each banking institution and its business policy. Larger banks, operating in broader markets, tend to have a stronger presence on platforms such as Facebook, Instagram, LinkedIn, and YouTube, where they can directly engage with various audience segments, ranging from individual consumers to businesses. These platforms enable banks to not only promote their products and services but also to engage in real-time responses to customer inquiries, contributing to greater transparency and customer satisfaction.

On the other hand, smaller banks in Serbia, while maintaining a website as an essential business identity, tend to use a more limited number of networks, primarily focusing on fundamental platforms such as Facebook and LinkedIn. Nevertheless, even with a modest social media strategy, these banks recognize the importance of these channels for advertising, disseminating information, and maintaining competitiveness in the digital age.

Analysing the presence on social media (Table 1):

- All banks have active websites, and most of them also use social networks. Facebook and LinkedIn are the most represented platforms, on which almost every bank is present.
- Instagram and YouTube are predictably popular, while TikTok and Viber have a more limited presence, likely due to the specific demographics of their user bases.

Banks such as Bank of China Serbia, Mirabank, and SRPSKA BANKA show a limited presence on social media, having only active websites, which is likely a result of their focus on a more niche and specific business model.

Table 1. Overview of the Presence of Banks in Serbia on Social Media.

	Bank in Serbia	Site	Facebook	Instagram	Twitter	YouTube	TikTok	LinkedIn	Viber	Used social networks
1	Addiko Bank	Yes	Yes	Yes		Yes		Yes	Yes	5
2	AIK BANKA	Yes	Yes	Yes		Yes		Yes		4
3	ALTA banka	Yes	Yes	Yes		Yes		Yes		4
4	Adriatic Bank	Yes	Yes	Yes				Yes		3
5	API Bank	Yes	Yes	Yes				Yes		3
6	Banca Intesa	Yes	Yes	Yes	Yes	Yes		Yes		5
7	Banka Poštanska štedionica	Yes	Yes	Yes	Yes	Yes		Yes		5
8	Bank of China Srbija	Yes								0
9	Erste Bank	Yes	Yes	Yes	Yes	Yes	Yes	Yes		6
10	Eurobank Direktna	Yes	Yes		Yes	Yes				3
11	HALKBANK	Yes	Yes	Yes		Yes		Yes		4
12	NLB Komercijalna banka	Yes	Yes	Yes		Yes		Yes		4
13	Mirabank	Yes								0
14	3 BANKA	Yes	Yes	Yes		Yes		Yes		4
15	OTP banka Srbija	Yes	Yes	Yes		Yes	Yes	Yes		5
16	ProCredit Bank	Yes	Yes	Yes		Yes		Yes	Yes	5
17	Raiffeisen banka	Yes	Yes	Yes		Yes		Yes		4
18	SRPSKA BANKA	Yes								0
19	UniCredit Bank Srbija	Yes			Yes	Yes		Yes	Yes	4
20	Yettel Bank	Yes	Yes	Yes	Yes	Yes		Yes		5
		20	16	15	6	15	2	16	3	
		100%	80%	75%	30%	75%	10%	80%	15%	

Source: Authors' research; Websites and/or social networks of banks in Serbia.

Trends and Implications:

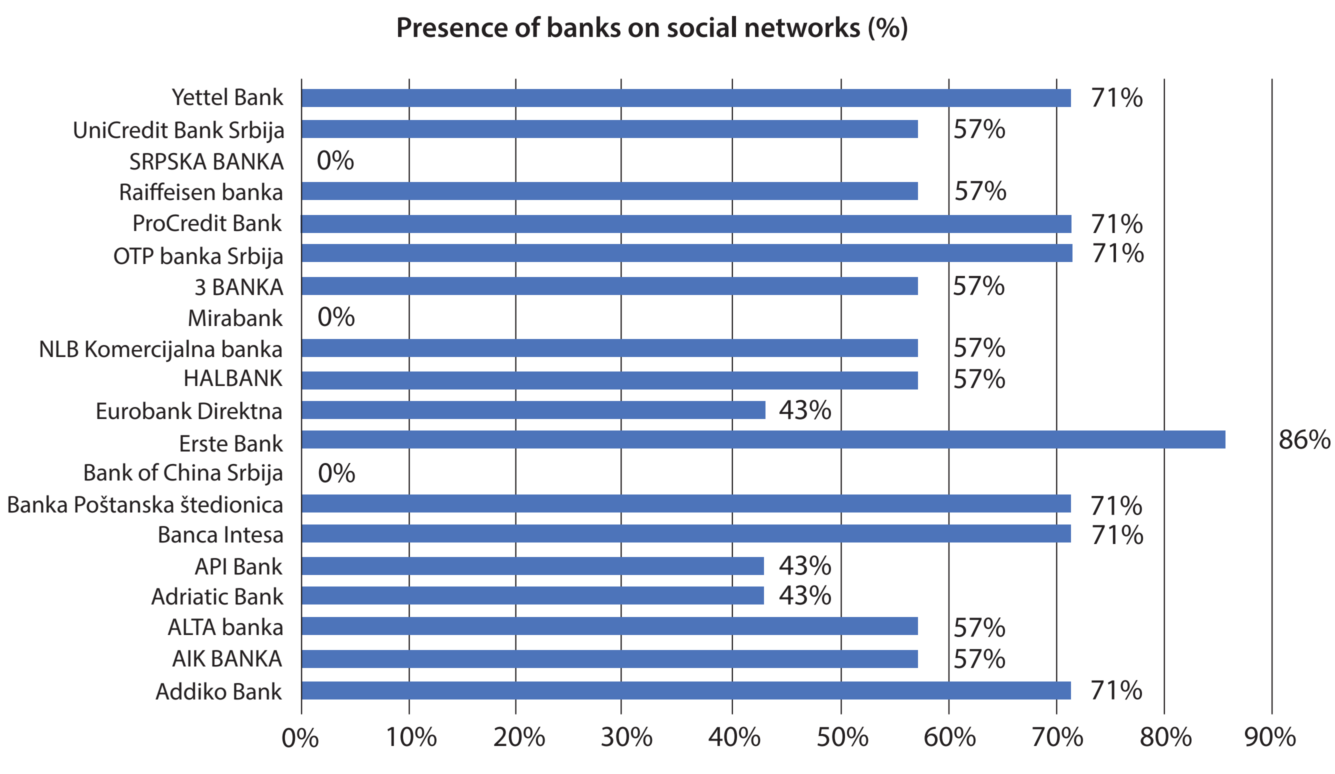
- LinkedIn and Facebook remain dominant channels for direct communication with customers, while Instagram and YouTube serve more specific purposes, whether for PR or customer support.
- TikTok and Twitter are less popular, which may indicate that banks have not yet fully recognized the potential of these platforms and adjusted their strategies for younger demographics that are more active on these networks.

Potential Opportunities:

- Banks that are not present on platforms such as YouTube, Instagram, or LinkedIn should consider expanding their presence to better reach various demographic groups, from younger audiences to business users.
- Banks with a presence on a greater number of platforms are better able to target different demographic groups and meet the demands of digital users more effectively. Erste Bank (86%), along with Addiko Bank, Banca Intesa, Banka Poštanska štedionica, OTP banka, and Yettel Bank, has the broadest digital presence, utilizing 75% of available platforms, indicating a strong digital strategy (Chart 1).
- Banks such as AIK BANKA, ALTA Bank, HALKBANK, NLB Komercijalna Banka, 3 BANK, Raiffeisen Bank, and UniCredit Bank, with 57% presence across four social media platforms, and Adriatic Bank, API Bank, and Eurobank Direktna with 43% presence across three platforms, have opportunities to improve their digital strategies.
- Most banks utilize between 50 – 71% of platforms, indicating a balanced digital strategy but with potential for further growth.
- Bank of China Serbia, Mirabank, and SRPSKA BANKA do not use social media, which may suggest a lesser focus on digital channels.
- TikTok is almost completely unused by banks, except for Erste and OTP Bank. This presents an opportunity for other banks to connect with younger users through creative campaigns on this platform.
- Viber, a popular platform in the region, is not sufficiently exploited, although it has the potential to provide customer support, notifications, and promotions.

The most active bank in terms of social media presence is Erste Bank, while Banka Intesa, Banka Poštanska Štedionica a.d. Belgrade, OTP Bank, and ProCredit Bank lead in terms of followers on social media, particularly on Instagram.

Chart 1. Percentage of presence of each bank on social networks (Facebook, Instagram, Twitter, YouTube, TikTok, LinkedIn, and Viber).



Source: Authors' research; Websites and/or social networks of banks in Serbia.

Their strategy involves active engagement with users via digital channels. Banka Intesa and Raiffeisen Bank are also highly active on YouTube, which may indicate a stronger presence through video content and digital campaigns.

By comparing the current data on the presence of banks on social networks and the number of followers (Table 1, Table 2) with the data from 2017 (Zelenović et al., 2018, p. 59; Milić, 2020, p. 69), it can be found to the following conclusions:

1. Instagram Presence:

- In 2017, most banks in Serbia did not have Instagram accounts, as this platform was not as popular and widespread as it is today.
- Current results show that Instagram is one of the most popular social networks, where almost all banks are present. Banks that stand out by the number of followers are OTP Bank Srbija: 2024 – 15,600 followers; ProCredit Bank: 2024 – 14,400 followers; Banca Intesa a.d. Beograd: 2024 - 13,000 followers; and Bank Poštanska štedionica: 2024 - 11,100 followers.

Table 1. Overview of the Presence of Banks in Serbia on Social Media.

Bank in Serbia		Activity on social networks		
			Instagram	**YouTube**
1	Addiko Bank	Followers	4645	972
		Posts	1078	90
2	AIK BANKA	Followers	6065	441
		Posts	503	64
3	ALTA bank	Followers	3844	542
		Posts	537	12
4	Adriatic Bank	Followers	205	0
		Posts	33	0
5	API Bank	Followers	910	0
		Posts	277	0
6	Banca Intesa	Followers	13000	7170
		Posts	2100	264
7	Banka Poštanska štedionica	Followers	11100	1480
		Posts	773	87
8	Bank of China Srbija	Followers	0	0
		Posts	0	0
9	Erste Bank	Followers	8452	2240
		Posts	1110	312
10	Eurobank Direktna	Followers	0	1550
		Posts	0	314
11	HALKBANK	Followers	3533	315
		Posts	1744	48
12	NLB Komercijalna banka	Followers	3934	1520
		Posts	1898	231
13	Mirabank	Followers	0	0
		Posts	0	0
14	3 BANKA	Followers	2987	1330
		Posts	412	135
15	OTP banka Srbija	Followers	15600	1050
		Posts	318	123
16	ProCredit Bank	Followers	14400	1540
		Posts	987	311
17	Raiffeisen bank	Followers	5323	5050
		Posts	148	177
18	SRPSKA BANKA	Followers	0	0
		Posts	0	0
19	UniCredit Bank Srbija	Followers	0	2180
		Posts	0	86
20	Yettel Bank	Followers	5209	305
		Posts	40	24

Source: Authors' research; Websites and/or social networks of banks in Serbia.

2. Twitter Presence:

- Interestingly, most banks currently do not have Twitter accounts, while the majority did in 2017. This decline likely indicates a shift in strategy due to the decreasing popularity of this platform and a redirection of efforts towards other platforms, such as Instagram.

3. LinkedIn Presence:

- LinkedIn has seen a growth in the number of banks using the platform. In 2017, out of the twenty-six operating banks, seventeen had an account on LinkedIn (Milić, 2020). By 2024, out of twenty banks, sixteen maintain a presence, indicating a significant increase in activity and a greater focus on the business user market.

4. YouTube Presence:

- Banca Intesa a.d. Beograd: 2017 – 378 followers (Zelenović et al., 2018); 2024 – 7170 followers. This significant growth indicates an increase in digital activity and more effective engagement through video content.
- Raiffeisen Bank: 2017 – 122 followers (Zelenović et al., 2018); 2024 – 5,050 followers. This also represents substantial growth, suggesting greater involvement in video marketing.
- UniCredit Bank: 2017 – 158 followers (Zelenović et al., 20181); 2024 – 2,180 followers. This bank has also seen a marked increase in followers, suggesting that YouTube has become a key component of digital strategies in banking.

Most banks have significantly increased their activity on LinkedIn and YouTube, indicating a growing focus on professional communication (LinkedIn) and video marketing (YouTube). The reduction in Twitter activity may suggest that it is not a primary platform for user engagement in Serbia.

Compared to 2017, most banks have improved their digital strategies and increased their presence on key platforms, particularly YouTube, Instagram, and LinkedIn. However, there has been a noticeable decline in Twitter's presence and stagnation on Facebook, likely reflecting shifts in user preferences and a transition to newer, more visually dynamic platforms.

5. CONCLUSION

The presence of banks on social networks in Serbia is becoming a key part of digital strategies, focused on communication and customer loyalty. Erste Bank leads the way with 86% presence, while Addiko, Banca Intesa a.d. Beograd, Banka Poštanska štedionica, OTP bank, ProCredit Bank, and Yettel Bank use 75% of the platforms. The analysis confirms two hypotheses: the first, that banks use social networks in marketing, is partially confirmed because 80% of banks use at least three networks, while three specialized banks do not have accounts. The second hypothesis about the growth of the use of networks in promotions has been fully confirmed. Instagram and YouTube are growing, while Twitter is declining. Facebook and LinkedIn are the most used networks, and TikTok and Viber are recommended for banks to expand their presence on social networks. To banks that do not use YouTube, Instagram, and LinkedIn, the authors recommend using the mentioned social networks for more effective access to young and business people. This review can serve as a basis for future analyses of the digitalization of the banking sector in Serbia.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Corporate Finance
Review paper

WTO'S ROLE IN SHAPING GLOBAL ECONOMY AND CONTEMPORARY BUSINESS DYNAMICS

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Abstract:

The World Trade Organization (WTO), established in 1995 as the successor to the General Agreement on Tariffs and Trade (GATT), plays a critical role in regulating international trade. Its mission is to promote free and fair trade by reducing barriers and resolving disputes among its 166 member countries, which account for over 98% of global trade. The WTO ensures compliance with trade rules, with a particular focus on protecting the interests of smaller nations, and addresses a wide range of issues, including intellectual property and agriculture. However, the organization faces significant challenges, such as the rise of the digital economy, the impact of climate change, and increasing protectionism, underscoring the need for reform. Critics argue that the WTO often favors developed countries, to the detriment of developing nations. To remain relevant, the WTO must modernize its processes. This paper seeks to analyze the WTO's role in regulating international trade, examine contemporary challenges, and evaluate potential reforms to enhance its relevance and equity for all member states.

Keywords:

international trade, international relations, WTO, global market, multilateral trading system.

1. INTRODUCTION

The World Trade Organization (WTO) serves as the central institution in regulating international trade, guiding and shaping trade relations among its members. Having commenced operations on January 1, 1995, as the successor to the General Agreement on Tariffs and Trade (GATT), the WTO aims to promote free and fair trade, reduce trade barriers, and resolve disputes between member states, thereby ensuring the enforcement of international obligations (Radojević, 2022). With 166 member countries accounting for over 98% of global trade, the WTO plays a pivotal role in the global economy (WTO, 2024).

Moreover, the WTO acts as a guarantor of rule compliance, a function particularly vital for smaller nations in their interactions with major economic powers. This role enables smaller economies to protect themselves from unfair trade practices and secure access to larger markets (Bjelić, 2002). The organization also addresses a wide array of issues, including intellectual property, trade in services, and agriculture, covering a broad spectrum of international trade matters.

However, the WTO faces numerous challenges in the contemporary world. Global trade is becoming increasingly complex, with emerging issues such as the digital economy, climate change, and the protection of labor rights. Additionally, there is persistent criticism that the WTO disproportionately favors developed countries and multinational corporations, while developing nations often fail to benefit equally. In light of these challenges, the organization must confront the need for reforms to enhance its relevance and ensure greater equity for all member states.

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2. ESTABLISHMENT OF THE WTO

2.1. THE BEGINNINGS OF INTERNATIONAL TRADE COOPERATION: GATT (GENERAL AGREEMENT ON TARIFFS AND TRADE)

The International Trade Organization (ITO) was proposed as the third Bretton Woods institution, alongside the International Monetary Fund (IMF) and the World Bank, to promote international economic cooperation. Negotiations took place between 1946 and 1947 with 23 countries, resulting in agreements on tariff reductions and trade regulations (Rapaić, 2013). Although the Havana Charter, which aimed to establish the ITO, was adopted, it was never ratified by a sufficient number of countries.

Despite being signed, the Havana Charter failed to gain approval from key countries, including the U.S. Congress, which ultimately prevented the ITO from coming into existence. As a result, the General Agreement on Tariffs and Trade (GATT) was implemented in 1948 as a provisional framework to regulate international trade.

GATT operated through multilateral negotiations, initially focusing on the reduction of tariffs on industrial goods (Rapaić, 2013). As global trade expanded into new sectors, such as services and intellectual property, GATT encountered increasing challenges, eventually leading to the establishment of the World Trade Organization (WTO) in 1994.

2.2. THE URUGUAY ROUND DISCUSSIONS AND THE EVOLUTION TOWARDS THE WTO

The General Agreement on Tariffs and Trade (GATT) evolved through multiple negotiation rounds, including the Kennedy, Tokyo, and Uruguay Rounds, each focusing on tariff reductions and addressing various trade-related issues. The Uruguay Round (1986-1994) was the most comprehensive, covering the trade of services, the protection of intellectual property, and agricultural commodities (Stakić, 2014). This round culminated in the establishment of the World Trade Organization (WTO) on January 1, 1995. Unlike GATT, which was a provisional arrangement, the WTO became a permanent organization with a broader mandate. It now oversees key agreements such as the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

2.3. KEY AGREEMENTS AND DECISIONS IN WTO HISTORY

Since its establishment, the World Trade Organization (WTO) has played a central role in regulating global trade. A key milestone was the Doha Round, launched in 2001 with the aim of liberalizing trade, particularly focusing on the needs of developing countries (Bagwell & Staiger, 2010). Although the negotiations remain incomplete, the Doha Round continues to be a significant topic of discussion. In 2013, the WTO achieved a major breakthrough with the Trade Facilitation Agreement, its first significant multilateral deal, designed to reduce bureaucratic barriers and streamline trade flows. The WTO also addresses a wide range of issues, including market access, subsidies, anti-dumping measures, and technical barriers, continually adapting its rules to meet the evolving challenges of the global economy and technological advancements.

3. FUNCTIONS AND PRINCIPLES OF THE WTO

The World Trade Organization (WTO) plays a pivotal role in overseeing and regulating international trade through its core functions and guiding principles. These functions allow the organization to promote stability and predictability within the global trading system, ensuring fair and open trade among its member states. The section on the WTO's functions and principles highlights how the organization facilitates global trade, resolves disputes, and supports its members in achieving their trade-related goals.World Trade Organization (WTO) serves a pivotal function in overseeing and governing international trade through various functions and principles. These functions enable the organization to maintain stability and predictability in the international trading system, ensuring fair and open trade among its members. The section on the functions and principles of the WTO reflects how the organization works to enhance global trade, resolve disputes, and support its members in achieving their trade objectives.

3.1. CORE RESPONSIBILITIES OF THE WTO

A central responsibility of the World Trade Organization (WTO) is to govern and oversee multilateral trade agreements. The organization monitors the implementation and enforcement of these agreements, which are negotiated among its member countries. The WTO serves as a platform for negotiating new trade agreements, as well as for reviewing and improving existing ones (Matsushita et al., 2015). For example, the WTO manages the enforcement of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Trade Facilitation Agreement, and the General Agreement on Trade in Services (GATS).

The WTO also functions as a forum for negotiating trade liberalization initiatives and addressing other trade-related issues (Bjelić, 2017). Negotiations occur between member states to agree on reducing tariffs, eliminating non-tariff barriers, overseeing trade in services, and addressing other matters affecting international trade.

These negotiations can be multilateral, such as through negotiation rounds, or bilateral between two countries.

Dispute resolution is a key function of the WTO, providing a structured process to resolve conflicts between member states regarding trade agreements. This process includes consultations, the establishment of panels, and, if necessary, an appellate body, ensuring fairness and transparency while preventing unilateral sanctions. In addition, the WTO monitors members' trade policies through periodic Trade Policy Reviews (TPRM), enhancing transparency and cooperation among members (Bjelić, 2017). The organization also offers technical assistance and training to developing countries, helping them navigate trade negotiations, implement agreements, and build institutional capacity. These efforts support members in understanding international trade rules and improving their participation in the global economy.

3.2. KEY FUNDAMENTALS OF THE WTO

The The fundamental tenets of the World Trade Organization (WTO) underpin its operational framework and the conduct of international trade (Matsushita et al., 2015). These principles ensure consistency, predictability, and fairness in the global trading system.

A core tenet of the WTO is the Most-Favored-Nation (MFN) principle. According to this principle, a WTO member must accord equal treatment to all other members in trade-related matters. This implies that if a member grants a trade advantage, such as a reduced tariff, to one member, the same advantage must be uniformly extended to all WTO members. This principle prevents discrimination among members and ensures equitable conditions in international trade.

The National Treatment principle mandates that member countries extend the same treatment to foreign products as they do to domestic products, services, and intellectual property, no less favorably than their domestic equivalents once they have crossed the border. This principle guarantees that foreign companies have equal opportunities as domestic companies in the respective country's market, thereby preventing protectionism and discrimination against foreign products and services.

Transparency is a key principle of the WTO, involving the obligation of members to disclose their trade policies and practices, as well as any changes that may affect international trade. Transparency allows members to have clear information about the trade policies of other members, facilitating compliance with rules and reducing the risk of misunderstandings and disputes.

Predictability and stability are crucial for the optimal performance of international commerce. The WTO aims to provide a stable trading environment through the implementation of clearly defined rules and procedures. This includes the obligation of members not to unilaterally withdraw from trade agreements and to adhere to agreed-upon rules. Predictability enables companies to plan their business activities with greater certainty, promoting economic growth and advancement.

4. THE WTO'S ROLE WITHIN THE GLOBAL ECONOMIC SYSTEM

The World Trade Organization (WTO) plays a pivotal role in shaping the global economic landscape by regulating and promoting international trade. Its activities have significant implications for economic growth, the development of emerging economies, and the advancement of globalization. Through its functions and principles, the WTO seeks to provide a stable and predictable trading environment, which is essential for fostering economic prosperity and facilitating global economic integration.

4.1. PROMOTION OF ECONOMIC GROWTH

A central objective of the World Trade Organization (WTO) is to foster economic development through the facilitation of trade liberalization. By reducing trade barriers, including tariffs and quotas, the WTO enhances market access and promotes the exchange of goods and services across nations. This liberalization allows countries to concentrate on production based on their comparative advantages, leading to more efficient resource allocation and increased productivity (Howse, 2016).

Increasing international trade can directly influence a country's economic growth by boosting exports, which generates additional revenue and stimulates domestic production. Furthermore, imports provide access to cheaper or higher-quality goods, benefiting both consumers and businesses. Thus, openness to trade contributes to higher living standards and economic stability.

4.2. IMPACT ON DEVELOPING COUNTRIES

The World Trade Organization (WTO) significantly impacts developing countries, which face unique challenges in global trade. The organization aims to integrate these countries into the global trading system by providing technical assistance and special and differential treatments. These treatments grant developing countries flexibility in implementing trade agreements and accessing the markets of developed nations without reciprocal obligations.

Through its technical assistance programs, the WTO helps developing countries build capacity to engage in trade negotiations, implement trade policies, and comply with international standards. This support is crucial for enhancing their ability to compete in the global market and benefit from trade opportunities.

However, critics argue that the WTO still favors developed countries, as developing nations often encounter challenges such as limited access to these markets and unfair trade conditions. For instance, agricultural subsidies in developed countries create barriers to the competitiveness of agricultural products from developing countries. Thus, while the WTO aims to facilitate development through trade, challenges persist that require further attention and reform.

4.3. ROLE IN THE GLOBALIZATION PROCESS

Globalization, characterized by increasing economic, cultural, and political integration among countries, would not be possible without institutions like the World Trade Organization (WTO). The organization promotes rules and norms that facilitate global trade, contributing to the growing interconnectedness of the world economy. Through trade liberalization, the WTO enables the faster movement of goods, services, capital, and technology across borders (Baldwin, 2016).

This process has profound economic and social implications. On one hand, globalization allows countries and companies to expand their markets and access new technologies, potentially leading to increased productivity and innovation (Deardorff & Stern, 2002). On the other hand, it can result in economic disparities, where certain industries or regions benefit more than others, potentially increasing inequality and causing social tensions.

