Acta Catallactics

časopis za ekonomska i opšta društvena pitanja

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Časopis „Acta Catallactics, časopis za ekonomska i opšta društvena pitanja“ od autora očekuje najviše standarde integriteta u istraživanju. Radovi koji su primljeni za razmatranje za objavu u časopisu trebaju sadržavati dovoljno informacija kako bi svaki kvalificirani istraživač mogao ponoviti rezultate.

Acta Catallactics
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Poštovani,

Pred Vama je deseti jubilarni broj naučnog časopisa "Acta Catallactics, časopis za ekonomska i opšta društvena pitanja" koji je osnovan 2019. godine i izlazi dva puta godišnje u izdanju udruženja "Multi" i Visoke škole "Internacionalna poslovno-informaciona akademija" Tuzla. Nakon pet godina djelovanja, sada već možemo navesti da je riječ o vrijednoj tradiciji izdavaštva, posebno razumijevajući da u Bosni i Hercegovini nema puno naučnih časopisa koji se bave tematikom ekonomskih i drugih društvenih pitanja.

"Acta Catallactics" je usmjeren prema naučnicima i stručnjacima koji se bave istraživanjem ekonomskih i opštih društvenih pitanja. Objavljuje radove koji doprinose teorijskom, metodološkim i empirijskim spoznajama u svim ekonomskim oblastima, kao i drugim oblastima koje pokrivaju društvene nauke. Radovi se mogu temeljiti na kvalitativnim i kvantitativnim analizama, mogu predstavljati sinteze dosadašnjih istraživanja i ukazivati na otvorena pitanja u izdvojenim područjima društvene i ekonomske prakse. Prihvaćaju se radovi različitih nivoa istraživanja (od pojedinačnih slučajeva do manjih ili velikih uzoraka) i različitih kontekstualnih okvira (od mikro jedinica do širih društvenoekonomskih okvira). Radovi se objavljuju na engleskom, ali i bosanskom/srpskom/hrvatskom jeziku.

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Pozivamo sve zainteresovane da pošalju svoje radove za novi broj časopisa koji izlazi krajem 2025. godine.

Svako dobro,
dr.sc. Admir Čavalić
glavni i odgvoroni urednik

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Acta Catallactics

Sadržaj

ARTIFICIAL INTELLIGENCE (AI) IN MODERN FINANCIAL PRACTICES AND EDUCATION

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Abstract

Artificial intelligence (AI) is a topic that infiltrated various areas and can therefore be considered a multidimensional and multidisciplinary field. It is inevitable that its application will soon be widespread and the major driver of job evolution. The importance of the topic of AI employability in finance lies in the fact that AI is already being applied in financial practice which is necessitating financial managers and students to acquire AI-related knowledge. As well, it is important for the education institutions to follow and analyse current research and reports in this field to keep their study programs up-to date with technological advancements. Using PRISMA protocol, a systematic literature review of 50 peer-reviewed articles published on this topic in the first half of 2024 and indexed in the WoS database was conducted. The review identified the main application areas (30) and challenges (10) in AI use in finance, prompting discussions on integrating AI into financial management education. Portfolio management and trading, predicting and forecasting future trends and business outcomes, detecting fraud and errors in various areas and credit scoring were the most emphasized were recognized by most authors as application areas. At the same time, a black box problem which leads to question of understanding and reliability of decisions based on AI-generated input, trust, user perception, unwillingness to use AI and the lack of a standardised legal framework for its use in finance were emphasized as a challenges of AI use in finance to be considered.

Key words*: Artificial Intelligence (AI), Financial Management, Education, Systematic Literature Review.*

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1. Introduction

Artificial intelligence (AI) has been an intriguing topic for some time now. Although it has been researched for decades, its development and implementation potentials are not still explored in full and therefore the topic of AI integration is very much current and more important than ever. The technological foundations, the ease of use, the possibilities of integration in everyday and business tasks, the impact on a change of the workplaces (job evolution), the questions of ethical use, safety issues, the regulatory framework and the need for the people to adopt learn and deal with new technological advances, are the topics that numerous authors have been dealing with for some time (Siteanu, Frunzeti, & Coşereanu, 2017; Ernst, Merola & Samaan, 2019; Müller, 2020; De Felice, 2022, etc.).