The WTO also plays a crucial role in managing the adverse effects of globalization, such as unfair trade practices, dumping, and intellectual property protection. Through its dispute resolution mechanism, the WTO enables countries to challenge trade practices they consider unfair and seek resolutions based on the agreed rules.

4.4. CHALLENGES AND CRITICISMS

Despite its numerous contributions, the World Trade Organization (WTO) faces significant criticisms and challenges. Critics argue that the WTO tends to favor the interests of wealthier nations at the expense of poorer, underdeveloped regions. Additionally, there are considerable concerns that the WTO’s negotiation processes are overly slow and bureaucratic, hindering its ability to promptly address emerging challenges such as the digital economy, climate change, and labor rights issues (Bagwell & Staiger, 2011).

A major challenge for the WTO has been the failure of the Doha Round of negotiations, which was initiated with ambitious goals to further liberalize trade and enhance the status of emerging economies. Due to disagreements among members on critical issues such as agriculture and industrial tariffs, the Doha Round did not achieve its intended objectives. This has raised questions about the WTO's future role as a forum for multilateral trade negotiations.

5. REFORMS AND FUTURE CHALLENGES FOR THE WTO

Since its establishment, the World Trade Organization (WTO) has been facing constant demands for adaptation and reform to remain relevant and effective in the changing global economic environment. Addressing new challenges such as the digital economy, climate change, and rising protectionist tendencies requires innovative approaches and modernization of the institution. This section will explore the key reforms and future challenges facing the WTO.

5.1. NEED FOR MODERNIZATION

One of the greatest challenges for the World Trade Organization (WTO) is regulating and managing digital trade. With the rapid growth of e-commerce, issues such as data protection, digital security, and the taxation of digital products are becoming increasingly critical. Current WTO rules do not adequately address the specifics of digital trade, necessitating the establishment of new rules and standards to enable fair and open digital commerce (Nenci, 2020).

Additionally, climate change poses a significant challenge for the WTO. Integrating environmental standards into trade policies is essential. The organization can promote trade in eco-friendly technologies and regulate policies that harm the environment. Future reforms may include mechanisms for monitoring and reducing the carbon footprint of products and services. Furthermore, enhancing transparency and efficiency is crucial, particularly in negotiation and dispute resolution. Involving all members, especially developing countries, and streamlining procedures through digital tools can help the WTO operate more effectively and respond swiftly to global challenges.

5.2. STRENGTHENING MULTILATERALISM

One of the key challenges for the World Trade Organization (WTO) is restoring trust in multilateral trade discussions. The breakdown of the Doha Round negotiations underscored the difficulties in reaching consensus among a diverse membership with varying interests. Strengthening the multilateral approach requires flexibility and a willingness to compromise to achieve common goals (Herbert, 2020). Moreover, reaching agreements on smaller, specific issues may help build trust and facilitate gradual progress toward more comprehensive agreements.

In addition to the multilateral approach, regional and bilateral trade agreements are playing an increasingly significant role. The WTO must identify ways to harmonize these agreements with multilateral rules to avoid trade tensions and fragmentation of the global trading system. This includes recognizing regional agreements within the WTO framework and ensuring they contribute to the global objectives of open and fair trade of the key challenges for the WTO is restoring trust within multilateral trade discussions. It was the breakdown of the Doha Round discussions that highlighted the difficulties in reaching consensus among a large number of members with varying interests. Strengthening the multilateral approach requires flexibility and willingness to compromise to achieve common goals (Herbert, 2020). Also, reaching agreements on smaller, specific issues may help build trust and gradual progress towards more comprehensive agreements.

Alongside the multilateral approach, regional and bilateral trade agreements are playing an increasingly significant role. The WTO must find ways to harmonize these agreements with multilateral rules to avoid trade tensions and fragmentation of the global trading system. This includes recognizing regional agreements within the WTO framework and ensuring they contribute to global goals of open and fair trade.

5.3. ADDRESSING PROTECTIONISM

In recent times, protectionist strategies have become more prevalent, leading to trade wars among major economic powers that have severely disrupted the global trading system. The World Trade Organization (WTO) must play a key role in mediating and resolving these conflicts through its dispute resolution mechanisms while promoting dialogue among its members. A return to a more open and cooperative trade policy is essential for maintaining the balance of the global economy.

One of the greatest challenges facing the WTO is balancing national interests with global trade rules. Countries often implement protectionist measures to safeguard domestic industries and jobs, which can contradict WTO regulations. Therefore, finding ways to protect legitimate national interests while adhering to global rules will be crucial for sustaining equilibrium in international trade.

5.4. THE ROLE OF THE WTO IN THE POST-COVID ECONOMY

The COVID-19 pandemic has significantly altered global trade dynamics, resulting in disruptions to supply chains, reduced demand, and economic decline. The role of the World Trade Organization (WTO) in the post-COVID economy will be critical for the recovery and renewal of global trade.

The WTO must support its members in recovering from the pandemic's impact by promoting open trade and removing remaining trade barriers. This includes collaboration with other international organizations to ensure a coherent and comprehensive strategy for global economic recovery.

The pandemic has highlighted the fragility of global supply chains. The WTO can play an instrumental role in strengthening the resilience of these supply chains by fostering diversification of sources, improving logistical capacities, and ensuring a stable trading environment. Developing flexible and resilient supply chains will be crucial for preventing future disruptions.

In the recovery of the post-COVID economy, the WTO must focus on increasing inclusivity and sustainability in global trade. This involves supporting small and medium-sized enterprises, promoting social justice, and integrating environmental standards into trade policies. A fair and sustainable recovery is essential for building a more resilient and inclusive global economy.

6. FUTURE TRENDS AND PERSPECTIVES FOR THE WTO

As the global economy evolves, the World Trade Organization (WTO) must adapt to new challenges and opportunities. This section will analyze the key future trends and perspectives for the WTO, providing specific recommendations for enhancing its functioning. It will identify new areas of focus and propose strategies for strengthening the multilateral trading system.

6.1. DIGITAL TRADE AND TECHNOLOGICAL INNOVATIONS

With the rise of digital trade, the World Trade Organization (WTO) must develop new international standards and rules to regulate this sector (Reis et al., 2021). This includes addressing issues such as data protection, privacy rights, transaction security, and taxation of digital services. Establishing global rules will help reduce trade barriers and stimulate the growth of the digital economy.

The WTO can play a vital role in supporting technological innovation by promoting fair trade practices and protecting intellectual property rights (Reis et al., 2021). Supporting research and development, along with safeguarding the rights of innovators, is essential for maintaining competitiveness and encouraging innovation on a global scale.

6.2. TRADE RELATIONS AND SUSTAINABLE GROWTH

A significant future goal of the World Trade Organization (WTO) must be the integration of sustainable practices into international trade. This includes promoting trade in environmentally friendly products, supporting ecological technologies and standards, and reducing the negative impact of trade on the environment. The WTO should establish clear guidelines and standards to assist members in adopting sustainable trade practices.

The WTO can play a crucial role in achieving the Sustainable Development Goals (SDGs) by promoting open and inclusive trade. This involves supporting economic growth, reducing poverty, enhancing access to education and healthcare, and protecting the environment. The WTO should develop strategies that enable countries to leverage trade as a tool to achieve these objectives.

6.3. STRENGTHENING MULTILATERAL COOPERATION

Reforming the negotiation process is crucial for strengthening multilateral cooperation within the World Trade Organization (WTO). This includes enhancing transparency, inclusivity, and efficiency in negotiations, as well as amplifying the role of smaller and developing countries (Qureshi, 2022). Developing new methods for achieving consensus and expediting decision-making processes can significantly improve the WTO's operations.

Furthermore, the WTO should enhance cooperation with other international organizations, such as the International Monetary Fund (IMF), World Bank, and United Nations. This collaboration can address complex global issues, including economic crises, climate change, and global inequality. The synergy between these organizations can contribute to a holistic approach in tackling global challenges. Synergy between these organizations can contribute to a holistic approach to tackling global challenges.

6.4. TRADE RULES AND SOCIAL JUSTICE

The The World Trade Organization (WTO) should integrate social standards and labor rights into its trade policies (Bjorklund, 2021). This includes promoting fair labor conditions, prohibiting child labor and forced labor, and supporting dignified work for all. By incorporating social standards, the WTO can help create a fairer and more humane global trading system.

One of the key goals of the WTO must be to combat global inequality. This involves promoting trade policies that support economic growth and development in developing countries, as well as advocating for marginalized groups. The WTO should develop strategies aimed at reducing inequality and fostering inclusive economic growth.

6.5. ENHANCING DISPUTE RESOLUTION EFFICIENCY

Reforming the dispute resolution mechanism is essential for enhancing the efficiency of the World Trade Organization (WTO). This involves accelerating the dispute resolution process, improving transparency and fairness, and increasing the capacity to handle complex disputes (Islam et al., 2020). Additionally, developing new methods for alternative dispute resolution, such as mediation and arbitration, could further enhance the WTO's effectiveness.

With the emergence of new types of disputes related to digital trade and climate change, the WTO must build its capacity to address these challenges effectively. This includes training experts, developing new rules and procedures, and increasing resources dedicated to resolving such disputes. Strengthening the capacity to manage these evolving issues will help ensure the stability and predictability of global trade.

7. CONCLUSION

The World Trade Organization (WTO) remains instrumental in shaping international trade dynamics and global economic policy. Its commitment to trade liberalization, support for developing countries, and regulation of globalization processes significantly contribute to global economic growth and the improvement of living standards worldwide. However, the WTO faces considerable challenges, including criticisms of favoritism towards developed countries, delays in decision-making, and the urgent need for reforms to address new global issues such as digital trade and climate change.

While the WTO provides vital support to developing countries through technical assistance and special provisions, it must overcome several obstacles to foster a fairer global trading system. Globalization has delivered numerous economic and social benefits, but it has also led to imbalances that necessitate more effective interventions by the WTO, particularly in regulating unfair trade practices and enhancing the multilateral negotiation process.

To maintain its relevance, the WTO must continue to modernize, implementing reforms related to digital trade, environmental standards, transparency, and procedural efficiency. Such reforms are crucial for addressing contemporary challenges, including rising protectionist tendencies and the recovery from the COVID-19 pandemic. The success of these reforms will determine the WTO's future as the cornerstone of the multilateral trading system, which is essential for sustainable development and an inclusive global economy.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Corporate Finance
Original paper

SOCIAL MEDIA AND CONTEMPORARY BUSINESS IN ACCOUNTING AND CORPORATE FINANCE

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Abstract:

The growing integration of social media into corporate finance and accounting practices is reshaping traditional communication methods and influencing market dynamics. Platforms such as Facebook, LinkedIn, and Twitter are increasingly being used by companies to engage with stakeholders, enhancing financial transparency and corporate governance. This paper explores the role of social media in disseminating financial information, shaping investor behavior, and facilitating corporate decision-making. It highlights both the opportunities and challenges presented by social media, including its ability to reduce information asymmetry and improve access to capital, while acknowledging the risks of misinformation, market volatility, and regulatory uncertainties. The paper synthesizes current research on the subject, addressing the implications for corporate social responsibility reporting, investor relations, and stock market performance.

Keywords:

social media, corporate finance, corporate social responsibility (CSR), financial transparency, market reactions.

1. INTRODUCTION

Social media has become a vital tool for corporations in the digital age, changing communication methods in various industries, including accounting and corporate finance. Businesses are becoming more open to incorporating social media sites like Facebook, LinkedIn, and Twitter into their corporate operations to communicate with stakeholders in real-time and to increase transparency. This expanding trend demonstrates a greater understanding of social media's ability to strengthen investor relations, corporate governance, and effective dissemination of financial information (Shi et al., 2019; Helal et al., 2018). Companies that can effectively use social media to deliver precise and timely financial updates gain a huge competitive advantage as investors become more knowledgeable and engaged.

The adoption of social media in corporate finance and accounting aligns with technological advancements that are driving modern business practices. Emerging technologies like blockchain and artificial intelligence (AI) are increasingly integrated into social media platforms, boosting data security, transparency, and the speed of financial reporting. Companies with strong social media presence tend to gain more favorable perceptions among investors, leading to improved market performance and easier access to capital (Hamade et al., 2024; Ghazwani et al., 2024). However, despite its benefits, social media presents challenges such as the spread of misinformation, heightened market volatility, and regulatory uncertainties (Maria et al., 2023; Beka et al., 2022). Navigating these dynamics is crucial as businesses continue to capitalize on the opportunities offered by social media while mitigating the associated risks.

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Companies' readiness to incorporate social media into their business strategy is a reflection of their understanding of these platforms as more than mere means of communication; they are also effective instruments for shaping investor behavior, controlling market expectations, and improving financial decision-making. Social media is having an increasing impact on corporate finance and accounting, and businesses that take advantage of this change are setting themselves up for long-term success in an ever-changing financial environment. Businesses can improve corporate trust, improve investor relations, and develop a more vibrant and open financial ecosystem by utilizing social media efficiently.

The following are the main aspects dealt with by this paper:

Subject: This research focuses on the growth improvement role of social media in corporate finance and accounting by examining how social media enhances transparency, improves communication with stakeholders, and reshapes traditional reporting mechanisms. The integration of social media platforms such as Facebook, Twitter, and LinkedIn into corporate strategies is explored in the context of influencing investor behavior, managing market expectations, and facilitating financial decision-making.

Purpose: The purpose of this study is to investigate the benefits and challenges of adopting social media in accounting and corporate finance. The research aims to understand how companies can leverage social media to enhance investor relations, increase access to capital, and improve corporate governance, while also addressing risks such as misinformation, market volatility, and regulatory uncertainties. By examining the interaction between social media, emerging technologies such as Artificial Intelligence (AI), blockchain, and financial practices, the study seeks to provide insights into how businesses can maximize the opportunities presented by digital platforms.

Structure: This research is organized as follows:

- Introduction outlines the subject, purpose, and structure of the study, providing an overview of the significance of social media in corporate strategies, particularly in accounting and corporate finance.
- Literature Review examines existing research on the impact of social media on these fields, with a focus on how emerging technologies influence investor behavior, corporate governance, and financial reporting.
- Methodology explains the research design and methods employed to evaluate the effects of social media on corporate practices, financial transparency, and governance.
- Findings and Discussion analyze the data and present insights into how businesses are leveraging social media to enhance investor relations and financial reporting processes.
- Finally, the Conclusion summarizes the research outcomes and offers recommendations for future research, as well as practical guidance for the integration of social media in corporate finance and accounting strategies.

2. LITERATURE REVIEW

The increasing influence of social media on business practices has become a significant focus of contemporary research, particularly in accounting and corporate finance. With platforms such as Twitter, LinkedIn, and Facebook becoming integral to communication strategies, social media's role in influencing financial transparency, corporate governance, and investment decisions has been explored extensively. This literature review synthesizes current research on the intersection of social media, accounting, and corporate finance.

2.1. THE ROLE OF SOCIAL MEDIA IN ACCOUNTING

Social media has altered how financial information is disseminated and consumed, reshaping traditional accounting practices. Y. Shi et al. (2019) argue that social media platforms enhance the speed at which companies release financial statements and other relevant financial disclosures, reducing information asymmetry between firms and stakeholders. By leveraging social media, companies can foster real-time engagement with investors and customers, providing updates on financial performance that go beyond traditional reporting mechanisms.

In addition, Hamade et al. (2024) found that companies with a strong social media presence tend to have more positive perceptions among investors, often leading to higher stock prices. However, lack of regulation on social media platforms means that companies might also face challenges such as the spread of misinformation. As noted by Maria et al. (2023), social media can sometimes contribute to financial rumors that may distort market perceptions, leading to increased volatility.

The adoption of social media in accounting also aids in enhancing corporate social responsibility (CSR) reporting. Social media allows firms to communicate their sustainability efforts and ethical practices to a broad audience. According to Zhang, Z., and Chen (2020), organizations that actively report CSR initiatives via social platforms often witness increased investor trust and higher levels of stakeholder engagement, which in turn positively affect their financial outcomes.

2.2. SOCIAL MEDIA AND CORPORATE FINANCE: INVESTOR BEHAVIOR AND MARKET REACTIONS

In the realm of corporate finance, social media has played an increasingly vital role in shaping investor behavior and influencing market reactions. The rise of platforms such as Twitter has enabled investors to gain access to unfiltered news and insights directly from companies, analysts, and influencers. Saleem et al. (2024) explored how Twitter data could be used to predict stock price movements, revealing that Twitter sentiment analysis is often predictive of short-term price fluctuations. Their findings suggest that when investors analyze social media content, they are better equipped to make informed investment decisions.

Furthermore, Helal et al. (2018) point out that social media has revolutionized corporate communications, allowing companies to influence investor sentiment in ways that traditional financial reports may not. By leveraging social media, firms can tailor their messages to target different investor demographics, thereby shaping market expectations. This has particularly significant implications for firms engaging in capital-raising activities, such as initial public offerings (IPOs) and mergers and acquisitions (M&A).

Social media also plays a role in facilitating access to capital for firms. Ghazwani et al. (2024) found that firms with a strong social media presence were more likely to attract institutional investors, particularly in emerging markets. Social media engagement signals transparency and fosters stronger connection with investors, which can lower the cost of capital and improve the firm's ability to access equity financing.

The following table (Table 1) summarizes the previous studies in the field of social media on Business practices, Accounting, and Corporate Finance:

Table 1. Summary of the literature review.

SR	Authors	Year	Title	Contribution of the Paper
1.	Y. Shi, Y. Tang, W. Long	2019	Sentiment contagion analysis of interacting investors: evidence from China's stock forum	This paper contributes to the understanding of investor behavior in emerging markets by employing an agent-based model to study sentiment contagion among investors in China's stock market. Through the use of text mining techniques to identify sentiment from large-scale online stock forum data, the paper enhances the accuracy of investor sentiment classification and provides empirical insights into the formation and contagion of sentiment across different time periods, industries, and macroeconomic conditions. The findings illustrate that investor sentiment contagion is more intense during rising and falling periods compared to stable periods and is particularly pronounced in emerging industries. Additionally, the study highlights the role of macroeconomic factors in promoting optimism among investors and accelerating sentiment contagion through discussions and interactions on stock forums. This research not only advances behavioral finance by exploring the mechanisms of investor sentiment contagion but also expands the application of text-mining techniques to the financial domain, offering practical insights for both investors and regulators.
2.	Hamade, M., Hussainey, K. and Albitar, K.	2024	Corporate reporting through social media: a comprehensive literature review	This paper contributes to the growing body of knowledge on corporate communication by conducting a systematic review of 136 peer-reviewed journal articles focused on social media use for corporate disclosure. It identifies key trends, geographical patterns, and theoretical frameworks in existing research, highlighting gaps, especially in developing countries. By categorizing disclosure types into five themes—general disclosure, corporate social responsibility, financial information, CEO announcements, and strategic news communication—the paper offers a comprehensive thematic analysis. The review also advances the field by providing a cross-theme analysis of the determinants and consequences of corporate social media use, offering fresh insights and proposing new avenues for future research in corporate communication strategies.
3.	Maria Cristina Arcuri, Gino Gandolfi, Ivan Russo	2023	Does fake news impact stock returns? Evidence from US and EU stock markets.	This paper contributes significantly to the understanding of how fake news impacts stock returns by examining both the U.S. and EU stock markets. Using empirical analysis, the paper explores the role of misinformation in financial markets, particularly its effects on stock volatility and investor behavior. The study highlights how fake news can distort market perceptions, leading to irrational trading decisions and market instability. By addressing the consequences of misinformation, this research advances the field of behavioral finance and provides valuable insights for policymakers, regulators, and investors seeking to mitigate the risks associated with fake news in financial markets.

SR	Authors	Year	Title	Contribution of the Paper
4.	Zhang, Z. and Chen, H.	2020	Media coverage and impression management in corporate social responsibility reports: Evidence from China	This paper advances the understanding of how media coverage influences corporate social responsibility (CSR) reporting and impression management in Chinese companies. It provides empirical evidence showing that firms strategically use media coverage to shape stakeholder perceptions and enhance their corporate image by focusing on CSR initiatives. The study explores the relationship between media visibility and impression management tactics, revealing that companies with higher media exposure are more likely to report positively on their CSR activities. This contribution is crucial for understanding how media-driven impression management impacts stakeholder trust and corporate reputation, offering valuable insights for both corporate communication strategies and future CSR reporting practices.
5.	Saleem, T., Yaqub, U. and Zaman, S	2024	Twitter sentiment analysis and bitcoin price forecasting: implications for financial risk management	This paper significantly contributes to the understanding of the relationship between social media sentiment, specifically on Twitter, and Bitcoin price forecasting. Through the application of sentiment analysis, the study demonstrates that Twitter sentiment can serve as an effective tool for predicting short-term Bitcoin price fluctuations. It highlights how social media sentiment, when analyzed using advanced risk management techniques, offers insights into market behavior and financial risk. This research is particularly valuable for investors and financial analysts seeking to enhance risk management strategies in the volatile cryptocurrency market, advancing the field of behavioral finance and sentiment-driven trading models.
6.	Helal, G., Ozuem, W. and Lancaster, G.	2018	Social media brand perceptions of millennials	This paper contributes to the understanding of how millennials perceive brands on social media, particularly in the retail sector. It provides empirical insights into how social media platforms influence millennial consumers' brand perceptions and purchasing decisions. The study highlights the role of social media engagement in shaping brand loyalty and customer relationships, with a focus on the unique characteristics and preferences of the millennial demographic. By identifying key factors that drive brand perceptions through social media, this research offers valuable implications for retail managers aiming to enhance their social media strategies and better engage with millennial consumers.
7.	Ghazwani, S.S.; Alzahrani, S.	2024	The Use of Social Media Platforms for Competitive Information and Knowledge Sharing and Its Effect on SMEs' Profitability and Growth through Innovation.	This paper significantly contributes to the understanding of how social media platforms facilitate competitive information sharing and knowledge dissemination among small and medium-sized enterprises (SMEs), particularly in emerging markets. It demonstrates that the strategic use of social media fosters innovation and business growth by improving access to market intelligence and enabling real-time interactions between businesses and stakeholders. The study also highlights how social media engagement positively impacts profitability and sustainable growth for SMEs, offering practical insights for business owners looking to leverage social media for competitive advantage. This research broadens the scope of sustainability studies by linking social media usage to SME growth and innovation.

3. CHALLENGES AND RISKS

Despite its advantages, social media presents several risks in both accounting and corporate finance. One major challenge is the regulatory uncertainty surrounding financial disclosures made via social media platforms. In their analysis, Beka et al. (2022) highlight the difficulty in ensuring compliance with established accounting standards and securities regulations in the age of social media. The potential for companies to engage in selective disclosure through social platforms is a concern for regulators and investors alike.

Another critical issue is the impact of social media on stock market volatility. As Agarwal et al. (2021) note, the proliferation of financial news and rumors on platforms such as Reddit and Twitter has contributed to market phenomena like the GameStop short squeeze in 2021. These events illustrate how social media can amplify market volatility, sometimes leading to unintended consequences for both retail and institutional investors.

The reach of social media is ever expanding. However, we have begun to see how intangible mediums such as Twitter and Reddit can have real-world consequences on the economy. As such, the federal government must be more diligent when it comes to regulation of these platforms and what content is posted on them. Left unchecked, social media could have the power to tank an entire economy with one tweet, either intentionally or unintentionally (Theodore Brothers, 2023).

The following table (Table 2) summarizes the previous knowledge of the challenges and risks:

Table 2. Previous knowledge of the challenges and risks.

SR	Authors	Year	Title	Contribution of the Paper
1.	Beka, E.; Pavlatos, O.	2022	The Impacts of Social Media on Accounting and Auditing: Evidence from Greek-Listed Firms	This paper contributes to the understanding of the impacts of social media on accounting and auditing practices by examining evidence from Greek-listed firms. It highlights how social media platforms influence corporate transparency, communication, and stakeholder engagement, which in turn affect auditing processes and financial reporting quality. The study provides empirical insights into the ways firms leverage social media for real-time disclosures and how this influences auditors' assessments and decision-making. By identifying the benefits and challenges of incorporating social media in the financial reporting and auditing processes, the paper offers valuable implications for both practitioners and regulators aiming to enhance corporate governance and accountability in the digital age.
2.	Agarwal, S., Kumar, S., & Goel, U.	2021	Social media and the stock markets: an emerging market perspective	This paper contributes to the growing body of knowledge on the relationship between social media and stock market behavior, particularly in emerging markets. It examines how social media platforms, such as Twitter, influence investor sentiment and stock market volatility. The study provides empirical evidence that social media discussions can significantly impact stock price movements, especially in markets with higher levels of individual investor participation. By highlighting the role of social media as a source of market information and sentiment, the research offers valuable insights for investors, financial analysts, and policymakers seeking to understand and manage the effects of digital platforms on stock market performance in emerging economies.
3.	Theodore Brothers	2023	The Increasing Influence of social media on the Stock Market.	This paper offers critical insights into the increasing influence of social media on stock market dynamics, particularly focusing on how platforms such as Twitter, Reddit, and TikTok have impacted stock prices and investor behavior. It highlights key cases, such as the GameStop short squeeze, to illustrate how social media discussions can rapidly mobilize retail investors, amplify market volatility, and challenge traditional financial models. The study sheds light on the risks and opportunities presented by the democratization of market information through social media, providing valuable implications for regulators, institutional investors, and retail traders. This research underscores the growing need for regulatory frameworks to address the potential market distortions caused by viral social media trends.

4. FUTURE DIRECTIONS

The intersection of social media and corporate finance is still an emerging field of study. Future research should focus on developing frameworks for regulating social media disclosures to ensure compliance with existing financial reporting standards. Additionally, further exploration of the relationship between social media sentiment and stock market behavior is needed, particularly in the context of algorithmic trading and machine learning models (Zolfagharinia, H., Najafi, M., Rizvi, S., & Haghighi, 2024) that rely on sentiment analysis for decision-making. As social media is becoming more useful and ubiquitous, both academics and practitioners need some initial and reliable background data on this preliminary situation.

Social media analytics is showing promise for the prediction of financial markets. However, the true value of such data for trading is unclear due to a lack of consensus on which instruments can be predicted and how. Current approaches are based on the evaluation of message volumes and are typically assessed via retrospective (ex-post facto) evaluation of trading strategy returns. The sentiment analysis methodology to quantify and statistically validate which assets could qualify for trading from social media analytics in an ex-ante configuration (Kandasamy, T., & Bechkoum, K. 2024).

Table 3. The future directions.

SR	Authors	Year	Title	Contribution of the Paper
1.	Zolfagharinia, H., Najafi, M., Rizvi, S., & Haghighi,	2024	Unleashing the Power of Tweets and News in Stock-Price Prediction Using Machine-Learning Techniques	This paper makes a significant contribution to the field of stock-price prediction by integrating tweets and news into machine learning models. The study demonstrates how data from social media, particularly tweets, can enhance the accuracy of stock market predictions. By employing advanced machine-learning techniques, the research identifies the predictive power of social sentiment in conjunction with financial news. The findings reveal that integrating real-time sentiment analysis from both tweets and news articles can lead to more accurate and timely stock price predictions. This work is particularly valuable for traders and financial analysts seeking to leverage non-traditional data sources to make more informed investment decisions, and it opens new avenues for future research in the intersection of social media, finance, and artificial intelligence.
2.	Kandasamy, T., & Bechkoum, K.	2024	Impact of Social Media Sentiments on Stock Market Behavior: A Machine Learning Approach to Analyzing Market Dynamics	This paper contributes to the growing research on the relationship between social media sentiments and stock market behavior by applying machine learning techniques to analyze market dynamics. It focuses specifically on the influence of Twitter sentiments, particularly those surrounding Tesla Inc. and Elon Musk's tweets, to predict stock price movements. The research highlights how the combination of social media data with traditional financial measures, such as moving averages, improves the accuracy of predictive models. By identifying potential market inefficiencies driven by investor sentiment, this study challenges the efficient market hypothesis (EMH) and provides a deeper understanding of how social media influences stock market volatility. This paper is valuable for both investors and researchers seeking to refine stock prediction models using social media sentiment.

5. CONCLUSION

Social media platforms provide unprecedented amounts of information about all aspects of activities for individuals, groups, companies, and government. The posted financial information can reshape traditional accounting practices and traditional reporting mechanisms via real-time engagement with investors and customers. This can reduce the information asymmetry, the time needed for dissemination, and the cost of capital. This can also improve investors' trust, stock pricing, and ability to access equity financing.

However, there can be a major challenge in regulatory uncertainty when using social media platforms for financial disclosures, to avoid the spread of misinformation and rumors. This paper addresses a topic that is within an emerging field of study. Future research can focus on regulating social media disclosures in compliance with existing financial reporting standards.

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THE IMPACT OF SOCIAL MEDIA ON TOURIST PURCHASE CHOICES

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Abstract:

Social media are increasingly present in the daily lives of modern people in different ways. More and more information, from daily news to finding different contents of services, entertainment, activities and travel can be found on social networks. In this paper, we will deal with the influence of social networks on the decision-making process when choosing a tourist trip. The goal of the work is to show how and in what way something that we see and read on social networks can play a role in creating our opinion about something, and even the final decision. Through the survey we conducted, we will analyze the answers of the respondents, primarily to what extent social networks are used in creating our image of a product; in this case we focus on tourist trips. Through this work, we also come to answering the question of how important it is nowadays to be on social networks for anyone who wants to market one of their services or products.

Keywords:

social media, decisions, consumers, tourism industry, internet marketing.

1. INTRODUCTION

Let's start with the fact that tourism needs are classified as supplementary needs, being satisfied after basic needs and, essentially, they are not necessary for human survival (Ilić & Stefanović, 2019). The fact is that in recent years, and even decades, with the increase in tourism movements globally, we can say that tourism needs are increasingly approaching basic needs, at least for a certain number of people (Sofronov, 2018). Fulfilling the need for travel, with the intention of relaxation, unwinding, learning something new, contributes to the restoration of psycho-physical health and enhances productivity at work and in an individual's overall life (Popesku & Gajić, 2020).

The exchange of information within the tourism sector is very specific and represents a significant marketing activity. There is a special relationship between the seller and the buyer here, in the sense of the service creator and the service user (Burgess et al., 2011; Pencarelli, 2020). In this regard, we can conclude that technological changes and changes in overall communication, from the advent of the internet, through various forms of communication, to social networks, are crucial for the survival of every individual offering some form of tourism service on the market.

In recent years, we have witnessed the fact that most people own smartphones, and an increasing number of people are joining social networks, using them as a way to get information and share various content. The development of technology has led to the possibility of spreading a large amount of information on social networks, as well as providing a very fast way of communication, both between service providers and users, and among the users themselves.

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These changes have made it essential for those who create and offer tourism services to be seriously involved in new communication trends, to be accessible and present on social networks in order to remain competitive in the market (Kádár & Gede, 2021; Seok et al., 2021; Živković et al., 2016).

2. LITERATURE REVIEW

2.1. THE CONNECTION BETWEEN THE INTERNET AND CONSUMERS IN TOURISM

Today's concept of marketing activities in tourism is primarily focused on consumers, i.e., tourists. The main goal is to meet all consumer needs, and besides creating a good and high-quality product, in this case, a complete tourism service, great attention is paid to the needs and desires of tourists through building personal relationships and good communication (Živković & Brdar, 2018).

Information and communication technology, at the beginning of its emergence and application in tourism activities, was primarily used for the collection, storage, and analysis of information within companies. Subsequently, communication technology expanded to the relationship between businesses and their partners, facilitating the spread of information and easier communication. Eventually, new technologies began to be used between companies and end-users of services. Today, advanced forms of technology and communication have led to a connection between consumers, or users of tourism services, allowing for easier transfer of information and content (Bastidas-Manzano et al., 2021; Gössling, 2020; Pencarelli, 2020). Technological advancements and rapid movements in the global market have resulted in very dynamic changes in tourism, enabling improved service quality, more efficient communication, easier creation of new products, and better satisfaction of consumer needs, i.e., tourists (Njeguš, 2021). The advantages of using the internet for consumers in tourism primarily include the ability to thoroughly review offers, compare prices, and learn about details and experiences of others by following reviews, comments, tourism blogs, and articles. These possibilities contribute to reducing intermediaries in tourism, as service users can access their desired accommodations, modes of transportation, and other services at the destination directly (Chaw & Tang, 2019).

The internet is now intertwined with all aspects of life and work. For this reason, it is impossible to imagine work in tourism without the use of the internet and presence on social media (Brdar, 2023). Service providers present their tourism products online, sharing information and content to reach as many clients, in this case tourists, as possible (Opute et al., 2020). Communication with tourists allows service providers to gain insight into their desires and needs, enabling faster action and the creation of new services that will meet constant market changes and attract new users of tourism services (Labanauskaitė et al., 2020). The availability of excessive information, as well as issues with false information and online fraud, can be confusing and stressful for consumers. As a result, even consumers of tourism services who have taken advantage of new technologies sometimes revert to direct communication with service providers (travel agencies, accommodation facilities, etc.) outside the internet to avoid unpleasant experiences (Fedeli, 2020; Popesku & Gajić, 2020). The advancement of technology and mobile devices has led to direct communication among people and the exchange of content from travel locations. This can have both positive and negative effects on tourism. Images from destinations, hotels, and restaurants are exchanged rapidly and in real-time, along with ratings, reviews, and comments that can be both favorable and unfavorable.

2.2. DECISION MAKING ABOUT TRAVEL AND SOCIAL MEDIA

One of the fundamental characteristics of services is their intangibility, meaning that there is no way to verify or consume the service before purchasing (Qiu et al., 2022). This poses an additional challenge in creating service marketing and increases the risk associated with purchasing. For this reason, consumers primarily rely on personal impressions, making recommendations from other users and word-of-mouth communication very important (Cuic et al., 2023). Value for consumers represents a critical point in the purchasing decision, meaning that consumers consider all the characteristics of the service provider. In addition to the quality of the product/service offered, the attitude of employees, their dedication, knowledge, and accessibility are also very important (Smaliukiene et al., 2015). The goal of every company, as in all other sectors, including tourism, is to secure customer loyalty and favor by providing greater value for consumers (Hadianfar, 2021). Every tourist aims to make the best possible purchasing decision, reducing the risk of making a wrong choice and having a negative experience during their travels or at the destination (Chen et al., 2021). Throughout the purchasing decision process, consumers go through several phases, which can be summarized as follows: recognizing needs, seeking information, evaluating alternatives, making a purchase decision, and post-purchase behavior (Živković & Brdar, 2018).

With the development of the internet and new technologies, social media has emerged, which is now very prevalent in people's daily lives. Social media represents a virtual space used as a means for communication and the exchange of various textual and video content. This provides a new way for people to connect socially using mobile devices and internet-related technologies. They can be divided into two groups: the first group includes websites, blogs, and other services based on specific themes, while the second group consists of social networks that were primarily designed for connecting users with their friends and sharing everyday content (Abou-Shouk & Hewedi, 2016; Xiang & Gretzel, 2010; Čerović et al., 2022). The increase in the number of social media users in recent years has made it essential for tourism businesses to establish a presence on these platforms. Creating content for social media (Facebook, Instagram, TikTok, etc.) has become a routine part of promoting services for a large number of tourism enterprises. Additionally, through comments and direct messages, a special connection and relationship is formed with each consumer/tourist. This includes both loyal customers eager for new information and content, as well as opportunities to attract new users of the offered services (Živković et al., 2014). There are many similar or nearly identical tourism products in the market, whether it's trips sold by travel agencies or accommodation options at a particular destination, making the relationship, communication, and trust that the customer builds with the tourism enterprise one of the key factors in their purchasing decision (Li et al., 2020).

3. RESEARCH RESULTS

For the purposes of writing this paper, a survey was conducted to demonstrate the extent to which social media is used to create an image of a product, with a focus on tourism services in this case. The survey was conducted in September 2024, using a Google Forms questionnaire consisting of 15 closed-ended questions. A total of 160 respondents participated in the study.

The first part of the survey pertains to socio-demographic characteristics (gender, age, education, employment status). In this section, we see that the majority of respondents were women (62.5%), and the age structure is diverse, with the predominant group being individuals aged 31 to 40 years, representing 45.6% of the survey. The highest percentage of respondents has a higher education degree. The last question in this segment relates to employment status, where we see that the majority of respondents are employed (86.3%).

The survey is divided into three groups: The Role of Social Media Before Travel, The Role of Social Media During Travel, and The Role of Social Media After Travel. Before the questions in these three groups, respondents were asked whether they use social media daily. We can say that this question is the cornerstone of the entire survey, and 142 respondents (88.8%) answered affirmatively, indicating that the majority of them use social media on a daily basis. This positive response supports the survey, as the focus is on understanding the extent to which social media influences decisions when choosing tourism services.

Table 1. Socio-demographic characteristics.

Socio-demographic characteristics	No. Of respondents	Percentage
Sex	Male	60 (37,5%)
	Female	100 (62,5%)
Age	18-30	31 (19,4%)
	31-41	73 (45,6%)
	41-50	22 (13,8%)
	51 and more	34 (21,3%)
Education	High School	30 (18,8%)
	College	48 (30%)
	University	48 (30%)
	Postgraduate Studies	34 (21,3%)
Employment status	Student	6 (3,8%)
	Employed	138 (86,3%)
	Unemployed	6 (3,7%)
	Retired	10 (6,3%)

Source: Authors' data.

The first group of questions related to the role of social media before travel consists of five questions. To the question, "When choosing a travel destination, do you seek information through social media?" the majority of responses were affirmative - 118 respondents (73.8%).

Several questions in the survey were presented as a scale with statements that respondents had to agree or disagree with. Each scale consisted of five statements, marked with numbers representing: 1 – Strongly disagree, 2 – Mostly disagree, 3 – Neutral, 4 – Mostly agree, 5 – Strongly agree.

For the question, “Is the most relevant information about a destination or a hotel found on social media?" nearly half (49.4%) answered affirmatively, while around 30% of respondents indicated that they were neutral. The next question confirmed this with 81 respondents (50.6%) stating that they communicate through social media with providers of tourism content (travel agencies, hotels, restaurants, etc.). However, it is important to note that nearly half of the respondents do not communicate with service providers via social media. The following question, presented as a statement, "Communication through social media with providers of tourism content is easier than making a direct phone call or visiting a travel agency in person", showed that the largest number of respondents (48, or 30%) mostly agreed, 41 (25.6%) were neutral, while 29 (18.1%) strongly disagreed with this statement. The last question in this group was, "Have you ever made a reservation for a tourist trip or accommodation at a destination through social media?" The majority response was "No" - 106 respondents (66.3%), while 54 (33.8%) answered "Yes".

The second group of questions related to the role of social media during travel consists of three questions. To the question, "Do you post about your travels on your social media?" the majority of respondents answered "Yes" - 109 (68.1%), while 52 (31.9%) answered, "No". The next question was formulated as a scale with the statement, "Photos and comments from tourist destinations (as well as showcasing content from destinations) that we post on social media can be useful to our friends and inspire their travels". Here, the largest number of respondents agreed - 132 (82.5%), while the number of neutral respondents and those who disagreed was very small. Additionally, the following question was also in the form of a scale with the statement, "If something on my trip is not as expected or if the destination or hotel does not meet my expectations, I will immediately post about it on my social media". With this statement, 90 respondents (56.2%) disagreed, while a slightly smaller number - 39 (24.4%) were neutral.

The third and final group of questions pertains to the role of social media after travel and consists of two questions. To the question, "Do you leave reviews on social media after returning from a trip?", the majority of responses were, "No" - 106 (66.3%), while 54 (33.8%) answered "Yes". The last question in this survey was, "Do you think it's better to post a negative review on social media to inform others or to address the service provider directly about not meeting your expectations?". For this question, we had two responses:

1. It's better to post on social media so that service providers take the criticism more seriously.
2. No, it’s better to address the service provider directly and point out the shortcomings.

The largest number of respondents chose the second option - 97 (60.6%), while 63 (39.4%) opted for the first response.

By analyzing all the responses, we conclude that the majority of people use social media daily, and they enjoy gathering information and collecting data about tourist destinations, hotels, restaurants, etc., on social media. Additionally, the conclusion is that respondents are quite indecisive when it comes to communicating and directly addressing tourism providers through social media, and that most respondents have never made a reservation this way. The second group of questions, which focused on the role of social media during travel, reveals that people mostly post their photos and content from vacations and trips on their profiles, and they believe that this can inspire their friends to travel or visit a particular destination. However, negative experiences are generally not shared on social media. Finally, from the third group of questions, we see that people are not inclined to leave reviews on social media, and when it comes to negative experiences, they prefer to address tourism service providers directly rather than posting about them on social media.

4. CONCLUSION

The theoretical part of this paper confirms that the internet and social media today represent the largest sources of personal experiences and information; so users of tourism services primarily inform themselves through these channels. The widespread availability of information and content (text, images, videos) on the internet offers a simpler way and assistance for a certain number of tourists when making travel decisions and purchasing tourism products. These changes have also led to the fact that it is almost essential and unimaginable in today’s world for any tourism business (travel agency, hotel, restaurant, etc.) to lack a presence on social media. For every tourism enterprise, one of the most important aspects is consumer satisfaction, in this case, that is the tourist, and achieving this goal relies heavily on effective communication. Today's communication is increasingly shifting to social media, which means that participants in the tourism industry must understand all possible ways to operate on these platforms and the potential they offer for fostering good relationships with existing clients, as well as for finding new service users.

From the conducted survey, we determined that potential tourists gather information about new trips on social media and share their travels with friends, but usually only in a positive context. This behavior of tourists on social media is very favorable for service providers, as they can gain free advertising through the content that tourists share on their profiles. Conversely, if negative experiences occur, they are mostly not posted on social media. Additionally, this could be a potentially good opportunity for service providers if they have a habit of communicating with their clients after the service is rendered, finding ways to address negative situations and dissatisfaction, as well as making adjustments in their operations to prevent such issues from recurring in the future if they wish to maintain a long and successful presence in tourism.

The research conducted in this paper can confirm previous theoretical insights on these topics and serve participants in the tourism industry in decision-making related to meeting tourist needs through a better understanding of tourist behavior based on their online activities. It is important to note that the limitations of this study include a smaller number of respondents and an uneven gender and age distribution. Opportunities for further research lie in expanding the survey to a larger geographical area, allowing us to gain a broader perspective and obtain results that would be clearer and more precise.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Marketing and Management
Review paper

THE IMPACT OF DIVERSIFICATION STRATEGY ON FIRMS' PERFORMANCE

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Abstract:
Diversification strategies have been widely researched in the field of strategic management, but findings on their impact on firm performance are contradictory, indicating a need for further research. It is known that diversification can enhance firm performance, but the effects vary depending on the type of diversification and the time frame. This paper uses a systematic review of the existing literature to analyze the impact of diversification strategies on firm performance. Various studies on diversification were analyzed, leading to the conclusion that the related diversification is beneficial in the short term, while the unrelated one may lead to a loss of focus and the increased costs. The research results confirm the inverted U-shape theory in relation to diversification and firm performance, suggesting a need for careful management of diversification and consideration of contextual factors. The findings emphasize the importance of understanding the dynamics of diversification and its impact on firm performance and indicate the need for further research in strategic management to better comprehend effects of different diversification strategies.

Keywords:
diversification strategies, firm performance, related diversification, unrelated diversification, curvilinear model, inverted U-shape theory.

1. INTRODUCTION

Rapid development of the global business environment has led to a growing interest in analyzing diversification strategies and their impact on company's performance. This paper explores how diversification strategies can influence long-term results, with an emphasis on corporate governance and institutional factors that affect the decision-making process.

The primary focus of this research is on the impact of diversification strategies on business performance, examining the synergies and limitations they bring. The goal is to analyze how different forms of diversification affect profitability, market value, and long-term success of companies. Special attention is given to the phenomenon of the "too much of a good thing" effect, which points to operational issues that may arise after reaching the optimal level of diversification. This study also analyzes the impacts of various diversification strategies, taking into account legal frameworks, agency costs, and the effects of economic crises on resource allocation.

This research significantly contributes to understanding the economic and organizational aspects of diversification, providing valuable information for managers in making strategic decisions. Determining the point at which diversification shifts from beneficial to burdensome for a company is critical information for decision-makers. This study aims to fill a gap in the existing literature on the complex relationships between diversification, corporate governance, and firm performance. The analysis of national and institutional factors influencing strategy selection is a crucial aspect, as these choices may vary depending on legal and economic frameworks.

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Previous research indicates that the related diversification, which involves utilizing existing resources and knowledge, typically yields better results than the unrelated one. However, there are significant limitations in analyses that compare studies across different industries and market contexts, making it difficult to draw general conclusions. Although literature offers extensive analyses of diversification strategies, significant limitations arise from the incomplete analysis of institutional factors. For example, previous studies have mostly focused on economic aspects, often overlooking the legal and political contexts that also influence strategic decisions.

The motivation for this paper stems from the need to clarify the effects of different types of diversification in various industrial and institutional contexts to better understand the role of these strategies in modern business. Additionally, there is a growing need to understand how multinational companies implement diversification as a response to increasingly complex economic and political challenges. Another important aspect is finding solutions for better integration of internal capital markets and resource management during financial crises.

The central idea of this research is that diversification brings positive effects up to a certain level, after which additional levels of diversification can lead to negative outcomes. The research hypothesis is that the related diversification has a more positive impact on business performance compared to the unrelated one. A key aspect of this research is that diversification strategies play a vital role in the long-term sustainability of companies, especially in times of crisis, when internal capital markets and resource flexibility can provide a competitive advantage. This paper contributes to understanding the mechanisms that influence the effects of diversification on business performance, particularly in specific markets and institutional conditions.

Research findings indicate that the moderate diversification contributes to profitability growth, while the excessive one can lead to increased organizational costs and decreased efficiency. These results provide important guidelines for formulating diversification strategies under various market conditions. It has been shown that firms applying diversification strategies have greater financial management flexibility and are less exposed to risks from external market shocks. This finding highlights the need for a deeper understanding of resource and capital management in times of crisis. The article is structured so that, after a brief introduction, the existing research is analyzed, and through the results and discussion, advantages and limitations of diversification strategies are considered. In conclusion, the paper offers key recommendations and guidelines for future research.

2. LITERATURE REVIEW

Research on the relationship between diversification and firm performance shows that the effects of diversification can vary significantly depending on several factors. In the early stages, moderate diversification brings a positive impact on business results, but excessive diversification can lead to a decline in performance. The costs of organization and coordination often outweigh the benefits of additional diversification (Hashai, 2015).

The neoclassical model presented in the research of Maksimovic and Phillips (2002) points to the optimal size of the company depending on the industry specifics and capacity. Additionally, research on British manufacturing companies shows a positive correlation between product diversity and profitability up to a certain point, after which performance declines.

Companies that apply the related diversification usually achieve more profitable results because they can utilize the existing resources and knowledge. In contrast, the unrelated diversification, which involves investments in completely different industries, can lead to stabilization of cash flows but simultaneously to lower profitability (Amit & Livnat, 1988). An example of the related diversification could be a company that manufactures computers and decides to produce computer components, allowing it to leverage the existing capacities.

The core competencies of a company play a crucial role in its success in the global economy. These competencies enable creation of unique products and innovations, thus making the company competitive in the market (Prahalad & Hamel, 1990). Moreover, the concept of dominant logic (Prahalad & Bettis, 1986) helps companies shape their strategies based on internal assumptions and values, which is highly significant for successful diversification.

According to a resource theory, companies with surplus resources, whether physical, knowledge-based, or financial, have a greater chance of opting for diversification. Companies with an excess of physical and knowledge-based resources usually focus on the related diversification, while those with an excess of financial resources often choose the unrelated diversification (Chatterjee & Wernerfelt, 1991).

2.1. EVOLUTION OF DIVERSIFICATION AND IMPACT ON MARKET VALUATION

During the 1960s, companies that expanded into multiple industries did not have a high market valuation compared to those focused on a single activity. This phenomenon, known as the "diversification discount," shows that companies with a broader range of activities had a lower value than those specialized in one sector. However, during the 1970s, the discount gradually disappeared, and the market began to value diversified and focused firms equally. During this period, companies with high insider ownership, which in the 1960s was associated with negative diversification results, began adopting diversification strategies as the discount started to decline.

This discount, which represents a premium for focused companies, is often associated with advantages such as greater expertise and efficiency in management (Hund, Monk & Tice, 2012). The higher value that investors attribute to focused companies stems from their clear specialization and lower business complexity. Financial markets' reactions to new acquisitions and diversification strategies can be short-term and do not always reflect the company's true value. According to some research, the diversification discount may disappear or turn into a premium when proper benchmarking is applied (Villalonga, 2001). Successfully implemented diversification can increase the company's market value, but managers and investors must have a long-term perspective and carefully compare results with similar firms.

2.2. WAVE OF DE-DIVERSIFICATION AND STRATEGIC FOCUS

During the 1980s, the United States experienced a wave of de-diversification that significantly altered corporate strategies, with the concept of conglomerates losing popularity (Davis, Diekmann, & Tinsley, 1994). Companies began returning to core activities, leading to improved business performance. It was shown that excessive diversification could result in inefficient operations and greater complexity, prompting managers to focus on their core competencies and market demands.