As its technological properties develop, its application is spreading to different areas (Faud, 2019; Xu et al., 2021). Unlimited access and knowledge to utilize AI technology can determine economic and political dominance. For this reason, competition not only among industrial giants but also between countries for the supremacy of knowledge and the implementation of this technology is understandable. Organisations need to adopt AI technologies in different areas of their business to remain profitable and sustainable in a highly competitive environment (Kumari, Kaur & Swami, 2022). Therefore, it is inevitable that today's students and tomorrow's employees, officials and managers will need to adopt AI and utilise knowledge to be competitive in the business world.

As the topic of AI is too broad to discuss its implementation in general terms, a more focused approach must be taken. The aim of the study is to identify the activities in financial management where AI can be reliably applied in order to gradually introduce AI technologies into the training of financial management students. In this paper, the questions associated with the implementation of AI in financial management were analysed. The following general research questions were posed:

- How is AI used in financial management?
- What are the challenges of implementing AI in financial management?
- What are the opportunities for implementing AI in financial management education as education was found crucial for the acceptance of technological advancements (Liao et al., 2024)?

To find answers to these questions, a systematic literature review of papers published in the first half of 2024 and indexed in the Web of Science was conducted. As of the purpose of determining the application of AI in financial management and the possibilities of its implementing in financial management education at universities, the following research areas were considered:

- Definition of AI technologies in general
- Possibilities of applying AI in financial management (automated trading systems, fraud detection, risk management, personal financial management, customer service, etc.).
- Evaluation of its usability in financial management education.

The following chapter analyses the definition of artificial intelligence as well as its types and taxonomy. The third chapter presents the research methodology and the description of the examples, followed by a chapter with the research results. The fourth chapter discusses the research findings while the last one gives a conclusion as well as the limitations of the research and recommendations for future research.

2. Definition of Artificial Intelligence

Although it may seem that the issue of AI is a challenge only for policy makers and businesses, it will quickly become an issue for everyone due to its rapid integration into daily life, be it professional or personal. Therefore, its understanding is very important.

There are various definitions ranging from simple to complex, although there is not yet a standardised definition unified on the level of all institutions, most of them have emphasize same AI characteristics. For NASA, "Artificial intelligence refers to computer systems that can perform complex tasks normally done by human-reasoning, decision making, creating, etc.". ..."

:

- Any artificial system that performs tasks under varying and unpredictable circumstances without significant human oversight, or that can learn from experience and improve performance when exposed to data sets.
- An artificial system developed in computer software, physical hardware, or other context that solves tasks requiring human-like perception, cognition, planning, learning, communication, or physical action.
- An artificial system designed to think or act like a human, including cognitive architectures and neural networks.
- A set of techniques, including machine learning that is designed to approximate a cognitive task.
- An artificial system designed to act rationally, including an intelligent software agent or embodied robot that achieves goals using perception, planning, reasoning, learning, communicating, decision-making, and acting" (NASA, n.d.: n.p.).

European Commission changed its definition of AI from one proposed in:

> *"Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)" (European Commission, 2018: 1),*

to updated definition:

> *"Artificial intelligence (AI) refers to systems designed by humans that, given a complex goal, act in the physical or digital world by perceiving their environment, interpreting the collected structured or unstructured data, reasoning on the knowledge derived from this data and deciding the best action(s) to take (according to pre-defined parameters) to achieve the given goal. AI systems can also be designed to learn to adapt their behaviour by analysing how the environment is affected by their previous actions." (High-Level Expert Group on Artificial Intelligence, 2018:7).*

By OECD Artificial Intelligence (AI) System can, with certain level of autonomy, produce and output which can consist of predictions, recommendations and decisions by using the input given by humans or machines (OECD, 2021: 1).