Specialization proved to have an advantage over diversification, especially in the context of maximizing shareholder value (Comment & Jarrell, 1995). Companies that focused on a single activity had better control over resources and more efficient management, resulting in higher profitability. During the late 1980s, the process of de-diversification impacted numerous American firms, leading to a reduction in the sectors they operated in and improvement in their productivity (Lichtenberg, 1992).

2.3. DIVERSIFICATION AND ITS IMPACT ON COMPANY VALUE: INSTITUTIONAL FACTORS AND CONTEXTUAL CHANGES

Considering the question of whether diversification destroys firm value brings different perspectives. Although diversified companies often face a stock discount, this is not necessarily a direct result of diversification itself but reflects the previously discounted values of new business segments (Graham, Lemmon, & Wolf, 2002). According to some research, a lack of synergy between different activities can lead to a loss of company value (Berger & Ofek, 1995). An example is a manufacturing company entering the service sector without sufficient understanding of that area, which can lead to negative perceptions of investors and a drop in value.

Research on companies that are part of business groups has shown that they often enjoy a diversification premium due to the efficiency of internal markets and market power in the early stages of economic development (Lee, Peng, & Lee, 2008). However, in a more developed institutional environment, this premium may diminish or even turn into a discount. Therefore, it is crucial for companies to adjust their strategies to these changes, either by optimizing existing operations or even through de-diversification. Research on emerging markets shows that membership in business groups can lead to increased profitability (Khanna & Rivkin, 2001).

The benefits of membership in such groups include access to resources, synergies through collaboration, and better performance compared to independent firms. These firms also gain greater bargaining power and easier access to new markets. However, the mere diversity of the group is not a guarantee of positive outcomes (George & Kabir, 2012). The strategy and structure of the group, as well as its ability to respond to changes in the institutional environment, play a significant role in the success of diversification.

The connection between enterprises and institutions plays an important role in determining their activities. Institutions provide resources and legitimacy that can influence companies' decisions on diversification (Peng, Seung-Hyun & Wang, 2005). Additionally, institutional factors such as governments and regulatory bodies can encourage diversification through various incentives. Legal frameworks and corporate culture also shape firms' strategies, making them more cautious in decisions regarding expansion into new markets. Research in East Asian countries shows that economic instability can limit the success of diversification strategies (Chakrabarti et al., 2007). In environments with high economic risks, companies may face difficulties in achieving positive outcomes from their diversification efforts.

Contextual and institutional factors are key to understanding companies' ability to generate value through diversification (Khanna & Palepu, 2000). Laws, political systems, and cultural norms significantly impact the success of business groups and companies in implementing diversification strategies.

2.4. INSTITUTIONAL CONTEXTS AND THE ROLE OF DIVERSIFICATION IN CORPORATE PERFORMANCE

The evolution of large European corporations reveals the importance of institutional and national factors in shaping diversification strategies and their impact on performance. Legal systems and economic circumstances in different countries play a key role in shaping diversification strategies, leading to specific models in various national frameworks. This variation illustrates how institutional differences influence diversification decisions.

Furthermore, during financial crises, diversified companies have greater flexibility in capital allocation, which was particularly evident during the 2007-2009 recession (Volkov & Smith, 2015). This approach allows companies to leverage their internal resources when the external sources of capital are unavailable (Kuppuswamy & Villalonga, 2010).

Research indicates that highly diversified firms are less dependent on internal cash flows when making investment decisions, making them more resilient to financial shocks (Shin & Stulz, 1998). This aspect leads to better managerial flexibility across different business segments. However, the crossing of financial flows between segments can lead to inefficient resource allocation (Chevalier, 2004).

Internal capital markets play a crucial role in times of crisis by helping allocate capital during the instability of external financing sources (Matvos & Seru, 2012). While companies with large cash reserves can more easily access acquisition funds, this strategy is not always effective, as cash accumulation often results from operating losses (Harford, 1999; Opler et al., 1999).

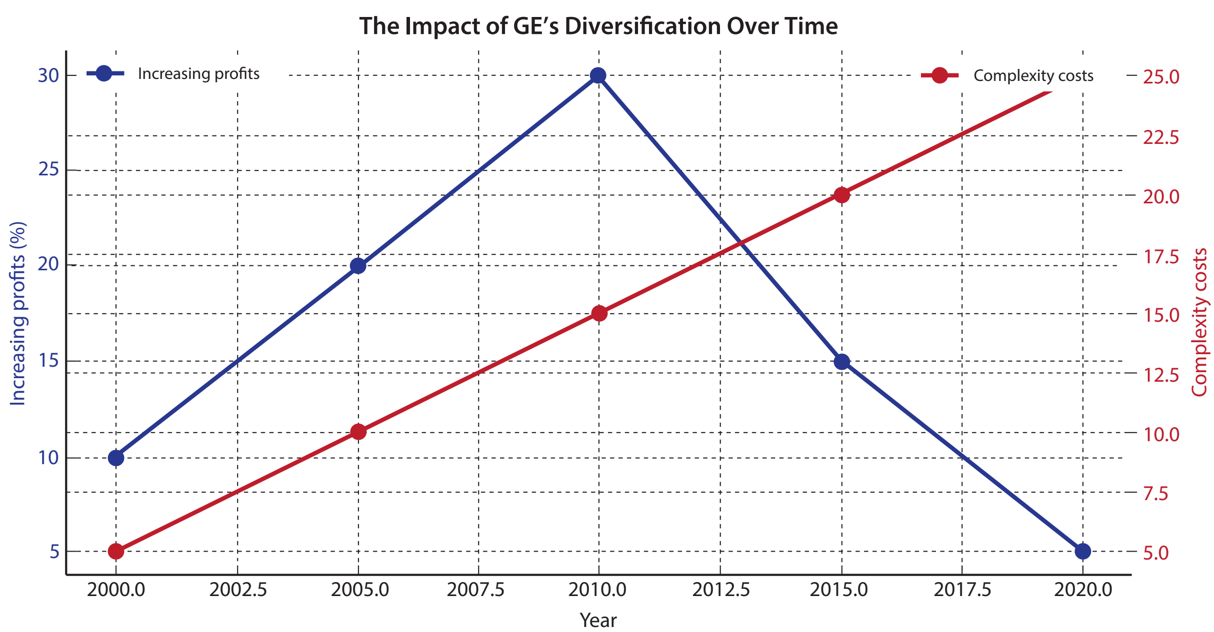
Conflicts of interest between managers and shareholders can undermine investment efficiency, especially when managers have uncontrolled access to cash flows, which can result in unnecessary investments and a decrease in company value (Rajan, Servaes & Zingales, 2000). A solution to this problem could be borrowing, which would motivate management to make more rational investment decisions, thereby better aligning shareholder and managerial interests (Jensen, 1986).

3. RESULTS AND DISCUSSION

Research on the impact of diversification on the business performance of companies indicates the complexity of these relationships, where moderate diversification often yields positive effects. This phenomenon can be explained by the inverted "U" theory, which suggests that up to a certain point, diversification genuinely increases profitability and reduces risks. However, beyond that critical point, the complexity of management and rising costs may lead to a decline in the company's performance.

For example, General Electric (GE) actively diversified its operations into various industries, including energy, healthcare, and finance, in the early 2000s. While initially this strategy resulted in significant increases in profits and market value, the sheer number of different businesses became extremely difficult to manage. As the company reached a higher level of diversification, the costs of coordination and management complexity led to a decrease in performance. In 2015, GE began a restructuring process and withdrew from certain segments, indicating the difficulties caused by excessive diversification.

Illustration 1. The Impact of GE's Diversification Over Time.



Source: Cascade Strategy (n.d.), Thompson (2003), and Chicago Booth Review (n.d.).

The chart illustrates the impact of General Electric's (GE) diversification over time. The blue line shows an increase in profits from 2000 to 2010, when the company experienced significant growth. However, starting in 2010, there was a noticeable decline in profit growth, reaching a low in 2015, when the restructuring process began. The red line represents the increasing costs of management complexity, which steadily rose from 2000 to 2015. This indicates that while diversification was initially successful, it ultimately led to the increased costs and complexity over time, resulting in diminished performance.

This example illustrates how excessive diversification can negatively impact performance, confirming the inverted "U" theory in the context of business strategies.

Empirical research shows that companies that successfully integrate new activities into their existing structures achieve significant synergies and economic benefits. Key performance indicators, such as return on assets (ROA), return on equity (ROE), and revenue growth, play an important role in assessing the effectiveness of diversification strategies. For instance, ROA measures a company's asset management efficiency, indicating that firms that successfully integrate new business units tend to achieve higher ROA, which reflects better resource utilization. ROE, on the other hand, measures profitability in relation to shareholders' equity, meaning that diversification leading to higher ROE reflects a company's ability to generate greater returns for investors. A successful diversification strategy usually results in revenue growth, indicating an expansion of market share and increased sales.

One notable example is Amazon, which started as an online bookstore but diversified its business into various industries, including cloud computing through Amazon Web Services (AWS). This strategy led to an increase in ROA, suggesting better management of new resources, and ROE significantly rose, demonstrating Amazon's ability to generate profits for its shareholders (Amazon.com, Inc., 2021).

In contrast, unsuccessful integration can lead to rising costs and diminished performance. For example, Quaker Oats acquired Snapple in 1994 for $1.7 billion, but the integration process was problematic, resulting in a significant decline in both ROA and ROE. Ultimately, the company was forced to sell Snapple for only $300 million in 1997, illustrating the failure of the diversification strategy (Koller, Goedhart & Wessels, 2010).

Moreover, institutional factors play a crucial role in shaping diversification strategies. For instance, Tata Group in India has achieved success in diversification partly due to a favorable institutional environment that encourages innovation and offers various subsidies (Ghosh, 2019). These companies have managed to align their strategies with specific market conditions, achieving long-term success in their diversification efforts.

4. CONCLUSION

Research on synergies and limitations of diversification reveals the complexity of the relationship between diversification strategies and company performance. Based on the existing literature, it can be concluded that moderate diversification usually yields positive results, while excessive diversification can negatively affect company performance. It is crucial to find an optimal level of diversification, as after a certain point, coordination and adaptation costs may outweigh the benefits of new activities.

Neoclassical models point to a positive correlation between product diversity and profitability, up to a point after which there is a decline. In strategic diversification, related activities often produce better results than the unrelated ones, and core competencies play a significant role in creating competitive advantages. During the analysis, special attention was paid to institutional factors, which significantly influence the success of diversification strategies. Companies that can adapt their strategies to changes in the institutional context may achieve better results, both in existing and new markets.

The challenges companies face include dynamic market conditions, where rapid changes require adaptation, as well as the lack of synergy between different activities, which can lead to value loss. Identifying factors that prevent the realization of synergy is an important aspect of future research. Additionally, different institutional frameworks can significantly impact company strategies, but more detailed research is needed on how these factors function in different economic systems.

Future research directions include focusing on strategy adaptation, analyzing how companies can adjust their diversification strategies in the context of changing market conditions and institutional factors, as well as identifying key success factors. It is necessary to investigate which core competencies and resources contribute to success in diversification and which diversification models lead to successful performance. Analyzing specific examples of successful and unsuccessful diversification strategies can help understand the mechanisms behind these outcomes. These guidelines can contribute to the development of diversification theory and practical applications in corporate strategy, encouraging companies to make informed decisions about their future expansion.

It is important to emphasize that contextual and institutional factors play a key role in companies' ability to generate value through diversification. The implementation of various diversification strategies significantly depends on the specific legal and economic frameworks within which firms operate. This dependency confirms the importance of institutional factors in determining the success of diversification strategies, which is evident in the evolution of large European corporations, highlighting the significance of national economic circumstances.

In times of financial crises, diversified companies demonstrate greater flexibility in capital allocation, particularly visible during the 2007-2009 recession. Research suggests that highly diversified firms are less dependent on internal cash flows when making investment decisions, making them more resilient to financial shocks. However, it is important to note that cross-segment cash flows can lead to inefficient resource allocation.

Key challenges in future research will be identifying specific factors that affect different diversification models in different institutional contexts, as well as considering the effects of internal capital markets in times of crisis, especially regarding capital allocation under unstable external financing conditions. Future research could focus on analyzing the effects of cash reserve accumulation on strategic decisions, considering that cash accumulation may be a result of operational losses. It is important to explore conflicts of interest between management and shareholders, as well as the use of mechanisms such as debt to optimize investment decisions. The analysis of ownership structure and executive compensation represents a key aspect in the context of improving company performance. Such research could contribute to a deeper understanding of diversification dynamics in various economic and institutional frameworks, thus improving the strategies companies apply to generate value.

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STRESS MITIGATION AND STRATEGIES FOR WORKING WOMEN IN NIGERIA ORGANIZATIONS

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Abstract:

Stress can strain both personal and professional relationships. Addressing the causes of stress, along with coping strategies and behavioral changes, may provide relief. Social and employer interventions can help reduce stress and improve well-being. This study examined workplace stress-reduction strategies for women. A descriptive cross-sectional research design was used, employing surveys and purposive sampling to gather data. A total of 150 Nigerians, representing each geopolitical zone and Abuja, were randomly selected from the country's 200 million population. Data was collected quantitatively through a confirmed structured questionnaire, with samples obtained via email. Traditional statistical methods were applied, using a four-point Likert scale for analysis. The majority of participants (52.4%) were aged 26–35, 69.5% were single, and 70.9% had a higher education. The sample was predominantly from the northern region (59.0%), with 23.8% of respondents holding employer roles, 47.6% freelancers, and 67.6% working in private firms. Strategies for minimizing job stress included avoiding stressful situations, sleeping, talking with coworkers, seeking professional help, and meditation. However, some strategies were less effective in preventing burnout. Most participants reported relaxing with family and enjoying their work, which helped lower stress levels. Women specifically relieved job stress by resting, taking breaks, listening to music, using social media, watching movies, talking with others, and eating. Stress-related infections such as immunosuppressive, bacterial, and fungal infections require treatment.

Keywords:

stress, women, workplace, mitigation, Nigeria.

1. INTRODUCTION

Stress at work is a widespread problem that affects many individuals who are actively employed. It can negatively influence both a person's physical and mental health, as well as their work performance. According to the American Psychological Association (APA), work stress is defined as "the detrimental physical and emotional reactions that arise when the requirements of the job do not meet the talents, resources, or demands of the worker." This stress may be triggered by a wide range of circumstances, such as an overwhelming workload, stringent time constraints, lack of control or autonomy, insufficient support or resources, and conflicts with coworkers or superiors. Additionally, personal issues, such as financial worries or challenges in one's personal life, can also contribute to work-related stress.

The consequences of workplace stress can be significant. It is linked to mental health issues such as anxiety, depression, and burnout, as well as physical symptoms like headaches, fatigue, and sleep disturbances. Moreover, stress can adversely affect job performance, leading to errors, accidents, and decreased productivity (American Psychological Association, 2020).

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Workers are less likely to experience job-related stress when the demands and pressures of their roles align better with their knowledge and skills. The likelihood of experiencing work-related stress is inversely proportional to the level of support received from colleagues or supervisors. Employees who have a greater degree of control over their work and actively participate in decision-making processes related to their roles are also less likely to experience stress (Jackson et al., 2010; Kahn and Schneider, 2014).

Both the nature of the job itself and the conditions under which it is performed are significant contributors to occupational stress. The "content of work" refers to the psychological risks associated with working conditions and the workplace environment. One of the earliest elements investigated was how the workload affected employees' health. Stress is associated with both the quantity of work (the amount of tasks to complete) and the quality of work (the complexity of tasks). Factors contributing to job stress include:

Job Content: Monotonous, under-stimulating, or meaningless tasks; lack of variety; unpleasant or aversive tasks.

Workload and Work Tempo: Having too much or too little to do; working under time constraints; strict and inflexible working hours; unpredictable schedules; poorly designed shift systems.

Participation and Control: Lack of involvement in decision-making; limited control over work methods, pace, working hours, and the work environment (ILO, 2016; Gelaye et al., 2014; Goh et al., 2015).

The long-term purpose of this study is to determine the psychological impacts that job stress has on women, as well as to identify strategies that can be employed to combat these psychological effects. This research aims to investigate the strategic mitigation of work-related stress among employed women in selected Nigerian institutions.

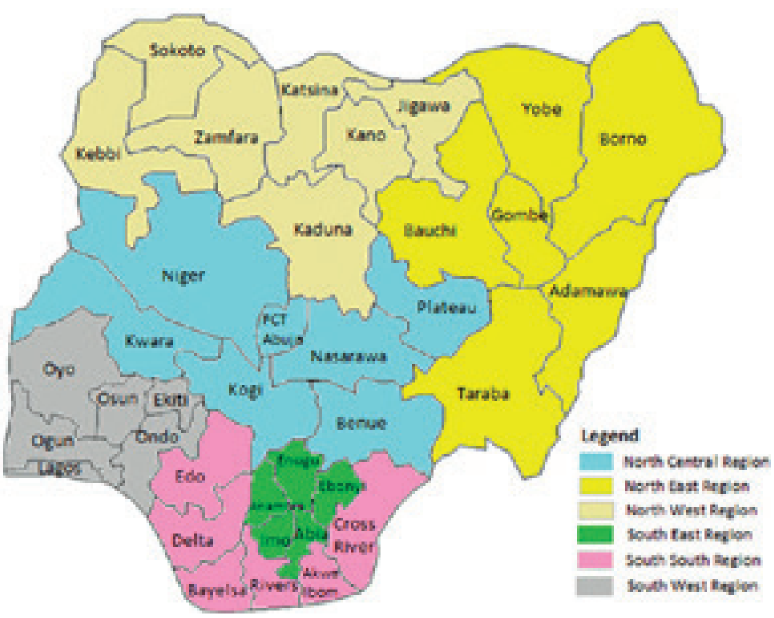
2. MATERIALS AND METHODS

A total of 150 respondents were sampled randomly from Nigeria's six geopolitical zones: North Central (NC), North East (NE), North West (NW), South West (SW), South East (SE), and South South (SS), along with five respondents from Abuja, the Federal Capital Territory (FCT), out of a population size exceeding two hundred million.

Figure 1: Map of Nigeria showing the 36 states grouped into 6 agro-ecological zones.

Fig. 1: Map of Nigeria showing states Volunteered and consented women of various age groups from variety of Nigerian organizations served as the study's population, using purposive sampling technique, which is a type of non-probability sampling method which depended on the ability of the researcher's judgment of suitability. To ensure the suitability and appropriateness of response gotten from the respondents. Electronic medium of data collection was used. The questionnaire link was delivered directly to respondents' email with an accompanying message describing the nature of the survey and the confidentiality of the questionnaire. The instrument used for collection of data is a structured questionnaire developed by the review of related literature for the study. The questionnaire was intended to elicit the objective opinions of the respondents on the mitigation of work-related stress on employed women in Nigeria Organizations.

Figure 1. Map of Nigeria showing states.



Source: Adopted from the Federal Government of Nigeria (2012).

The questionnaire consisted of four sections, A, B and C. Section A of the questionnaire elicits personal information of the respondents, while section B to C contains item questions in accordance to the specific purpose of the study and research questions developed from the study. Section B contains Ten (10) items designed to find out the general psychological effects of work stress. In section C, eight (8) items were used to determine the strategies employed to overcome work stress. Electronic medium of data collection was employed. The data obtained was analyzed statistically using 5 point Likert scale and The acceptance point for the mean (×) of nominal values assigned was calculated as mean score index. 1: Map of Nigeria showing the 36 states grouped into 6 agro-ecological zones. Fig. 1: Map of Nigeria showing states Volunteered and consented women of various age groups from variety of Nigerian organizations served as the study's population, using purposive sampling technique, which is a type of non-probability sampling method which depended on the ability of the researcher's judgment of suitability. To ensure the suitability and appropriateness of response gotten from the respondents. Electronic medium of data collection was employed. The questionnaire link was delivered directly to respondents' email with an accompanying message describing the nature of the survey and the confidentiality of the questionnaire. The instrument used for collection of data is a structured questionnaire developed by the review of related literature for the study. The questionnaire was intended to elicit the objective opinions of the respondents on the mitigation of work-related stress on employed women in Nigeria Organizations. The questionnaire was made up of four sections, A, B and C. Section A of the questionnaire elicits personal information of the respondents, while section B to C contains item questions in accordance to the specific purpose of the study and research questions developed from the study. Section B contains Ten (10) items designed to find out the general psychological effects of work stress. In section C, eight (8) items were used to determine the strategies employed to overcome work stress. Electronic medium of data collection was employed. The data obtained was analyzed statistically using 5 point Likert scale and The acceptance point for the mean (×) of nominal values assigned was calculated as mean score index.

3. RESULTS AND DISCUSSION

The sociodemographic information of the respondents was depicted on Table 1. Majority are above 25 year old, single with first degree. Most of them are Hausa by tribe and are self-employed.

Table 1. Demographic information of employed women at the study area.

Demographic Details	Demographic Details	Demographic Details	Demographic Details
Age	15-25	47	44.8
	26-35	55	52.4
	36 above	3	2.9
Marital Status	Divorced	1	1.0
	Married	30	28.6
	Single	73	69.5
	Widowed	1	1.0
Educational Qualification	B.Sc.	74	70.5
	M.Sc.	13	12.4
	PhD	6	5.7
	Secondary school	12	11.4
Language	Edo	12	11.4
	Hausa	25	23.8
	Igbira	15	14.3
	Igbo	20	19.0
	Isoko	4	3.8
	Nupe	12	11.4
	Yoruba	17	16.2
Religion	Christianity	43	41.0
	Islam	62	59.0
Work Status	Employee	49	46.7
	Employer	6	5.7
	Self employed	50	47.6

Table 1 shows the age distribution of the respondents. Of the total respondents, 47 (44.8%) are aged between 15 and 25 years, while 55 (52.4%) fall between the ages of 26 and 35 years. Additionally, 3 (2.9%) respondents are aged 36 years and above. Therefore, the age group 26 to 35 years has the highest number of respondents within the overall age range.

The table also presents the marital status of the respondents. It shows that most respondents are married, with 30 (28.6%) indicating this status. The second-highest group consists of single respondents, also with 30 (28.6%). The least represented categories are divorced and widowed respondents, with just 1 (1.0%) each.

The educational qualifications of the respondents are clearly presented in Table 4.1. Among the respondents, 74 (11.5%) hold a B.Sc., 13 (12.4%) have an M.Sc. degree, 6 (5.7%) are Ph.D. holders, and 12 (11.4%) are secondary school graduates. This indicates that B.Sc. holders constitute the highest proportion of the respondents. Further, the table shows the distribution of respondents by language. Edo-speaking respondents number 12 (11.4%), Hausa-speaking respondents total 25 (23.8%), Igbira-speaking respondents are 15 (14.3%), Isoko-speaking respondents are 4 (3.8%), Nupe-speaking respondents total 12 (11.4%), and 17 (16.2%) respondents are from the Yoruba ethnic group. This indicates that Hausa speakers are the most prevalent among the respondents.

Table 1 further provides the religious distribution of the respondents. The data shows that most respondents are Muslims, comprising 62 (59.0%), while Christian respondents total 43 (41.0%).

Regarding work status, 49 (46.7%) respondents are employees, 6 (5.7%) are employers, and 50 (47.6%) indicated that they are self-employed. This aligns with the study by Houser (2017), which reported an even distribution of women as both employers and employees in developing countries.

Table 2 contains seven (7) items that seek to gather the respondents' opinions regarding the strategies employed to overcome work stress. Out of the seven items, four were accepted while three were rejected. The accepted items had mean scores greater than the nominal score of 2.50, while the rejected items had mean scores below 2.50. Additionally, the last question outside the table is an open-ended question, bringing the total number of items in this section to eight (8).

3.1. DISCUSION

From the results of this research, all respondents in the sampled group reported occasionally experiencing stress at their workplace, confirming that female workers face stress in their work environments. Most respondents indicated that when they feel stressed, they often take some time off to relax. Although the majority of respondents confirmed that work stress does not affect their daily lives, they acknowledged that it impacts their mood and productivity. Additionally, a few respondents reported experiencing burnout due to work stress.

While most respondents agreed that they receive support from their colleagues, they noted that there is limited support from their superiors or leaders when they are stressed. These findings align with the earlier work of Lee and Ok (2020), which discovered that supervisor support was positively associated with lower levels of stress and burnout, as well as higher levels of job satisfaction and lower turnover intentions among frontline employees in the hospitality industry.

A majority of the respondents set limits on overtime work and have established a clear balance in their household workload with their partners. However, most confirmed that work stress strains their relationships with their spouses. This aligns with the study by Grotto, Habel, and Schmitt (2021), which found that work-family inter-

Table 2. Strategies employed to overcome work stress by Nigerian employed women.

Item	N	SA	A	D	SD	$\bar{x}$	Remark
When I feel stressed at work, I often ignore it	150	10	25	55	60	1.90	Rejected
When I feel stressed at work, I take time to relax	150	30	65	25	30	2.63	Accepted
When I feel stressed at work, I talk to my colleague about	150	75	35	20	20	3.10	Accepted
I often seek professional help on how to cope with workplace stress	150	10	15	35	90	1.63	Rejected
I exercise every day to help manage workplace stress	150	35	65	25	25	2.73	Accepted
I practice meditation to help me cope with workplace stress	150	25	40	45	40	2.33	Rejected
I set boundaries around my work schedule to avoid burnout	150	40	65	25	20	2.83	Accepted
When I feel stressed at work, I often ignore it	150	10	25	55	60	1.90	Rejected

ference was negatively associated with relationship satisfaction and positively associated with the likelihood of divorce, providing further evidence of the impact of work stress on romantic relationships. This strain may manifest in communication issues, as many people prefer to rest and sleep after a stressful day at work.

The research confirmed that workplace stress results in physical symptoms such as headaches, fatigue, loss of concentration, irritability, short temper, and stomach aches. These findings support the work of Dorn, Åkerstedt, Westerlund, Magnusson, and Kecklund (2021), which identified that work stress is associated with various negative physical and psychological health outcomes, including headaches, fatigue, stomach aches, and anxiety.

A vast majority of the respondents attested that the stress they experienced at work was not related to their gender and was general in nature. This contrasts with the findings of Gyllensten and Palmer (2005), which indicated that women reported higher levels of stress than their male counterparts. Most respondents also stated that there was no gender differentiation at their workplace. While the majority affirmed that they did not experience any form of discrimination during their pregnancies, they reported instances of mild sexism. Furthermore, although a large majority confirmed that the stress they experienced at work was not gender-related, they noted that unfair discrimination and treatment, due to unspecified reasons, contributed to their work stress.

This research also found that a majority of workers relieve stress by taking time off from work. They reported coping with stress by talking to their spouses or other individuals. Additionally, many manage work-related stress by making time for activities they enjoy. Other methods women use to alleviate work stress include sleeping, taking breaks, listening to music, engaging on social media, watching movies, participating in discussions, and eating.

Consequently, numerous practical applications arise from the findings of this study. These insights can be used by employers to develop more effective stress management programs tailored to the specific needs and preferences of their employees.

social support systems, encouraging physical exercise, and providing flexible work options, it is possible to greatly decrease stress levels among employees, for the purpose of an academic perspective, these results emphasize the necessity for additional investigation on the cultural, educational, and gender-related aspects that impact stress management. Potential future research could explore the long-term effects of various stress management techniques on employee well-being and productivity, as well as the influence of organizational culture on the development of these methods.

Finally, the study offers a thorough analysis of the sociodemographic variables and stress management techniques among women who are employed in Nigerian institutions. The acquired insights are extremely significant since they provide a basis for creating more efficient and culturally appropriate therapies to reduce work-related stress.

4. CONCLUSION

This research offers valuable insights into how employed women in Nigerian institutions navigate the challenges of work-related stress. These women demonstrate resilience and adaptability by taking breaks, engaging in enjoyable activities, seeking social support, and incorporating simple yet effective stress-relief techniques into their daily routines. In addition to enriching the academic understanding of stress management, these findings provide practical recommendations for organizations aiming to promote the mental well-being and productivity of their employees.

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THE ROLE OF SOCIAL MEDIA IN SHAPING MASSTIGE MARKETING STRATEGIES

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Abstract:

The paper focuses on the role of masstige marketing on the internet, with a particular emphasis on social media as a key tool for attracting consumers. The introductory section explores the significance of luxury brands as a foundation for understanding masstige strategies. Masstige marketing, which combines the prestige of luxury products with broader reach and accessibility, leverages social media to create a unique market position. These platforms enable brands to utilise influencers, corporate advertising, and content marketing to enhance visibility and engage consumers. Influencer marketing plays a pivotal role, relying on authenticity and transparency to build trust and loyalty among consumers. Additionally, the Masstige Mean Index (MMI) is introduced as a tool for measuring perceptions of mass prestige, providing brands with insights into their marketing success. This paper analyses how masstige marketing, through digital platforms, can balance exclusivity and accessibility, adapting to the evolving needs and expectations of modern consumers.

Keywords:

masstige marketing, social media, influencer marketing, Masstige Mean Index, digital marketing.

1. INTRODUCTION

In an increasingly digital world, the intersection of luxury and mass market appeal, known as masstige marketing, has become a significant focus for brands aiming to balance exclusivity with accessibility. Masstige marketing blends the allure of luxury with broader market accessibility, creating products and experiences that are both prestigious and attainable (Kumar & Paul, 2018; Paul, 2018). As a result, masstige brands often occupy a unique market space that resonates with aspirational consumers who seek quality and status without the price tag of traditional luxury goods.

The emergence of social media has revolutionized the way brands communicate with consumers, making it a critical tool for masstige marketing strategies (Živković & Brdar, 2018). Social media platforms provide unprecedented opportunities for brands to connect with audiences, amplify their messages, and create a sense of community around their products. Through targeted content, influencer partnerships, and interactive campaigns, brands can cultivate a perception of prestige while remaining accessible to a wider audience (Živković et al., 2016; Živković et al., 2014).

Influencer marketing, a key component of social media strategy, has proven particularly effective for masstige brands. By collaborating with influencers who embody the desired brand values, companies can leverage authenticity and relatability to build trust and loyalty among consumers. This approach not only enhances brand visibility but also reinforces the perception of prestige in a way that feels genuine and engaging to the audience (Brdar, 2023b).

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This paper aims to explore the dynamic role of social media in shaping masstige marketing strategies, examining how digital platforms enable brands to balance the seemingly opposing forces of exclusivity and accessibility. By analysing key elements such as influencer marketing, content strategy, and the use of metrics like the MMI, this research provides a comprehensive overview of the evolving landscape of masstige marketing in the digital age.

2. LITERATURE REVIEW

2.1. THE EVOLUTION OF THE LUXURY GOODS MARKET

Luxury brands attract consumers by emphasising high social status and the uniqueness of their products. According to Pathak et al. (2017), the appeal of luxury brands is based on the perception of rarity and exclusivity, which enhances their luxurious image. Wang et al. (2021) add that the perception of natural scarcity, created through marketing strategies, heightens the sense of luxury. Products such as luxury cars, watches, or handbags are often produced in limited editions, enhancing their sense of prestige.

Gupta (2023) emphasises that luxury brands provide a sense of belonging, superior quality, and exclusivity, making them symbols of success and sophistication. Today's consumers often aspire to imitate the lifestyle of higher social classes, drawn to luxury items that also satisfy hedonistic needs through self-reward. Traditionally, luxury products were regarded as symbols of prestige and elitism, with significant emotional value (Elena-Iulia, 2020). However, the concept of luxury has evolved to encompass diverse segments of clients with varied perceptions of luxury (Truong et al., 2009). The contemporary notion of luxury now includes personalisation, authenticity, and sustainability, adapting to the varied needs of consumers (Yeoman & McMahon-Beattie, 2011).

2.2. MASSTIGE MARKETING

Masstige marketing represents a sophisticated approach to branding, particularly for premium brands aiming for mass prestige (Kumar et al., 2020). This marketing strategy blends the prestige of luxury brands with the broad appeal of mass-market products, creating a unique positioning that resonates with a wide audience. By offering high-quality products and premium services at accessible price points, masstige brands deliver an unforgettable experience that allows consumers to enjoy a sense of luxury without the prohibitive costs traditionally associated with high-end goods. The success of masstige marketing lies in its deep understanding of the target audience and its ability to cater to their evolving needs and desires. This approach requires brands to carefully study consumer behaviour, preferences, and socio-economic conditions to tailor their offerings and communication strategies effectively. Brands must skilfully adapt their image and messaging to project luxury and exclusivity while remaining approachable and relatable to a broader demographic.

The implementation of masstige marketing involves strategic brand positioning as a symbol of luxury, quality, and superior service (Paul, 2018). This nuanced positioning builds strong emotional connections with consumers, fostering loyalty and repeat business. By creating a distinct identity that combines elements of both luxury and accessibility, masstige brands can stand out in the highly competitive marketplace, differentiating themselves from both traditional luxury brands and mass-market alternatives. This duality helps create long-term value by appealing to aspirational consumers who seek status and quality without compromising their financial comfort. The marketing mix (4Ps)—product, promotion, place, and price—plays a crucial role in masstige marketing. Special emphasis is placed on product innovation, compelling promotional strategies, and efficient distribution channels to reach a broad audience while maintaining a premium feel (Brdar, 2023a). Unlike traditional luxury marketing, which often employs high pricing to signal exclusivity, masstige marketing keeps prices stable yet competitive, ensuring that luxury remains within reach of middle-class consumers.

Positioning within masstige marketing revolves around the careful balance of high perceived prestige with accessible pricing. This strategy appeals particularly to middle-class consumers who aspire to experience luxury without a significant financial burden (Truong et al., 2009). Silverstein and Fiske (2003) underscore the significance of masstige marketing in bridging the gap between exclusivity and accessibility, drawing the middle class toward luxury goods by offering them at more attainable price points. The growing demand for masstige brands reflects the middle class's desire for luxury experiences that are not out of reach. Brands like Michael Kors, Coach, and Apple have successfully employed masstige strategies to create a perception of luxury that is both aspirational and accessible. The concept of "high quality, low price" is central to this approach, as it enhances price perception and boosts purchase intentions, especially among consumers who do not strictly associate high prices with superior quality (Shirai, 2015). This democratization of luxury aligns with broader societal shifts toward inclusivity and the desire for self-reward, making masstige marketing a powerful tool for modern brands.

2.3. MMI – MASSTIGE MEAN INDEX

Paul (2015) introduces the Masstige Mean Index (MMI), an innovative quantitative tool designed to measure a brand's mass prestige numerically, offering a comprehensive framework for brands to gain a deeper insight into their market presence and develop more targeted marketing strategies. The MMI serves as a diagnostic instrument that helps brands assess their positioning by quantifying consumer perceptions across multiple dimensions. By systematically evaluating a brand's standing in terms of luxury appeal, consumer awareness, and perceived quality, the MMI provides actionable data that can inform strategic decisions in brand management. The MMI is structured around a detailed questionnaire that captures three key factors critical to understanding a brand's mass prestige:

- Mass Prestige: This dimension evaluates how consumers perceive the brand in terms of luxury, exclusivity, and aspirational value, offering insights into how the brand is viewed in the marketplace. It measures the extent to which the brand has succeeded in balancing the allure of exclusivity with broad accessibility, a hallmark of successful masstige marketing. High scores in mass prestige indicate that the brand is perceived as desirable and prestigious by a wide audience, thereby reinforcing its competitive edge in appealing to aspirational consumers.
- Brand Knowledge: This factor assesses consumer familiarity with the brand, including their awareness of the brand's values, history, and product or service offerings. Brand knowledge reflects the depth of consumer engagement and the effectiveness of the brand's communication strategies. A well-informed consumer base is more likely to form a strong emotional connection with the brand, leading to increased brand loyalty and advocacy. By understanding the level of brand knowledge, companies can fine-tune their marketing efforts to enhance brand recall and strengthen consumer relationships.
- Perceived Quality: This aspect analyses consumer perceptions of the brand's product or service quality, focusing on attributes such as durability, performance, craftsmanship, and functionality. High perceived quality is crucial for sustaining a positive brand image, as it directly influences consumer satisfaction and repeat purchase behaviour. This factor also serves as an indicator of a brand's ability to meet or exceed consumer expectations, which is essential for maintaining a strong market position in the competitive landscape of masstige brands.

According to Paul (2019), findings from the MMI reveal that a higher Masstige Mean Index Value (MMIV) correlates with increased brand awareness, recognition, and a more favourable perception of quality among consumers. Brands with a high MMIV not only enjoy greater prestige but also benefit from a stronger emotional connection with their audience, which translates into higher consumer loyalty and market share. The MMI thus provides brands with critical insights into their strengths and areas for improvement, allowing them to refine their brand positioning and marketing strategies.

Moreover, the MMI's analytical approach helps brands identify specific consumer segments that perceive them as prestigious, guiding targeted marketing campaigns that resonate with these audiences. For instance, by pinpointing the exact factors that drive perceptions of prestige and quality, brands can optimise their product design, enhance their storytelling, and improve their customer service, thereby reinforcing their market position. In the broader context of masstige marketing, the MMI serves as a vital tool for navigating the challenges of balancing exclusivity with mass appeal. Brands can use the MMI to monitor changes in consumer perceptions over time, track the effectiveness of new marketing initiatives, and adjust their strategies to align more closely with evolving consumer expectations. Ultimately, the MMI empowers brands to make data-driven decisions that enhance their prestige and popularity, ensuring sustained success in a highly competitive market environment.

3. SOCIAL MEDIA MARKETING IN THE CONTEXT OF SHAPING MASSTIGE MARKETING STRATEGIES

Dahlen et al. (2009) emphasise that brands with lower reputations are more effective in utilising non-traditional media to enhance visibility, whereas those with higher reputations must carefully align media usage with their image. Social media significantly impacts brand management, particularly in masstige marketing, where consumers actively shape brand narratives (Gensler et al., 2013). It is crucial for brands to carefully monitor and manage these narratives to build their image and achieve market success. Social media marketing enhances customer satisfaction, a sense of belonging, and perceived value, thereby encouraging purchases (Kim & Kim, 2022). This form of marketing plays a vital role in advertising, managing customer relationships, and strengthening the brand (Alalwan et al., 2017). Social media strategies enable efficient message delivery, targeting of specific groups, and campaign monitoring, while electronic word-of-mouth assists in gathering feedback. Fan (2023) identifies key social media strategies, including:

- Celebrity Endorsement: Engaging well-known public figures to increase brand visibility.
- Corporate Advertising: Direct advertising to enhance brand recognition and stimulate consumer spending.
- Content Marketing: Creating relevant content to engage users.

By combining these strategies, brands can effectively leverage social media to enhance their image and achieve marketing objectives.

3.1. STRATEGY I: CELEBRITY ENDORSEMENT

Masstige marketing strikes a balance between luxury and accessibility, targeting middle-class consumers who aspire to sophistication but seek to avoid the high costs associated with luxury brands. These consumers value uniqueness and are influenced by interpersonal factors, motivating them to purchase masstige products. Their desire to stand out and follow social trends further fuels this inclination (Das et al., 2021). The purchasing decisions of these consumers are driven by their desire for distinctive and recognisable products. Social media influencers serve as a significant marketing tool, focusing on creating appealing content and transparent communication (Hudders et al., 2020). The effectiveness of influencer marketing depends on the influencer's originality, follower count, and sponsorships (Leung et al., 2022). However, overly direct advertising can provoke negative reactions. A strategic approach to influencer marketing involves selecting the right influencers, tailoring campaigns to brand objectives, and monitoring outcomes (Ye et al., 2021). The quality of content created by influencers, their credibility, and their relatability with followers strengthen consumer trust (Lou & Yuan, 2019). In masstige marketing, collaboration with influencers can enhance brand image, reduce advertising resistance, and increase consumer loyalty while maintaining the brand's exclusivity (Kim & Kim, 2022).

3.2. STRATEGY II: CORPORATE ADVERTISING

Corporate credibility plays an important role in shaping consumer responses to advertisements and brands. Sallam (2011) notes that corporate credibility, measured by honesty and expertise, significantly impacts consumer attitudes and purchase intentions, helping to create a positive brand image and enhance brand recognition and reputation. The credibility of endorsers can increase the effectiveness of advertising campaigns and influence attitudes towards advertisements (Lafferty & Goldsmith, 1999). Maintaining high corporate credibility is essential for building and sustaining a positive brand image, allowing brands to effectively communicate their values and strategies to the target audience, thereby improving market position and consumer loyalty (Goldsmith et al., 2000). In masstige marketing, where brands balance prestige and accessibility, maintaining high corporate credibility is crucial for building positive perceptions and enhancing consumer trust (Weerasinghe, 2019). Effective management of this credibility allows brands to preserve their prestige while offering accessibility to a broader audience. The content created by influencers, including their reliability, attractiveness, and relatability with followers, significantly contributes to strengthening consumer trust, which is particularly important for masstige marketing (Lou & Yuan, 2019). This approach enhances advertising credibility and reduces resistance, enabling brands to reach target market segments more effectively.

3.3. STRATEGY III: CONTENT MARKETING

Digital content marketing is a crucial tool for brands in masstige marketing as it expands the target audience and strengthens relationships with consumers. Rowley (2008) highlights that a successful approach requires understanding the value consumers place on content and encouraging their active participation in content creation, which enhances loyalty and builds deeper connections between the brand and its customers. Hollebeek and Macky (2019) stress that relevant content on digital platforms builds trust and increases brand value, helping brands to stand out and connect with consumers in a way that contributes to long-term success. Plessis (2022) adds that further research is needed to better understand consumer behaviour online, which is essential for adapting strategies in the evolving digital environment. The HIT-ECM framework, as presented by Mansour and Barandas (2017), enables high-tech entrepreneurs to use content-based marketing to innovate business models through content customisation and strategic networking. Bondarenko & Yashchenko (2023) state that content marketing helps businesses strengthen loyalty and improve business processes using formats such as infographics, e-books, and videos. This approach allows brands in the masstige segment to combine accessibility and prestige, achieving success in maintaining exclusivity while connecting with a broader consumer base.

Social media plays a significant role in masstige marketing, which combines elements of mass and luxury marketing. This approach enables brands to promote effectively and engage consumers, providing a fast and interactive way of communication (Pricopoaia & Susanu, 2021). Brands use social media to build and enhance relationships with consumers, reduce promotion costs, and improve brand recognition, which is crucial for masstige marketing that combines luxury and accessibility

(Dwivedi et al., 2021). Through these platforms, brands can communicate with consumers in a way that supports brand sustainability, sharing information and gathering feedback for strategy development (Adwan & Altrjman, 2024). Social media marketing significantly impacts user intentions, with social identification and satisfaction playing an important role (Jamil et al., 2022). Brands create a sense of community and exclusivity typical of luxury brands while maintaining the accessibility of the masstige segment.

4. CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH

This paper has highlighted the importance of masstige marketing in the contemporary digital environment, emphasising the role of social media as a key tool for attracting consumers. Masstige marketing, which balances luxury and accessibility, leverages social media to enhance visibility and consumer engagement while relying on influencer marketing, corporate advertising, and content marketing to establish a unique market position. Future research should focus on gaining a detailed understanding of the impact of different social media platforms on masstige marketing, analysing the effectiveness of specific marketing strategies, and evaluating the long-term effects of masstige marketing on brand perception. Additionally, research could explore how masstige strategies adapt to new trends and technologies in digital marketing. Understanding these aspects can help brands optimise their marketing approaches and improve their market position, providing deeper insights into the dynamics of masstige marketing in the contemporary digital context.

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Singidunum University International Scientific Conference
Međunarodna naučna konferencija Univerziteta Singidunum

PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Green economics
Original paper

THE IMPACT OF SOCIAL MEDIA ON ESG THROUGH THE LENS OF GREENWASHING

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Abstract:

Modern organizations use keywords that describe sustainable and environmentally friendly behavior to meet promises made to green consumers and gain an advantage over competitors. Organizations may face reputational damage due to issues such as complaints from customers, legal cases, or actions that harm the environment. It is not rare that public statements of organizations toward their green behavior are not supported with their credible actions, so phrases "climate neutrality", "net zero commitment" and others are just claims that follow the trend to be eco-friendly and acceptable in ESG standards. If organizations only follow the trend and use marketing campaigns to show that they are committed to sustainability, there is a high likelihood that we will engage in the greenwashing practice of those organizations. In the paper, authors make a breakdown regarding notable global greenwashing examples focusing on litigation cases which take origin from social media ads.

Keywords:

greenwashing, social media, ESG, organization, litigation risk.

1. INTRODUCTION

In the digital age, brand reliability and clients' purchase expectations are largely influenced by web-based marketing campaigns (Balakrishnan et al., 2014). The primary direct impact on purchasing goals was found in the subcomponents of web-based entertainment showcasing exercises, amusement, and informality. Additionally, web-based entertainment promoting efforts indirectly influence clients' purchasing intentions through brand trust and brand image effects. The prominence of online entertainment has turned into a business system in light of its extreme focus on purpose and high showcasing adequacy. Showcasing items and administrations via web-based entertainment are minimal, expensive and effective, and are a brilliant channel to increment item purchase conduct (Hu et al., 2024).

Modern organizations use keywords that describe sustainable and environmentally friendly behavior to meet promises made to green consumers and gain an advantage over competitors. It is not rare that public statements of organizations toward their green behavior are not supported with their credible actions, so phrases like: "climate neutrality", "net zero commitment" and others are just claims made for the purpose of the following trend to be eco-friendly and acceptable in Environmental, Social and Governance (hereinafter: ESG) terms. In the contemporary environment, social media, media ads and consumer initiatives can affect how people see and trust organizations that frequently use green practices (Wibowo et al., 2020). People who are more environmentally conscious lessen or stay away from environmentally harmful items by picking options harmless to the ecosystem; driving less and using products for as long as possible before replacing them; and are more mindful of the physical and mental advantages of green products (Khare, 2019).

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Great corporate ESG execution mirrors the organization's proactive responsibility, earning support from the public authority and acknowledgment from society (Quintiliani, 2022). Simultaneously, when organizations attempt ESG exercises, they receive cultural praise and get media inclusion. Media consideration applies popular assessment strain on corporate chiefs, driving them to lift corporate social obligation (CSR) data revelation to an essential improvement level, expecting to keep a positive corporate picture in clients' eyes (Benjamin & Biswas, 2022). Great corporate ESG execution frequently draws in media consideration, and the media's administrative intercession and directing impact of popular assessment pressure impact corporate way of behaving, convincing organizations to answer proactively. This interaction cultivates an upright administration cycle, advancing great ESG (Chang et al., 2023).

In addition to positive business practices, there is also the well-recognized phenomenon of greenwashing, the term that describes a deceptive organizational sustainability claim that can happen and spread deliberately or accidentally. Economic goals may encourage wrongdoing on the part of organizations and using greenwashing techniques to manipulate the public's perception of "green labeling" (Treen et al., 2020). Organizations profit from the widespread use of green marketing these days and the rising demand from consumers for eco-friendly goods and services by engaging in greenwashing. To stay true to their promise to eco-mindful buyers and outperform contenders, organizations use claims that address manageable and harmless ecosystem conduct. In the digital age, media campaigns that directly impact the public's view and reputation of companies engaging in greenwashing are the primary sources of reputational risk (Mirković et al., 2023).

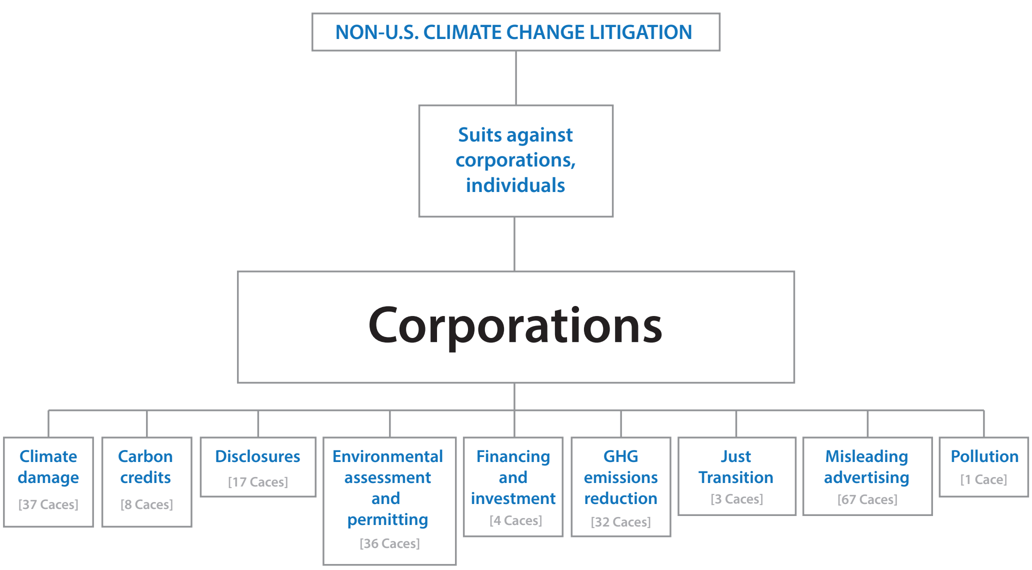
This article is structured in the following manner. The introduction part is dedicated to the role of social media and the phenomenon of greenwashing whereas the second title is related to research methodology and case studies of greenwashing in the aviation industry. The third title emphasizes the examples of greenwashing that take origins from Climate Change Litigation Database for non-US entities in industries different from those already elaborated on in the aviation industry. In the end, the authors pinpoint the key findings and potential benefits of this paper.

2. RESEARCH METHODOLOGY

For desk research in this paper, the authors used "Climate Change Litigation Databases" which is publicly available at the following link: https://climatecasechart.com/ (Climate Change Litigation Databases, 2024a). It consists of two databases that cover legislation on climate change where all cases are included in the Global database except for the US instances. These databases are searchable and arranged according to the type of claim. In this paper, authors focused on the Global database (non-US Database) and filtered "Suits against corporations and individuals" among three available filters. Upon choosing the filter, authors select filter "Corporation" which has nine different options, i.e. type of claims, presented in Figure 1:

The central part of the paper encompasses cases related to misleading advertising, more precisely within the topic of advertising using social media (Facebook, Youtube, X or formerly known as Twitter, Instagram, Google, etc.). The authors have chosen four cases to briefly analyze the conduct of companies which could be evaluated as greenwashing.

Figure 1. The structure of Non-US Climate Change Litigation cases among Corporates.



Source: https://climatecasechart.com/

3. RESULTS AND DISCUSSION

3.1. GREENWASHING CASES IN THE AVIATION INDUSTRY

The first two cases are directly related to the companies which are involved in the aviation industry and airplane business, namely Etihad Airways and 4Air LLC.

Etihad Airways is the national airline operator of United Arab of Emirates and a well-known operator worldwide. In October 2022, two Facebook ads were run and their content was challenged by The Advertising Standards Authority (hereinafter: ASA). The objective of ASA was to determine whether this advertising led to the wrong impression regarding the environmental impact of the flying service. On 12 April 2023, the decision regarding this case was made. The CAP Code (The UK Code of Non-Broadcast Advertising and Direct & Promotional) considers that absolute environmental statements should be supported by a substantial amount of evidence. According to Etihad advertisement, the phrase "sustainable aviation" would be seen as a long-term, complex goal focused on the airline industry (Climate Change Litigation Databases, 2024b). One aspect of this objective is achieving net zero carbon emissions by the year 2050. However, to appeal to a larger audience, the advertisment did not mention Etihad's objective of being net-zero till 2050; instead, they discussed "sustainable aviation" as a long-term objective.

Etihad had made assertions regarding lowering emissions with the usage of contemporary aircraft and flying techniques. However, high levels of CO2 and non-CO2 emissions from air travel persisted, significantly contributing to climate change. Many of the projects Etihad claimed to be committed to implementing were only expected to provide benefits several years or even decades from now. Due to this multidimensional approach, Etihad was forced to make bolder decisions than ever before, implementing new programs and technology as a part of a cohesive sustainability plan. They cited instances of the bolder approach, such as reorganizing their fleet to use contemporary, fuel-efficient aircraft. Sustainable aviation fuel generation in the UAE was developed as part of an energy and food security project. Etihad additionally stated that they were awarded several honors that demonstrated their "louder, bolder approach to sustainable aviation". Moreover, efforts in utilizing more efficient airplanes and minimizing single-use plastics did not provide sufficient support for a "sustainable aviation" claim. The claim overstated the environmental effect of traveling with Etihad, and the advertisements violated the Code. Etihad had been told to take steps to make sure that adequate evidence was set up to support their advertisements and that they did not provide a false image of the impact of flying with the airline. Generally, Etihad Airways broke the rules on misleading advertising and environmental claims, as it is stated in final decision (Climate Change Litigation Databases, 2024b).

4Air LLC, self-described as a "sustainability solutions program dedicated to aviation", is the second case study of litigation and greenwashing by using social media elaborated in the paper. Namely, In November 2022, a Google ad for 4AIR was introduced which misled customers regarding environmental claims of the company. The ASA expected to see a high degree of evidence supporting the claims, taking into account the entire lifespan of the products and services related to 4AIR's services. Because those services were closely related to aviation, they encompassed every phase of aviation activities, yet 4AIR did not operate any aircraft. Aviation created significant amounts of CO2 and non-CO2 emissions that contributed to climate change, even while using Sustainable Aviation Fuel. Furthermore, the results of research into future aircraft technologies would not be available until decades later. Support of such an activity via 4AIR was not sufficient substantiation to demonstrate the claim "Turn Flying into a Force for Good" as it was perceived. Also, there were no efforts or economically feasible innovations in the aviation industry that fully verified the absolute statements such as "eco-friendly aviation" and "sustainable aviation" as businesses would perceive them in context.

The ASA concluded that the advertisement could not be shown again in the format it was originally presented in. The ASA warned 4AIR to avoid misleading businesses by understating the environmental impact of their service, particularly when making unequivocal claims such as "eco-friendly aviation", "sustainable aviation" and "Turn Flying into a Force for Good". This decision was part of a bigger initiative addressing climate change and the environment (Climate Change Litigation Databases, 2024c). The ad was identified for evaluation as a consequence of intelligence obtained by the ASA's Active Ad Monitoring system, which uses artificial intelligence to actively search out internet ads that may violate the regulations.

3.2. OTHER GREENWASHING CASES LINKED TO SOCIAL MEDIA

Besides cases in the airplane industry previously expounded upon, the authors also analyzed some cases in other industries, such as pet vegan food and the petroleum and oil industry. Among other examples, the first is a supplier of vegetarian dog food the **Pack Pet Ltd**, which was a subject of greenwashing claims related to the post on its Facebook page starting around 12 June 2022, trailed by video. The content of the video featured several images of bowls filled with dog food, and the message at the end emphasized a strong connection between healthier dog food and a cleaner planet. Likewise subtitle in the video with the citation “better for the planet" was the subject of protest made by ASA to decide whether articulations in that video were bad behavior. ASA assessed proof given by Pack Pet Ltd in three separate examinations (Climate Change Litigation Databases, 2024d).

The main review included three gatherings of canines that were taken care of in one of three weight control plans: regular meat-based, crude meat, or veggie lover. The review’s reliability was debilitated by the way that 82% of respondents needed veterinary ability or abilities while surveying their pet’s well-being. The review verified that a greater, long-haul study was required. The subsequent paper, which had not been peer-inspected, demonstrated that the information it contained might have contained arbitrary happenstance connections, and that planned, randomized, controlled clinical examinations were expected to demonstrate the remedial significance of the discoveries. The third review utilized a web-based structure to gather diet data from 1,189 canines: 56% were taken care of a meat-based diet, 30% a plant-based diet, 5% a mix of the two, and 9% an indeterminable eating regimen (Climate Change Litigation Databases, 2024d).

In any case, it likewise resolved that no causation could be obtained from the outcomes, and there was a high opportunity of review predisposition for respondents. Aside from the way that the Pack Pet Ltd transmits nearly multiple times less CO2 than meat-based elective items, the ASA figured out that Pack’s commercials were not satisfactory and straightforward enough especially regarding the consideration of the full life cycle assessment of the products. (Climate Change Litigation Databases, 2024d).

Shell UK Ltd., a recognized multinational petroleum and oil company, wanted to make its low-emission energy products and services more accessible by increasing consumer awareness and demand. They thought that the advertisements accurately portrayed those goods and services and did not omit any information regarding their energy products, (such as gasoline) that were less friendly to the environment. Customers would primarily associate their brand with gasoline purchases because they would already be educated about that aspect of their business. Independent market research reveals that 83% of customers prefer Shell’s products and services that use less carbon, like renewable electricity and electric car charging (Climate Change Litigation Databases, 2024d). By providing concise and precise information about its most recent products, Shell aimed to close the knowledge gap among customers. This would be a significant step toward the company's larger objective of assisting clients in switching to energy sources with lower emissions.

Since the ads’ motivation was to advance low-carbon energy and introduce its “Powering Progress Strategy”, they accepted that any notice of high-carbon Shell items would have been counterproductive. Data about those Shell items would have simply served to feature their reality and accessibility and subsequently weaken the effect of the promotions’ positive natural message. Through its proclaimed Strategy, Shell intended to become a leader in its industry among companies that are truly committed to net-zero objectives achievement. Shell neither accepted that the promotions distorted the overall ecological effect of their business exercises, nor that the promotions precluded significant data about that effect. They likewise expressed that buyers would almost certainly comprehend that the promotion just went such a long way as to situate Shell’s sustainable power deals as a component of a system to help clients progress away from items with high CO2 emissions (Climate Change Litigation Databases, 2024d).

The ASA recognized that clients were probably going to grasp that energy items gotten from petroleum derivatives were earth-hindering. Also, they found that numerous purchasers would intently connect Shell with petroleum deals, and that the organization was associated with oil and gas speculation and extraction as their primary business. The ASA noticed that clients were progressively concerned about the ecological effect of exercises connected with higher-carbon items. Nonetheless, they were probably not going to know about the subtleties of this corresponding to specific organizations, and advertisements were along these lines liable to misdirect purchasers if they distorted the commitment that lower-carbon drives played, or would play in the close future, as a component of the general equilibrium of an organization's exercises. The ASA considers that buyers would draw a qualification between “Shell” and “Shell Energy”, especially because Shell was a brand notable for its energy items in a broader sense.

The general impression of the promotion was that low-carbon energy items included a huge extent of the energy items Shell put resources into and sold in the UK in 2022 or were probably going to do as such in the prospective period. Finally, the ASA considered that, despite the Shell’s arguments regarding “Powering Progress Strategy”, clients were not in a position to fully understand their commitment to net-zero objectives and lowering CO2 emissions as it could be concluded from the ads on YouTube. They found out that by avoiding the transparent usage of keywords on YouTube ad that directly pinpoint sustainable goals achievement, Shell’s intentions were more likely to mislead clients by the absence of material significant information.

4. CONCLUSION

Modern organizations are concerned with the topic of sustainable behavior and as a result of that focus the term ESG is more than up-to-date. A lot of research showed that a good corporate ESG segment increases the value of the company through better positioning on the market. One of the often used means for market positioning is the usage of different marketing campaigns which could have offensive impact on potential clients. Apart from positive marketing campaigns, it is not a rare situation that organizations make some eco-friendly and acceptable claims in public using social media just for the reason of following the global trend of sustainability worldwide. These misleading claims which are blatant examples of greenwashing should not be justified from any perspective.

Certainly, an adequate ESG embedded into an organization profile brings obvious benefits to them, such as an increase in corporate value, better adjustment on behavior of competitors, realization of long-term objectives in terms of sustainability, building a trust and credibility on the market, diminishing potential threats from the environment and strengthening the organization's brand value and reputation. When ESG component is well integrated into organization it means that there exist prerequisites for expanded media attention. Responsible behavior of organizations imposes that marketing campaigns and usage of social media for sustainable goals realization should be careful, measured, not too offensive and most important, accurate, meaning that reflects their substantial actions. Otherwise, the organization's actions are likely to be classified as greenwashing which will be the subject of monitoring and sanctioning by relevant bodies authorized to prevent such behavior.

In the paper, authors have analyzed four cases of misleading claims made on social media by organizations that are involved in the airplane industry, the industry of pet vegan food and the petroleum and oil industry. All observed cases were sanctioned by the ASA due to breaching the rules on advertising and misleading consumers by announcing claims that were primarily intended for reaching green and sustainable objectives. There was no visible evidence that the organization's behavior was confirmed with marketing campaigns via social media that included exclusively eco-friendly and acceptable statements. The objective of this paper was to pinpoint certain behaviors of organizations that result in litigation cases and reputational damage and it could be beneficial for practitioners that are mainly involved in the area of sustainable development and green economy.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Human resource
Review paper

HR'S ROLE IN FOSTERING AGILE CULTURE AND UPSKILLING IT TALENT

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Abstract:

Rapid changes in technology in the IT sector make continuous development and improvement of employees crucial for company success. However, attracting and retaining talent with the necessary skills presents a significant challenge for HR professionals. This paper analyzes the role of HR in creating an agile culture and encouraging upskilling to retain IT talent. We aim to examine how various HR strategies, such as education and training programs, launching innovation initiatives, and flexible working options, impact team agility, innovation, and employee motivation. Through a comparative analysis of existing research, the paper identifies key challenges and opportunities within HR practices, underscoring the necessity for continuous adaptation and innovation in HR strategies to support organizational success in a dynamic global business environment. The paper concludes with practical recommendations for HR professionals in the IT sector, aiming to improve their strategies for attracting and retaining skilled IT professionals through effective upskilling programs and agile practices.

Keywords:

agile culture, upskilling, talent retention, IT technologies, skills.

1. INTRODUCTION

The information technology (IT) sector is characterized by rapid development and continuous innovation in today's world. This dynamic environment requires companies to be agile and capable of quickly adapting to changes. Success in such an environment is crucially dependent on having talented and motivated IT professionals with the necessary skills. However, attracting and retaining such talent is increasingly challenging for HR professionals. From all this, companies must develop an agile culture. It should enable the creation of a work environment that supports rapid adaptation, response, and innovation. Agility programs and their implementation are becoming something that is already taken for granted. In this way, companies want to show that they respond quickly to changes and all the challenges that arise before them. In this direction, companies want to enable the upgrading of the skills of their employees, because that is something new. The job that was done in the previous period required one set of skills. New challenges have also brought the need for new skills. To meet these demands, HR must provide additional opportunities and resources for skill development and improvement. This process is not at all easy and simple. It is considered key in developing an agile culture and its realization. This is a big change for the company. HR must play a key role in this transition. In addition to clearly defined employee needs for their new skills, it must take into account how the change will be accepted and applied in the coming period. HR needs to increase employee motivation so that employees feel certain benefits in implementing an agile culture. HR is the one who needs to create a positive work atmosphere with all managers that values acceptance,

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initiative, and employee contribution in achieving company goals on one hand, and on the other hand needs to create a culture that builds and nurtures a climate that encourages loyalty to the company. In the analysis itself, we will use quantitative and qualitative analysis methods to identify effective HR strategies that can help IT sector companies retain their talents and stay competitive in a dynamic digital environment. We will particularly emphasize that developing an agile culture is a necessity for quick adaptation in today's times. HR must implement various agile methodologies, which should enable teams and company employees to quickly respond to changes and provide new solutions in a short period of time. One of the important HR challenges is also creating an environment that should support all employees in initiating and trying out new ideas, even if there is a risk of mistakes. The new approach and agility should imply tolerance for mistakes and learning from them. To achieve this, it is necessary to support open communication, brainstorming sessions, and promotion of creative thinking among employees. Also, allowing employees to work on projects that challenge and inspire them. For employees to respond to all these demands, HR must enable skill upgrading. This means providing financial support and time for employees to attend various trainings, IT conferences, and other educational programs that are relevant to their roles and future career goals.

Along the way, it is important to connect more experienced employees with new or less experienced colleagues to provide support and pass on their knowledge and experience. Companies are increasingly developing internal platforms for e-learning or libraries of professional materials available to all employees for continuous improvement. HR's role must also be focused on recognizing employee contributions, providing praise and rewards for achievements, and individual or team successes. HR must monitor trends and employee demands. One of these is enabling employees flexible working hours, working from home, or other arrangements that suit their personal needs and improve the work-private life balance. Implementing these strategies can significantly contribute to attracting, retaining, and motivating talent in the IT sector, which is crucial for company success in a fast and dynamic digital environment.

2. LITERATURE REVIEW

As Ajayi and Udeh (2024b) state the analysis emphasizes HR's vital role in developing agile leadership, promoting continuous learning and psychological safety, and using HR technologies to boost workforce agility. Key findings stress HR's strategic involvement in leadership development, learning frameworks, and fostering agile team dynamics to cultivate an agile work culture. The study also discusses upcoming challenges and opportunities in agile work cultures such as integrating remote work, AI, and ensuring diversity. Recommendations for HR and IT leaders include investing in agile leadership, improving team dynamics, and fostering continuous improvement culture. Additionally, the study highlights HR's crucial role in facilitating agile transformations within IT sectors and suggests future research directions on emerging technologies' impact on agile methodologies and HR's role in building inclusive and diverse agile teams. This research enhances our understanding of how HR-driven agile practices can propel organizational success in the evolving digital landscape.

As Shan and Wang (2024) state, in the ever-changing landscape of the knowledge economy, organizations must align their HR, IT, and agile strategies with the demands of a dynamic global business environment. This research embarks on a comprehensive exploration of HR, IT, and agile practices on a global scale. It seeks to unravel the intricacies of how organizations strategically align their HR, IT, and agile initiatives with the evolving demands of the knowledge economy.

According to Ajayi & Udeh (2024a), the transformative impact of digital technology has made upskilling increasingly crucial for the company. This is especially important given its small size, which exacerbates challenges such as outdated skills and limited training resources. The thesis employed interviews as the primary data collection method and focused on theories and approaches for upskilling, especially in the IT sector. By analyzing the company's current practices and engaging key stakeholders, the thesis crafted a tailored framework for fostering employee upskilling. This framework, informed by both theory and practical insights, aims to facilitate orderly upskilling processes, resource management, and the cultivation of a learning-oriented workplace culture. Ultimately, the thesis seeks to enhance digital solutions, boost project success rates, and promote creativity within the organization.

As Mishra and Chakraborty (2023) state, Industry 4.0 is reshaping the economy. As a result, businesses face heightened complexity, disruption, and uncertainty, necessitating frequent innovation in products and services.Organizations must adapt to evolving trends, embrace change, and develop agile processes to navigate new manufacturing systems and manage organizational impacts effectively. Leaders play a crucial role in fostering adaptability and responding swiftly to dynamic business dynamics. The shift towards a more agile organization requires a redefined leadership approach, with HR functions also needing to adopt agility. This chapter explores key HR agile practices and their impact on employee engagement, highlighting the importance of agile HR systems in fostering employee commitment amidst evolving business landscapes.

McMackin & Heffernan(2021) notes that the business landscape has evolved significantly in recent decades, prompting the adoption of innovative approaches, particularly within the HR domain. Agile principles, traditionally associated with technology production, are now extending into broader business value creation, including HR practices. Agile HR involves customer participation in product development, reflecting the human-centric nature of digital transformation. Key change enablers, intrinsically motivated individuals within organizations, drive progress towards new goals.

Vandy et al. (2024) have found that empirical evidence underscores the necessity for organizations to align their HRM practices with the new normal. The new normal in HRM presents both challenges and opportunities. Challenges include adapting to remote work, maintaining workplace culture and collaboration, and upskilling employees in digital tools and processes. However, it also offers opportunities such as accessing a broader talent pool and developing flexible work arrangements that support employee well-being. HR practitioners can leverage technology and adopt innovative practices to support workforce agility, employee engagement, and organizational success in the post-pandemic world.

To navigate these challenges and capitalize on opportunities, HR practitioners must adopt innovative and agile approaches to talent management, employee engagement, and workplace culture (Ásmundsson, 2021). This paper aims to explore practical strategies for HRM adaptation in light of the new normal, drawing from the broader HRM literature to guide practitioners and HR professionals in aligning their HRM practices with evolving developments.

Guðjón (2021) states that in today's rapidly changing world, companies must embrace agility, flexibility and adaptability like never before. Shifting from a survival mindset to one focused on thriving is imperative. Many companies are transitioning to project-driven models and flexible team networks, reflecting the growing trend towards a gig economy and increased project-focused work. Employees seek companies that foster a sense of belonging, prioritize their well-being, and offer opportunities for growth. To meet these expectations, companies must cultivate a culture that values personal and professional development. This includes providing opportunities for upskilling, reskilling, and internal mobility. Investing in IT and AI solutions can help employees find growth opportunities within the company, leading to a more competent workforce and increased retention of knowledge workers. While this development is promising, it also presents ethical challenges. The paper offers insights into the current state of this trend and explores potential future directions.

Istenič et al. (2022) in their research conduct a comprehensive examination of workforce upskilling initiatives in the Information Technology (IT) sector, aiming to identify effective strategies for preparing professionals for the rapidly changing digital landscape. Utilizing a systematic literature review and content analysis, the study investigates various upskilling programs, focusing on their design, implementation, and outcomes. Data are sourced from peer-reviewed journals and conference proceedings, selected based on relevance and timeliness to the current IT context. Key findings highlight the importance of anticipating technological trends to align workforce capabilities with future demands, emphasizing personalized and experiential learning pathways. The study underscores the strategic role of upskilling in bridging the digital divide and advocates for inclusive and accessible learning opportunities to cultivate a diverse and globally competitive workforce. Recommendations for stakeholders include adopting flexible learning models, fostering industry-academia partnerships, and prioritizing the development of technical and soft skills. Finally, the research emphasizes the need for a proactive and collaborative approach to IT education and workforce development. By integrating advanced learning technologies and inclusive strategies, stakeholders can ensure that the IT workforce remains adaptable and ready to innovate in the face of technological advancements. This framework lays the groundwork for future research and policy-making endeavours, aiming to strengthen the resilience and diversity of the global IT sector. Digital transformation presents a significant challenge for companies, as skills and competencies continuously evolve, a trend expected to accelerate in the future. To address this challenge, companies must reskill and upskill their existing workforce. The primary motivation behind this imperative is the scarcity of skilled workers in the labour market, particularly those with specific skills. Without reskilling and upskilling initiatives, companies face the dilemma of either hiring competent labour, which can be complex and costly, or risking an obsolete workforce and outdated practices, placing them at a disadvantage in the competitive landscape. Two main approaches emerge in response to emerging market trends: upskilling, which involves adopting new skills to advance in current roles, and reskilling, which entails preparing for entirely new jobs and career changes. The chapter aims to evaluate how well Slovenian companies are addressing the challenges of digital transformation through upskilling and reskilling initiatives. The research focuses on five key questions: the strategic skills deemed most important by Slovenian companies, how these companies prepare employees for digital transformation, the extent to which reskilling and upskilling methods are integrated into corporate strategies, the most effective training methods, and the primary challenges associated with upskilling and reskilling. To answer these questions, 28 semi-structured interviews were conducted with human resource managers from Slovenian companies recognized for their industry leadership or exemplary HR practices.

Roper et al. (2022) argue that it is necessary to examine the role of HR in supporting the agile transformation of organizations, which is relevant to our work because an agile culture is a key factor for quick adaptation and innovation in the IT sector. We can also rely on their research to identify specific HR practices that are effective in promoting team agility. We see that continuous improvement and acquisition of new skills are crucial for IT professionals to remain relevant in a rapidly changing environment. This research talks about everything so that we can understand the IT talent needs for upskilling and recognize which methods of providing these opportunities are the most effective. Koszela (2020) mention in their work the impact of HR practices on motivation and retention of employees. This research is relevant because talent retention is the primary goal of our work. We can rely on their research to identify specific HR practices that are effective in improving motivation and loyalty of employees in the IT sector, which will ultimately result in a higher likelihood of retaining IT talent. Kryscynski & Ulrich (2015) discuss the concept of Agile HR and how it can support organizations in fast and flexible work. This research shows us how the IT sector requires agility and quick adaptation, and Agile HR can help in creating a framework for such work. Based on their book, we get all the necessary insights to understand the key principles of Agile HR and suggest concrete ways to apply these principles in the IT sector. Mollet et al.(2023) and others in their work explore the transformation of the HR function into an agile organization. They list specific challenges and strategies for implementing agile principles in HR, which is relevant for supporting agile culture in the IT sector. Colakoglu et al. (2019) in their work focus on the role of HR in promoting innovation in organizations. From this, we see that various HR practices can support innovation in the IT team, which is crucial for success in a fast and competitive environment. Li (2022) in his work states that upskilling the workforce in the future becomes increasingly certain. In doing so, he lists several different ways to achieve this through improving the skills and knowledge of IT professionals. Wilkinson et al. (2020) stated in their work, The Future of Work: Jobs, Skills, that different aspects were reviewed through research conducted by the McKinsey Global Institute (2020). Here we see all future work trends and necessary skills that are essential in modern business processes. Based on the same, we have a better understanding of the key challenges in the IT sector in terms of talent and identification of relevant skills that HR strategies should target with upskilling program activities.

3. RESEARCH METHODOLOGY

This research will use the methodology of analyzing existing literature to further explore the role of HR in developing an agile culture and implementing upskilling strategies to retain IT talents. The analysis will be based on the selection of relevant research, including academic publications and reports from reputable institutions. Through the analysis of key themes and terms, identification of key HR strategies, and synthesis of empirical evidence from the literature, we will create a comprehensive overview of existing knowledge in this field. This approach will enable a thorough understanding of existing theories and research, and then serve as a solid foundation for further analysis and development of practical recommendations for HR professionals in the IT sector.

In this paper, we want to analyze the role of HR in developing an agile culture and encouraging upskilling to retain IT talents and experts. Special emphasis is given to identifying certain HR strategies that should contribute to the development of an agile culture in the IT sector. By choosing different HR strategies, companies influence the agility of their teams, innovation, and motivation of employees in the IT sector. This also allows them to improve the effectiveness of upskilling programs in retaining IT talent. One of the goals of this paper is to develop practical recommendations for HR professionals in the IT sector to improve the ability to attract and retain talent. This work will make a significant contribution to improving HR practice in the IT sector. The results will be useful to HR professionals, managers, and company owners in the IT sector, as well as to everyone dealing with the issue of attracting and retaining talent in this area.

4. RESULTS AND DISCUSSION

Our results confirm the key role of HR in promoting an agile framework and upskilling for IT professionals, thereby complementing the existing literature in this field. Through our work, we have connected our own findings with the existing literature. Our work is in line with research that emphasizes the importance of agile methodologies and continuous learning in the IT sector (Roper et al., 2022; Birkinshaw, 2018).The results provide empirical confirmation of the key roles of HR identified in previous works, such as the development of training programs on agility (Braun et al., 2017) and the promotion of a collaboration culture (Colakoglu et al., 2019).

Our research highlights the need for HR to be actively involved in transforming the organization towards agile principles, to have an active role in developing strategies for continuous professional development through upskilling programs. In spite of everything mentioned, we specifically focus on the connection between agile culture, upskilling, and the motivation/retention of IT employees. This approach relies on existing research and does not offer new empirical evidence. This means that the research results are limited to what has already been studied and published. The quality and objectivity of available works can affect the results of the analysis. The results of the literature analysis may change over time as the context of the researched issue changes. It is important to follow new research and update knowledge on this topic. Despite all these limitations, the literature analysis still offers a valuable contribution to the research of HR's role in the IT sector. By synthesizing the existing knowledge and identifying key themes and strategies, this analysis can serve as a solid basis for further research and practical recommendations for HR professionals.

5. CONCLUSION

This research, based on the analysis of published literature and research, has provided us with a detailed overview of the role of HR in developing an agile culture and encouraging upskilling to retain IT talent. The results emphasize the importance of HR strategies in promoting agile principles, facilitating continuous learning, and creating a competitive offering for IT professionals. Although the advantages of this analysis included collecting a wide range of perspectives and identifying key themes for further research, it is limited to existing knowledge and does not provide new empirical data. Despite these limitations, this analysis represents a valuable step in understanding the role of HR in supporting agility, innovation, motivation, and talent retention in the IT sector, providing a solid foundation for future research and practical application.

6. LITERATURE

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Human resource
Review paper

INNOVATIVE HR SOLUTIONS: ENHANCING HOTEL STAFF PRODUCTIVITY

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Abstract:

In the increasingly turbulent and demanding job market related to hotel professionals, the role of HR in designing and implementing strategies to create an appropriate work environment for hotel experts is crucial. For companies to keep up, position themselves, and face challenges in the tourism sector such as attracting and retaining experts and talents, it is necessary for the HR sector to take on many initiatives and activities to fully meet their expectations. Therefore, it is important to emphasise that adjusting HR practices according to the trends and needs of the hotel sector should be very frequent. For these reasons, it is necessary to create an organisational culture in companies that encourages innovation, motivation, and engagement of hotel professionals. Continuous care for these experts in companies becomes a necessity and one of the essential conditions for their retention.

Keywords:

hotel, employees, HR, productivity, innovations.

1. INTRODUCTION

To gain a competitive advantage in today's market, it is crucial to offer guests something unique that sets you apart and exceeds their expectations. At least one additional competitive edge can be very important: for example, prime location, competitive pricing, modern technology, or offering a product or service not easily replicable by others in the same business. In an era where differentiation is key, the quality of services and the competence of human resources—particularly skilled personnel—emerge as paramount factors in influencing tourists' choice of accommodation.

However, securing a prime location is not always feasible, lowering prices is a common strategy used by hotel businesses to cover costs during the off-season, technology spreads quickly and is accessible to almost all modern hotel companies, and the amenities offered by hotels are well-known and rarely differ. This brings us to two very important factors that can significantly influence tourists' choice of accommodation: the quality of services (products) and human resources, specifically skilled personnel, without whom quality would not be possible.

The current reality of every company, especially in the tourism and hotel industry, has become more demanding with each year because of attracting, retaining, and developing employees in different positions. The current reality of every company, especially in the tourism and hotel industry, has become more demanding with each year because of attracting, retaining, and developing employees in different positions. Addressing these challenges requires a strategic approach to human resource management that emphasises adaptability and innovation.

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2. LITERATURE REVIEW

Productivity is crucial in the hotel industry as it directly impacts operational efficiency, service quality, and overall profitability. The high level of productivity will help hotels control their labour costs while still maintaining the standards of service so important for customer satisfaction and retention. This is particularly important because it is predicted that by 2024, labour costs will represent 1/3 of the total hotel revenue (STR, 2024). Efficient management of human resources and operational processes ensures that hotels can meet customer expectations consistently, thereby enhancing their competitive edge in the market (Kleefstraet al., 2020;Simpao, 2018).

For a hotel, it is always more profitable to retain existing guests than to attract new ones. Guests are the ones who generate revenue for the hotel, without whom the hotel business could not exist. Considering that today's guests are more educated, experienced, and demanding, with expectations much higher than in previous times, we conclude that the key to success lies in effective human resource management, which will later reflect in their overall performance.

In the hospitality sector, productivity is not just about the quantity of output but also about the quality of service provided. High productivity helps in optimising work force deployment, ensuring that each employee contributes effectively to guest satisfaction (Biel&Reynolds, 2007). Because of this, schedules are created to determine how many employees are needed for each shift and in different roles. They also track how long it takes to complete tasks like checking guests in and out, cleaning rooms, and other duties. This helps measure how well employees are performing.This can lead to increased guest loyalty and positive reviews, which are critical for a hotel's reputation and long-term success (Zhang, 2022).

Hotel staff face various challenges that significantly impact their productivity. The most important issue is staff shortage, which reflects on service delivery, poses operational challenges, and puts an extra strain on the retained staff. This strain often results in burnout, lower morale, and ultimately higher staff turnover rates (Salama et al., 2022).The labour shortage became even more pronounced following the emergence of the COVID-19 pandemic (Baum et al., 2020). This has resulted in a lack of employees for the hotel industry due to distrust, retraining to other jobs, and the continuous rise of hospitality businesses (Filimonau et al., 2020).The third problem is the high turnover rate among hotels, where employees leave because of poor relations with their superiors, a lack of career growth, and job insecurity. They contribute to employees seeking alternative employment, hence perpetuating the turnover cycle and affecting productivity at large (Codling et al., 2022).

2.1. RECRUITMENT AND SELECTION

Effective recruitment and selection processes are fundamental to attracting talented individuals. According to Baum (Davidson & Wang, 2011), strategic recruitment ensures that hotels hire individuals who fit the organisational culture and possess the necessary skills. Additionally, Jiang et al. (2012) found that proper selection processes reduce turnover and improve job satisfaction. By aligning recruitment with organisational needs, hotels can create a more stable and satisfied workforce.

The incorporation of technology in the hotel industry's recruitment process has greatly improved efficiency and productivity. Sophisticated advancements like artificial intelligence (AI) and machine learning (ML) streamline numerous repetitive tasks like screening resumes, arranging interviews, and addressing candidate queries. This enables HR professionals to concentrate on strategic recruitment elements like enhancing candidate experience and building relationships with potential hires (Sivathanu&Pillai, 2018). For example, AI-powered recruitment tools can analyse large volumes of resumes and match candidates to job openings based on their skills and experiences, thereby speeding up the hiring process. Furthermore, digital platforms and social media allow recruiters to access a widerand more varied group of candidates, enhancing the likelihood of identifying the most suitable individual for the position (Caccavale, 2023). Instant messaging systems further streamline communication between recruiters and candidates, ensuring quicker responses and reducing time-to-hire (Croissy, 2023). Moreover, video interviewing technologies have become essential, allowing recruiters to conduct interviews remotely, which is particularly beneficial in the hospitality industry where flexibility is key. These technologies not only save time but also reduce recruitment costs and expand the geographic reach of the recruitment process (Kshetri, 2017).

2.2. TRAINING AND DEVELOPMENT

Continuous training and development are critical for employee growth and satisfaction. Hjalager and Andersen (2001) highlight that training enhances employee skills and job performance. In the dynamic environment of the hospitality sector, ongoing training helps staff stay updated with the latest industry standards and technological advancements, fostering a culture of continuous improvement (Ghani et al., 2022).

The efficiency and productivity in training and development processes are greatly enhanced by technological integration. E-learning platforms, virtual reality simulations, and mobile training applications provide employees with adaptable, customised learning opportunities (Kim et al., 2019).

These tools make it easy for staff to access training materials, letting them learn at their own pace and review content whenever they need to. This helps them remember and use what they've learned better in real-life situations. For example, some hotels have adopted virtual reality for training purposes, allowing employees to engage in realistic scenarios without the associated risks (Gilfedder, 2023). This technology improves learning results while also cutting down on the expenses and logistical obstacles of traditional training approaches. Similarly, mobile learning apps provide convenient training modules that employees can complete during free time, ensuring continuous professional development without disrupting daily operations(Kim &Kizildag, 2011).

2.3. PERFORMANCE MANAGEMENT

Performance management in the hospitality industry is an important process which ensures that quality services are offered and that employees become more productive. Practices in effective performance management will give clear expectations, regular feedback, and alignment of employee goals with organisational objectives, which is in a large way the key for a service-oriented industry like hospitality (Chen et al., 2011). These methods help increase employees' involvement and loyalty, resulting in higher levels of customer satisfaction and more positive business results. In the hotel sector, managing performance includes ongoing evaluation and enhancement of employees' abilities and capabilities. High-Performance Work Practices (HPWPs) like performance appraisals, training, and development programs are believed to have a large impact on organisational performance because they help in motivating and developing an efficient workforce (Murphy et al., 2018).

Innovations in performance management are transforming how hotels manage and develop their staff. For instance, the use of data analytics and AI enables more precise tracking of employee performance and identification of training needs (Vrontis et al., 2023). Forecasting employee turnover and developing proactive retention strategies can be facilitated by predictive analytics for HR managers. Moreover, the integration of rewards like authority, privileges, recognition, physical items, or digital assets in performance management systems through gamification can enhance employee engagement (Birtek et al., 2022).

2.4. EMPLOYEE ENGAGEMENT AND MOTIVATION

Employee recognition is a key factor in creating a motivating work environment. Milman (2003) suggests that recognising employees' efforts leads to higher job satisfaction and retention. For this reason, reward programs should recognise accomplishments in teams and by individuals (Poulston, 2008). High levels of engagement and motivation are linked to better job performance, increased employee retention, and overall organisational success (Albrecht et al., 2015).Engaged employees, with such initiatives, will do more than their regular tasks in guest service and make every effort to improve the work atmosphere. This can significantly enhance the guest experience, leading to higher customer satisfaction and loyalty.

Also, the technology used in the HR practices increases further the ability to engage and motivate hotel employees. These digital channels and mobile apps make it possible for instantaneous communication between the employees and their management.These tools also facilitate personalised training and development programs, which can be tailored to meet individual employee needs and career aspirations, thus promoting continuous learning and growth (Stone et al., 2015). Additionally, technology-driven engagement platforms can track employee performance and sentiment, providing HR with valuable insights to proactively address any issues and enhance overall job satisfaction (Sivathanu&Pillai, 2018).

Work-life balance is a good example of the key element of employee well-being. Deeryand Jago (2009) argue that work-life balance policies reduce stress and improve job satisfaction. Work-life balance could be supported by hotel management in the ways of flexible work schedules, sufficient rest periods, and work-life support programs such as counseling and wellness initiatives. For instance, programs aimed at improving time management and reducing workload can help employees balance their professional and personal responsibilities more effectively (Fan, 2011; Gragnano et al., 2020; Gruman& Saks, 2011). Flexible working hours and supportive policies contribute to a healthier work environment (Garrow&Hirsh, 2008). More precisely, work-life balance has been found to be related to lower levels of burnout and better mental health, thus improving job performance and productivity (Gragnano et al., 2020; Fan, 2011).

2.5. TECHNOLOGY INTEGRATION

Incorporating technology with HR practices within hotel management tends to positively impact productivity. This e-HRM automation tends to automate all the routine HR activities of a certain organisation, including those related to payroll process and benefit administration and record-keeping, leading to better utilisation of professionals in different strata of an organisation and focusing on strategic activities (Marler & Fisher, 2013). This automation reduces errors, speeds up processes, and ensures compliance with regulatory requirements, which collectively enhance operational efficiency (Bondarouk et al., 2017).

Artificial Intelligence (AI) and data analytics are also transforming talent management. Through AI, very large sets of data can be analysed to detect patterns for future trends in employee performance and turnover. Forexample, predictive analytics can help HR managers identify employees at risk of leaving and implement targeted retention strategies (Shah et al., 2017).

Technology promotes employee engagement and communication. HR mobile applications allow employees to access the services of HR at any time and in any place to optimise convenience and satisfaction. Chatbots and virtual assistants provide employees with instant help and information, minimising response time while enhancing overall experience for employees (Ivanov &Webster, 2017). Real-time feedback systems enable continuous performance management, allowing managers to provide timely recognition and address issues promptly (Bondarouk et al., 2017).

3. RESEARCH METHODOLOGY

This paper discusses how effective performance management practices are in the hospitality industry. A literature review combines existing research and theoretical frameworks to draw a general understanding of how performance management practices impact levels of employee productivity, engagement, and retention. It identifies common trends, challenges, and best practices to offer a consolidated view of current knowledge.

The desk research helps to understand the dynamics influencing HR practices within the hospitality industry, associated with problems like high turnover, maintaining service quality, and technological changes. In light of this, the review is intended to identify these issues and recommend evidence-based solutions to human resource practitioners. Key peer-reviewed journal articles, books, and industry reports were selected to explore themes such as recruitment, training, performance management, employee engagement, and technology integration. The objective is to be an extensive review that gives summary and identification of areas that are not researched yet.

The greatest advantage with literature reviews is the fact that they are drawn from multiple studies, which give a multiangled approach to the topic. This is very applicable in the hospitality industry where there is great variation in practice and the outcomes. However, the methodology lacks the capacity to bring out empirical findings on specific organisations or situations. This will indicate general trends and best practices, but the findings cannot be directly applicable to all settings. Hence, hotel managers and HR professionals are advised to carry out their own data collection and analysis in view of shaping strategies in accordance with their specific needs.

4. RESULTS AND DISCUSSION

The paper underlines the strategic HR practices that have been found to have a significant effect on performance management for companies in the hospitality sector. With the infusion of AI and machine learning, hiring becomes more efficient in terms of outreach and quality of hires, leading to lowered turnover and greater job satisfaction (Sivathanu & Pillai, 2018; Davidson & Wang, 2011). In the context of recruitment, technology expands the reach and efficiency of hiring processes. E-recruitment platforms enable hotels to attract a global talent pool, streamline application processes, andutilise AI to screen and shortlist candidates, thus speeding up hiring and improving the quality of hires.

E-learning platforms with flexible, personalised training and VR simulations are proven to enhance knowledge application and retention, thus translating to increased employee engagement and reduced turnover rates (Kim et al., 2019; Tracey &Hinkin, 2008).Training programs also increase employee engagement and loyalty (Tracey&Hinkin, 2008). Training and development are critical aspects of human resources management in the hotel industry. Effective training programs enhance employee skills, knowledge, and performance, directly impacting service quality and guest satisfaction.Technology platforms also facilitate personalised learning and development programs, ensuring that employees receive training tailored to their specific needs and career aspirations (Kim et al., 2019).

Regular feedback and goal setting aligned with organisational objectives are shown to improve productivity and service quality, with data analytics enhancing the precision of performance tracking and training needs identification (Chen et al., 2011; Vrontis et al., 2023). Furthermore, recognition programs and career development opportunities foster higher job satisfaction and retention, while technology-driven engagement platforms enable real-time feedback, further boosting motivation (Milman, 2003; Stone et al., 2015).

To address work-life balance challenges, many hotel companies are adopting various strategies. These range from giving out favorable working hours, offering onsite childcare services, to allowing remote working for a section of administrative activities. In addition, the companies' promotion of strong and supportive working cultures where the employees feel appreciated and understood can actually be of help to the employees toward (Fan, 2011; Gragnano et al., 2020; Gruman& Saks, 2011). Work-life balance is a critical issue for hotel workers due to the demanding nature of their jobs, which often involve long hours and irregular schedules. All these have a huge impact on their personal life and well-being. Studies have shown that achieving work-life balance among hotel employees has great potential to bring increased job satisfaction and organisational commitment. In conclusion, performance management practices yield employee engagement, productivity, and retention for effective results in a successful hospitality industry.

5. CONCLUSION

The literature review confirms that effective performance management practices are crucial for improving employee productivity, engagement, and retention in the hospitality industry. Key strategies include the implementation of technology into recruitment and training, continuous feedback, and recognition for work-life balance. Hotels adopting these practices will be able to increase their quality of service, guest satisfaction, and maintain a competitive edge in the market. The strategic alignment of HR practices with industry demands not only addresses immediate challenges but also fosters a resilient work force capable of thriving in a dynamic environment.

Future research needs to look at the long-term impact of these practices and include a wider set of hotels to validate the findings. Additionally, research into how new technologies and changing guest expectations influence HR strategies will provide further implications for performance management. Implementing these performance management strategies can help hotel managers create a more motivated, efficient, and loyal work force, ultimately contributing to the overall success of their establishments and positioning them for future growth.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Human Resource
Review paper

LEADERSHIP AND SOCIAL MEDIA: KEY FINDINGS AND A WAY FORWARD

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Abstract:

As an important tool in the digital environment, social media platforms enable leaders to connect with their employees, customers, investors and other stakeholder. The nature of social networks allows leaders to create relationships and inspire positive responses from their followers that benefit the organization. More than 80% of CEOs view social media as a tool for activities and connections that will positively affect their organizations. Interactive and interpersonal features of social media platforms enable CEOs to make themselves more approachable and easier to interact with. This paper provides an overview of nine studies that examined leadership in the context of social media and gives suggestions for further research.

Keywords:

leadership, social media, Twitter, Instagram.

1. INTRODUCTION

In the digital era, social media represents a phenomenon which endlessly grows, expands and includes members from different spheres of both public and private life. Leaders are not immune to the allures of social networks which enable them to connect with their subordinates, customers, investors and other stakeholders. E-leadership is classified as a process of social impact enabled by technology with which leaders may modify the behavior, attitudes, emotions, or performance of individuals, groups and organizations (Avolio et al., 2000). Social media networks assist leaders in exerting their social impact on others regardless of whether they are formal or informal leaders (Tur et al., 2022). Nowadays, likes and shares are used to allocate a leadership status to an individual with an account on social media platforms. Numerous activists, bloggers and influencers engage with their followers on social media and communicate their views on various matters. In this loosely regulated arena, understanding how effective leadership is achieved is valuable for individuals, organizations and communities. Organizations can achieve their goals and ensure success by implementing appropriate public engagement strategies and by collaborating both online and offline. More than 80% of CEOs consider social media to be an important springboard for activities and connections that will be favorably reflected on the organization (Tsai & Men, 2017). Indeed, the interactive, private and interpersonal characteristics of social media platforms enable CEOs to lessen the power disbalance between themselves and their followers. Therefore, CEOs may portray themselves authentically and communicate with the audiences in a spontaneous and personal fashion.

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This paper provides an overview of nine studies that examined leadership in the context of social media and gives suggestions for further research.

2. OVERVIEW OF STUDIES

Men and Tsai (2016) examined how the general audience interacts with CEOs on social media platforms. The authors proposed a model suggesting that CEOs' engagement on their social media platforms influences the perception of their authenticity and approachability, which, in turn, affects the organizational-public relational outcomes. Authenticity in the online environment entails providing an open display of all significant information and aspirations and thus represents the basis of efficient online interaction (Dahlberg, 2001). Therefore, interactions from a CEO's social media networks need to be viewed as authentic so that relevant bonds between an organization and the public can be created. Another notion significant for effective online interaction is approachability. Approachable individuals are perceived to be welcoming, thoughtful and friendly (Porter et al., 2007) and have been perceived as effective leaders. When interacting on their social media platforms, approachability enables CEOs to be viewed by the audience as close and reliable acquaintances instead of an obscure public personality. The organization-public relationship is rooted in the positive interactional exchanges that unfold on social media between an organization and its stakeholders (Broom et al., 2000). Results of an online survey involving 332 social media users demonstrated that two major factors in motivating an audience's interaction with a CEO on social media are thought leadership, or their perception that the CEO is a leader in one particular sector, and task attraction, or their perception that the CEO is the best at what they do. CEO's engagement with the audience on social media networks positively affected their perceived authenticity and approachability, which subsequently positively affected public satisfaction and trust. Based on the findings, the authors offer directions to CEOs and their organizations to devise efficient social communication strategies (Men & Tsai, 2016).

In their study, Tur et al. (2022) explored the impact of leaders' charisma on social media networks, such as Twitter and TED talks. Initially perceived as a gift that only chosen individuals have, charisma later became integrated into leadership theory. In particular, transformational leadership theory conceptualizes the factor of "idealized influence" as a leader's capacity to communicate a powerful mission to their followers and gain their trust (Bass, 1998). Charismatic leaders tend to engage in charismatic signaling (Awamleh & Gardner, 1999) which is displayed by both verbal and nonverbal conduct.

For example, using metaphors in one's speech to create clear images in the minds of the audience as well as selecting the unique structure or dynamics of the delivery enables the leader to be viewed as charismatic by their followers. At the same time, charismatic signaling can be quantitatively measured which enables these behavioral patterns to be assessed in the digital environment. Informal leaders actively communicate their positions and preferences to others even though they do not occupy a supervisory position in the organization. In order to investigate the impact of informal leaders' charisma, Tur et al. (2022) collected data from two sources of social media, namely, TED talks and Twitter, which enabled the authors to have a significant level of control over the data. The results showed that the display of more verbal charismatic indicators resulted in a greater number of TED talk views, better assessment of the talks' tendency to inspire viewers and greater numbers of retweets. These findings highlight the notion that leadership is primarily a process with a social impact in which followers willingly obey the leader and that this process is also unfolding in the social media context (Tur et al., 2022).

Lee et al. (2017) examined the difference between the founder CEOs in large S&P 1500 companies (e.g., Marke Zuckerberg of Facebook, Jeff Bezos of Amazon) and nonfounder/professional CEOs when it comes to the tone of their discourse on Twitter. The results showed that the founder CEOs are more overconfident compared to the nonfounder CEOs. Overconfidence refers to a person's inclination to perceive themselves to be superior to others concerning their competencies, discernments or potential and to undermine the dangers in the environment (Dushnitsky, 2010). In order to make these comparisons, the authors tracked and analyzed daily tweets of CEOs. Generally speaking, an unbiased text entails a baseline number of negative words. Pessimistic authors tend to use more negative discourse whereas optimistic and overconfident authors tend to avoid negative discourse. The authors utilized the directory of negative words developed for business social studies by Loughran and McDonald (2011). The results of the analysis showed that the absence of negative words in tweets suggests that the CEO is confident (Lee et al., 2017). These findings deepen our understanding of why founder CEOs tend to manage their organizations differently compared to professional CEOs. These valuable insights enable stakeholders to have a better understanding of the founder CEO's actions.

Considering the notion that investors tend to visit social media platforms to gain financial information, CEOs and organizations are subsequently making their financial data available on those platforms. Indeed, posting statuses on platforms such as Twitter regarding the focal points of their press releases or excerpts from their conference calls is widespread.

Since revealing financial data on social media has become common, Grant et al. (2018) used experimental design to study whether investors' reactions to the communication approach of a CEO were affected by the nature of the channel ranging from more conventional such as conference calls to more contemporary like Twitter. The authors investigated the impact of three communication approaches by which a CEO described organizational performance, namely bragging, modesty and humblebragging (Grant et al., 2018). Bragging entails basing one's achievement on internal capacity and is delivered with intensifying expressions (Wosinska et al., 1996). Modesty involves basing success on outward elements such as prosperity or support without the use of intensifying expressions (Tice et al., 1995). Humblebragging is supposed to sound modest but since it highlights one's remarkable success, it is viewed as being deceitful (Sezer et al., 2018). The findings reveal that when the communication channel is a conference call, investors are more likely to respond favorably and invest when CEO messages entail bragging about the organizational results compared to messages with a modest stance. Contrastingly, when the communication channel is Twitter, investors favored modest discourse regarding performance. Additionally, the extent to which a CEO was perceived to be trustworthy influenced the investors' evaluation of a CEO's communication channel and the tone of the message. Moreover, irrespective of the communication channel, the CEO's messages with a humble bragging tone about the organizational performance were perceived least favorably. This study has significant practical implications for organizations that are interested in devising communication approaches for platforms such as Twitter.

Since social media networks are a medium through which organizations can expand their relationships with clients, members of staff and shareholders, Tsai and Men (2017) conducted a study in which they examined the effect that a CEO's discourse on social media may have on the wider audience. The study provides insights into CEO amiability and its underlying effects on the public's perception of their relationship with the company as well as on their public advocacy. Public advocacy is defined as the behavior of the general audience with which they willingly spread affirmative facts about a company, its products or services, or confront the company's opponents (Walz & Celuch, 2010). The nature of social media interactions enables the members to perceive the impact that their praise and criticisms may have on their connections. This notion motivated Tsai and Men (2017) to collect survey responses from 332 participants on social networks who were following CEOs. The results showed that CEOs' compassionate and confident interactions on social media portray them as friendly and admirable personas, which subsequently enhances followers' confidence in and advocacy for the organization. Therefore, the CEO's presence and interaction with the audiences on social media seems to be a vital ingredient in evolving the relationship with their online followership, which eventually tends to have positive effects on the organization (Tsai & Men, 2017).

Using the data from CEO Twitter accounts, Gruda et al. (2021) studied the link between the narcissistic traits of leaders and corporate fundraising as a facet of a company's accomplishment. Narcissism as a trait entails an augmented perception of one's reputation and is linked to one's eagerness to succeed, contend, dominate and make brave projections (Wales et al., 2013). Despite its dark aspects, the bright side of narcissism entails self-assurance, and the capacity to motivate others which are highly admired qualities of corporate leaders. Namely, persons with narcissistic tendencies may be chosen for leadership positions in organizations, yet their behavior remains to be directed at their own interests and not at the concerns of their subordinates. In this study, the authors focused on grandiose narcissism which entails one's demonstration of supremacy, poise and privilege. Grandiose narcissism is composed of two components, namely admiration and rivalry (Back et al., 2013). Admiration refers to a narcissist's magnetism, uniqueness, and grandiose imagery whereas rivalry displays antagonism, violence and degrading others. Corporate fundraising represents an interesting polygon for investigating narcissistic traits because accomplishments in these activities support leaders' tendencies to portray themselves as a key factor in securing future organizational expansion. The data included 237 corporate leaders who actively published announcements on Twitter, who were followed by at least 100 Twitter users and were in at least 10 groups. Machine-learning algorithms were utilized to forecast leaders' character traits based on their Twitter accounts. The results showed that admiration was positively associated with - and rivalry was negatively associated with corporate fundraising achievements (Gruda et al., 2021).

Kim et al. (2016) investigated how the Chinese major online shopping platform Alibaba responded to a paracrisis on social media. Paracrisis is a situation that resembles a crisis to which the organization needs to react, yet it does not require the formation of a crisis committee or working in a crisis mode (Coombs & Holladay, 2012). Indeed, since paracrisis is not that stringent, reacting to it in a formal, structured manner may only further harm the organizational status. The authors showed that in the initial phase of the paracrisis, Alibaba effectively prevented its status crisis on social media by assuming the reaction strategy of humorous self-ridicule. The authors also highlight the impact that a CEO's character and parasocial connections may have when it comes to responding to the crisis, including the choice of a messaging approach that corresponds well with social media.

Importantly, the authors highlight that a fruitful communication approach to the social media crisis may not only alleviate the crisis but ultimately transform a possible status crisis into an occasion for public relations (Kim et al., 2016).

While social media platforms such as Facebook and Twitter offer a playground for a variety of activities such as public debates, and creating groups and pages, the main purpose of Instagram is displaying images. The fact that Instagram allows and accentuates graphic displays directs its users to focus on presenting and promoting themselves instead of creating relationships with others (Dumas, et al., 2017). Therefore, O'Connell (2018) investigated ways in which leaders in the political arena used Instagram and how it is related to both to their demographics and leadership positions. The author employed a content analysis of every Instagram announcement displayed by all members of the US Congress and nonvoting delegates seated in the first half of 2017. In total, the data included 17,811 Instagram posts made by 534 participants. The results showed that females tend to have an Instagram account more often compared to males. Furthermore, Senators and female members tend to make announcements on their accounts more often. A person's traits including their chamber, political affiliation and seniority substantially influence the type of content presented on Instagram. The results of an exploratory analysis yielded three conclusions: there is no difference in how members of Congress use Instagram and other social media channels, the use of Instagram will be vastly affected by the power of their political affiliation, and the future transformation of representation in Congress is evident due to more casual profiles of younger members (O'Connell, 2018).

Social media has been used by entrepreneurs as an influential medium for connection, branding and creating one's identity. Heizmann and Liu (2022) investigated how female entrepreneurs in Australia use social media to display their identity considering different aspects of their demographics. The study employed a qualitative methodology to collect and analyze data from the Instagram accounts of eight female entrepreneurs in Australia. Three prevailing aspects of members' identity performance include their presentation of themselves as being attractive, adored and influential. Even though entrepreneurial activities might have been perceived as masculine, this research demonstrates that female entrepreneurs tend to develop and portray more feminine identities on their social media accounts (Heizmann & Liu, 2022).

3. CONCLUSION

This paper provides an overview of nine recently published studies that investigate how leaders use social media and how it affects the perception of their traits, skills and organizational outcomes in general. In these studies, the most widely used social media network is Twitter, followed by Instagram. When it comes to personality, social media provides leaders with abundant opportunities to demonstrate various facets of their traits and thus enables followers to evaluate the leader's authenticity, approachability, charisma, overconfidence, and narcissism. These are significant attributes that have been shown to have a significant place in the leadership literature. For instance, charisma is a component of Transformational Leadership Theory and social media is an arena in which it can be explored further. Regarding the leader's skills, these studies highlight how social media enables leaders to effectively respond to a status paracrisis by employing the strategy of humorous self-ridicule and thus creating avenues for public relations. Furthermore, leaders use online platforms to display identities that align with their organizational goals and they may use a variety of communication styles (i.e., bragging, modesty). Last but not least, it was shown that the leader's interaction on social media networks may positively affect various organizational-public relational outcomes such as trust and satisfaction and may inspire public advocacy on behalf of their followers. Future studies should examine how various facets of the leader's personality presented on social media affect skills relevant to leader effectiveness such as encouragement, persuasion, communication, etc. Moreover, future studies should decipher how the leader's engagement on social media may impact relational outcomes such as the audience's supportive behavior, as well as product and service demand, achievement of corporate goals and organizational bottom line in general. Studies tend to employ quantitative methodology. Forthcoming studies should thus use a mixed-method approach to provide a content analysis of the leader's social media discourse, as well as the case study approach and qualitative interviews. In addition to Twitter (now X) and Instagram, future studies should use other social media platforms for collecting data. Social media remains a fruitful field for exploring leadership theory in the digital era and future studies will yield greater theoretical understanding, as well as practical implications for CEOs and organizations.

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PAPERS FROM THE THEMATIC AREAS OF THE CONFERENCE
Human Resource
Original paper

STRATEGIC MANAGEMENT OF CATTLE RUSTLING IN SOKOTO STATE, NIGERIA

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Abstract:

A survey on the strategic management of cattle rustling in Sokoto State, Nigeria, was conducted, enrolling 400 respondents through a questionnaire. The sociodemographic data revealed that 55% of respondents were male and 45% female. The largest age group was 25-30 years (42.7%), while respondents aged ≥45 made up 9.7%. Most (53%) were married, with only 7% widowed. Farmers comprised 22.7% of the sample, and 37.2% had informal education. The strategies for managing cattle rustling received mean score indices ranging from 2.80 to 4.20, with reporting cases to Village Heads being the most effective. It is recommended that tracking the perpetrators' locations be prioritized as a key control measure. Additionally, government intervention through job creation is essential to reduce unemployment and related social issues.

Keywords:

cattle, rustling, strategy, management, Sokoto.

1. INTRODUCTION

Cattle rustling is one of the global menaces in many communities, which affects numerous factors of livelihood, especially in rural communities. For instance, Anas (2017) discovered that the scourge affected the psychological well-being of rural communities, causing sleepless nights, as well as fear and apprehension to the victims. It affected the peaceful coexistence among different neighboring villages, and many lives were lost as a result. Cattle rustling often traumatizes the victims. Research conducted in Sokoto State, Nigeria, confirms such complications, where farmers recorded higher vulnerability than traders and herdsmen. Cattle rustling usually devastates the victims drastically and affects their occupational status negatively (Manu et al., 2014). Certain strategies are employed in managing cattle rustling in Nigeria, which involve community sensitization, meetings, and dialogue. Other methods are granting amnesty to perpetrators, and conflict resolution mechanisms as measures to minimize the number of attacks, and to recover stolen cattle. Nevertheless, cattle rustling often occurs and recurs as a vicious cycle (Habibu, 2016).

There are various programs set to sensitize inhabitants of the affected communities about the dangers and threats posed by bandits to the livelihood of the people. Various concerned bodies including both governmental and non-governmental organizations created awareness programs to sensitize and educate vulnerable citizens on preventive measures to prevent attacks by cattle rustlers through prompt reporting of suspicious activities to the appropriate authorities (Olaniyan and Aliyu, 2016). Peace dialogues and regulation in arms possession are the common

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management methods adopted by many communities (Habibu, 2016). This study evaluated the strategic management of cattle rustling in Sokoto State, Nigeria.

2. MATERIALS AND METHODS

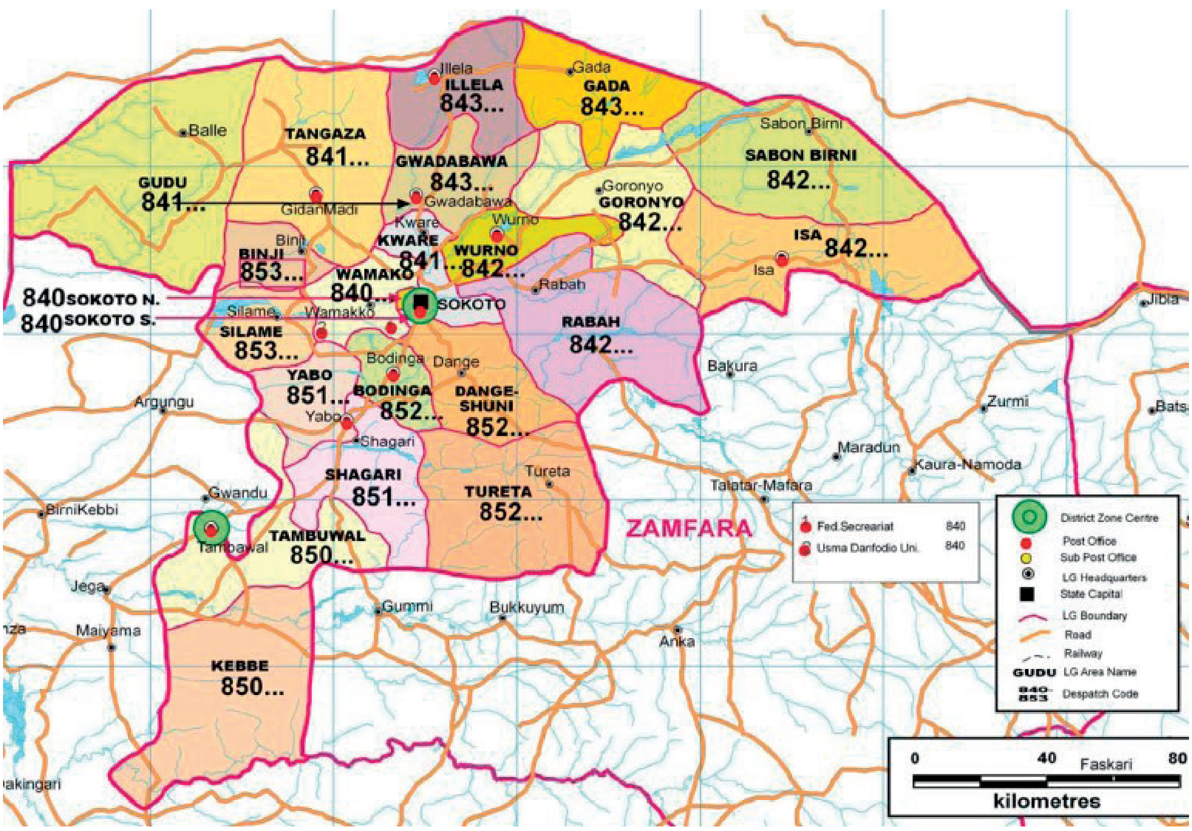
2.1. DESCRIPTION OF STUDY AREA

Sokoto is one of the states situated in Northwestern Nigeria. It borders with the Republic of Niger and Kebbi state. It shares a southeastern border with Zamfara state. The state covers an arid area of savanna vegetation and short grasses. The climate of the state has low rainfall from the middle of May to the middle of September with a transition of weather to harmattan from the months of November to March. The rain usually drains and channels to Sokoto (Kebbi) River and its tributaries. However, Sokoto is said to be a major tributary of the Niger River in Nigeria (McKenna, 2024) (Fig. 1).

Agriculture, which consists of crop production and pastoral nomadism is the mainstay of the economy in Sokoto state, and the cultivation of cash crops, peanuts (groundnuts), cotton, and rice. Other agricultural products such as sorghum, millet, cowpeas, and cassava are grown in Sokoto state. The state has a major water body called Sokoto River used for irrigation in the Sokoto-Rima basin. The state has large grazing lands, as such the state is well known as a primary producer of hides and skin from cattle, goats, and sheepskins, thereby producing a large turnover of finished leather products for exports. The state possessed minerals such as limestone and kaolin. Sokoto has sparse settlements composed mainly of Fulani and Hausa as dominant ethnic groups. The majority of the population of the state is Muslim. There are several major roads, an airport, and gave reserve popularly known as Kwiambana Game Reserve used for tourist attraction. The state's population during the census of 2006 revealed a population of 3,696,999 (NPC, 2009; McKenna, 2024).

The primary data were collected using a questionnaire designed for the management strategies adopted to curtail cattle rustling in Sokoto State, Nigeria. The questionnaire was structured in accordance with research objectives. A total number of four hundred respondents who volunteered to participate in the study were enrolled, and victims of cattle rustling were recruited for the study using a standard sampling technique (Ken, 2004). The questionnaire responses were compiled and analyzed. The data obtained was analyzed using descriptive statistics and the Mean Score Index (MSI) to examine the efficiency of the methods of controlling cattle rustling in rural communities. Management strategies adopted were analyzed using a 5-point Likert scale statistical tool as adopted by Norman (2010) and Richards et al. (2012).

Figure 1. The Map of Sokoto State Showing the Study Area.



Source: Utiya et al., 2020.

3. RESULTS AND DISCUSSIONS

The findings show sociodemographic information of respondents in the study area (Table 1). Predominant 55.0% are males, the majority (42.7%) belonging to the 25-34 age group, and almost half of them (53.0%) are married.

The gender, age, and marital status in the study area records 55% males and 45% females. This indicates the victimization of both men and women. There is a frequency of 42.7% among people aged 25 to 34. There was the least frequency 9.7% among people of ≥45 years. The finding concurs with that of Abdullahi et al. (2017), a research conducted on the socio-economic repercussions of cattle rustling in Northern Nigeria. With regards to age distribution, 42.7% were between 25 - 34 years. This depicted the youthful participation in pastoral nomadism in particular, and the population's involvement in cattle rearing. Almost half 53.0% of them are married with a small percentage 7.0% claiming to be widowed, which conforms to 6.6% widow participation in pastoral nomadism as Sulaiman et al. (2023) reported. Some widows take over the investment of their late spouses after conflicts. Imo (2017) reported that herds of cattle belonging to the nomads are also killed. Also, some of the victims (young and old) are severely injured or maimed. This has reduced some women farmers to the status of widows.

There is a predominant lack of formal education among the people, most of them are farmers (22.7%), (33.7%) earn below N10,000 (6 USD) per month (Table 2).

It was observed that there is a high (37.2%) level of informal education possessed by the people, whereas those with formal education studied at the tertiary level (32.2%) with the highest percentage. Many are farmers (22.7%), who engage in pastoral farming, which probably results in conflicts with other herders from other clans, as reported by Moritz (2010), that the herdsmen and farmers clashes disrupt and threaten the sustainability of pastoral farming and crop production in West Africa. Other studies added that some farmers practicing mixed farming revealed that their animals have in one way, or another affected other farmers, likewise, sedentary pastoralists were in one way or the other affected by farmers (Nformi et al., 2014).

Most 27.5% of respondents reported monthly income of below NGN 10, 000 (equivalent to 6 USD as of September 2024). The finding concurs with that of Manu et al. (2014) and Sulaiman et al. (2023) in the neighboring state, Zamfara state, Nigeria, which recorded average monthly income of below N30,000 and N10,000, respectively. The majority of the states in Northern Nigeria are facing economic hardships that predispose them to various forms of social vices with cattle rustling inclusive. The phenomenon of cattle rustling, and banditry has become widespread across the Northern States and is probably among the

Table 1. Sociodemographic Information of Respondents.

Gender	**Frequency**	**Percent (%)**
Males	220	55.0
Females	180	45.0
Total	400	100
Age	**Frequency**	**Percent (%)**
15-24	60	15.0
25-34	171	42.7
35-44	93	23.2
45-54	39	9.7
55 and above	39	9.7
Total	400	100
Marital Status	**Frequency**	**Percent (%)**
Single	126	31.5
Married	212	53.0
Divorced	35	8.7
Widowed	28	7.0
Total	400	100

Source: Authors' data.

list of top complex security challenges that are bedeviling Nigeria in the 21st Century. Virtually all of the states in the Northern region of Nigeria are affected by cattle rustling (Hamman, 2019).

Table 3 revealed management strategies for curtailing cattle rustling in the study area. The management strategies adopted include reporting, suspected cattle rustlers, adopting a counter-attack posture, surrendering money and other valuables to rustlers, and running to safe places among others as considered in this study. The strategies recorded a mean score range of 2.80 to 4.20, with the strategy of reporting cases of rustling to the village heads ranking as the best strategy.

Fig. 2 shows that the most adopted strategies for managing the effects of cattle rustling were reporting suspected rustlers to the village head and seeking refuge in safer places during attacks, with mean score indices of 4.10 and 3.90, respectively. Government compensating victims of cattle rustling was the least management strategy adopted by the respondents as it accounts for 2.80 mean score and ranked eleventh. This agrees with the study of Habibu (2016), who reported that governments are against the concept of taking law at hand by the victims of cattle rustling, and also, the compensations promised by the government are not sufficient to cover for the victims' losses. In some cases, the promises end up being empty to score political achievements. Therefore, the appropriate measure is to vacate ravaged areas of rustling or simply avoid becoming victims. Another article culled from Nigerian National Daily reported that the Government has issued a communiqué after a security and reconciliation meeting with security agents and related stakeholders in Sokoto State, that no task force agent should attack or execute any herdsman (who are the predominant cattle rustlers), as sacrifice must be made by both sides to ensure that peace reigns. It was agreed that herdsmen and their families should be allowed to go about their normal businesses without stigmatization provided they are disarmed (Daily Trust, 2014).

Table 2. Socioeconomic Information of the Respondents.

Level of Education	**Frequency**	**(%)**
Primary School	118	29.5
Secondary School	100	25.0
Tertiary Institution	129	32.2
Informal education	149	37.2
Total	400	100
Occupation	**Frequency**	**(%)**
Farming	91	22.7
Livestock's rearing	24	6.0
Artisanal mining	51	12.7
Fish Farming	19	4.7
Trading	82	20.5
Transportation	5	1.2
Retail Business	9	2.2
Civil servants	43	10.7
Jobless/Unemployed	76	19.0
Total	400	100
Monthly Income (N)	**Frequency**	**(%)**
<10,000	135	33.7
11,000 - 15,000	61	15.2
16,000 - 20,000	48	12.0
21,000 - 25,000	72	18.0
≥26,000	84	21.0
Total	400	100

Source: Authors' data.

Those cattle rustlers were directed to immediately return the stolen animals to the government or mediators. Therefore, reporting the case to Village Heads where rustlers live, is the simplest way of redeeming rustled cattle, since rustlers still respect their elders and kinsmen, and, in some cases, they release the stolen animals without any terms or request of ransom as a result of their elders' intervention. Apkensuen and Foreman (2022) opined that once cattle are rustled in a community, the herders normally hire assassins to brutally retaliate irrespective of one's involvement in the crime. Therefore, to curb the problem of cattle rustling, negotiations between the groups at local levels are particularly important, to include all stakeholders to work together in solving the problem. In this way, everybody would feel included and accept the outcomes of negotiations.

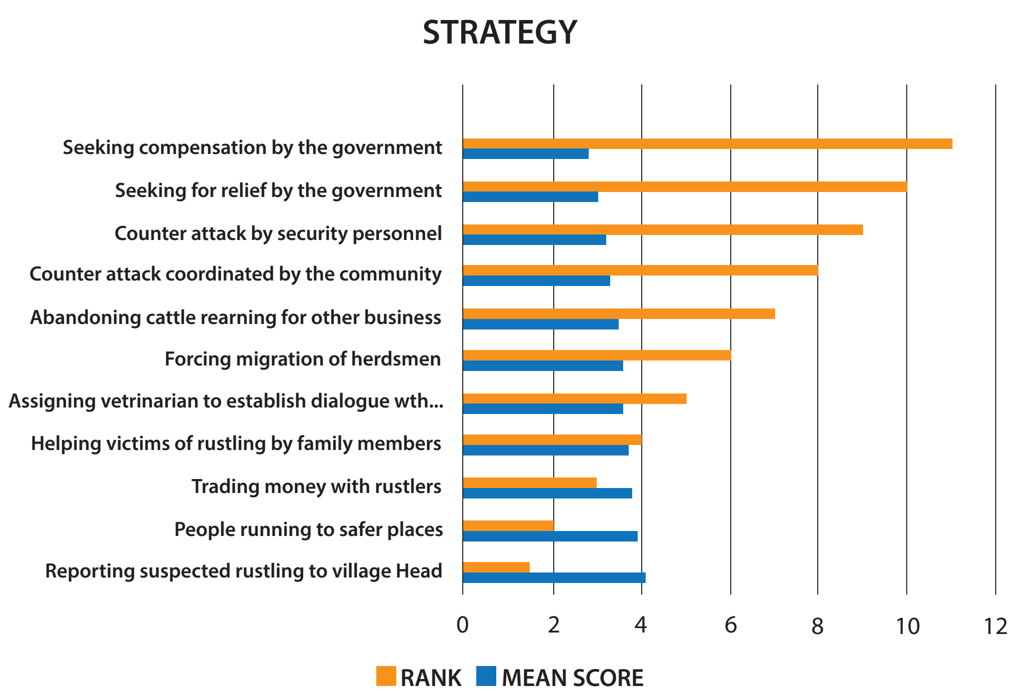
Whereas other studies argued that herders are still protecting their cattle from rustling or theft. Olaniyan and Aliyu (2016), pointed out that traditionally, even child teenagers among pastoral communities are obliged to embrace not only skills and braveness required for pastoralism but also develop the courage and eagerness to aggressively, defend their herds from raids and attacks. Other studies pointed out modern technologies such as Chipsafer, which is a Uruguayan firm that has set up a platform which uses a remote tracking system to identify and geo-locate individual livestock, offering security against theft and disease, and demonstrating a growing trend toward the Internet of Things in agriculture (Dyllan, 2018); Radio Frequency Identification (RFID) RFID is an automatic identification technology that uses electromagnetic waves to identify carriers of label objects (or tag) when they pass near an interrogator (or reader) (Ousmane et al., 2017); Sigfox's global IoT network, developed collars that give ranchers access to real-time information about each animal's speed, body temperature, stress level and have the power to greatly improve the health and safety of herds worldwide (Sigfox, 2017); and FarmIT developed by Reverbant IoT Company, which provides users with an intuitive, easy-to-use mobile app for tracking and managing their animals (Reverbant.com, 2018; Uwa et al., 2022). But most of these modern technologies are yet to be introduced into developing countries like Nigeria, as such, victims usually improvise on the measures to prevent themselves from being attacked or raided (Uwa et al., 2022).

4. CONCLUSION

The findings showed that reporting suspicious activities related to cattle rustling to Village Heads and people seeking refuge in safer places during attacks were the most commonly adopted and efficient strategies for managing the effects of cattle rustling in Sokoto State, with mean score indices of 4.10 and 3.90, respectively.

Based on these findings, it is recommended that the state's security forces be strengthened to better control such attacks. Additionally, conflict resolution agencies, in collaboration with traditional rulers, should intervene in affected areas to promote peaceful coexistence, as the rustlers remain responsive to the concerns of their elders.

Figure 2. Strategies Adopted in Managing the Effects of Cattle Rustling.



Source: Authors' data.

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