Copeland (2024) in Encyclopedia Britannica summarizes the definition to the capability of computers or robots to conduct given task connected to intelligent beings, which has characteristic of humans in the way of its intellectu al process which includes "ability to reason, discover meaning, generalize, or learn from past experience"

From these definitions few AI characteristics can be generated:

- Intelligent response in solving tasks and achieving goals set,
- A controlled degree of autonomy,
- Learning and improving ability,
- Adaptive behaviour, which can be defined as a human-like characteristic,
- Rational acting,
- Various possibilities of technological implementation and integration (whether software or hardware).

As it could be previously seen, AI includes several technologies used according to the defined problem and goals set, of which most important are presented in Figure 1.

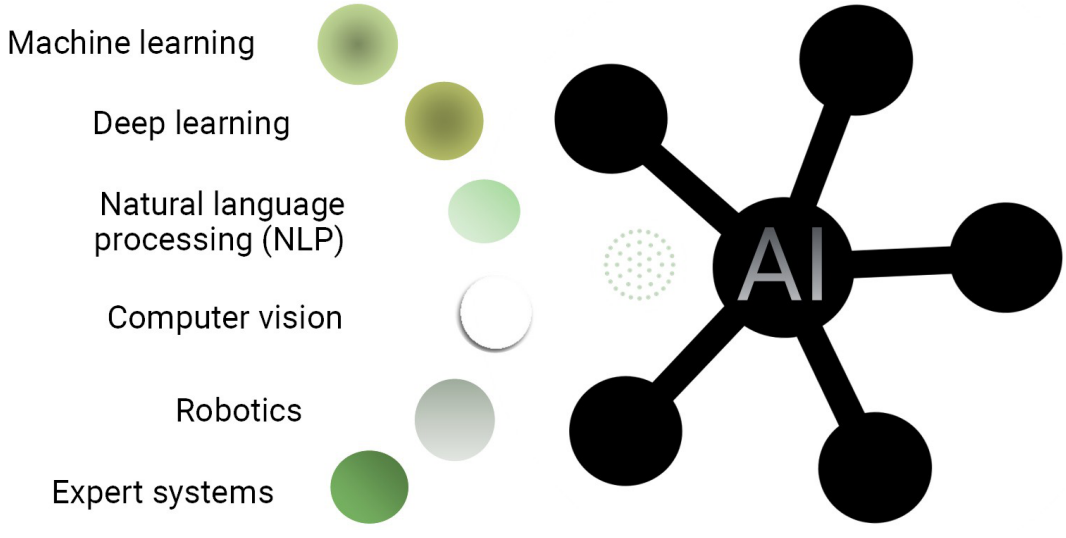


Figure 1. Types of AI based on technologies

Source: Authors' visualisation (according to Al-Ansi and Al-Ansi, 2023: 69; Ivošević, 2024: n.p.).

In their study of 65 relevant documents produced between 1955 and 2021, Samoili et al. (2020) analysed policy and institutional reports, research publications and market reports on AI. The result of the analysis was a taxonomy and, in total 185 keywords describing the basic structure of the AI field. They used the earlier definition of the EU's High-Level Expert Group on Artificial Intelligence (2018). The summary of their findings can be found in Table 1.

Table 1. AI domains and subdomains constituting part of the operational definition of AI by Samoili et al. (2020: 23)

	AI taxonomy	
	AI domain	AI subdomain
CORE	Reasoning	Knowledge representation
		Automated reasoning
		Common sense reasoning
	Planning	Planning and Scheduling
		Searching
		Optimisation
	Learning	Machine learning
	Communication	Natural language processing
	Perception	Computer vision
		Audio processing
TRANSVERSAL	Integration and Interaction	Multi-agent systems
		Robotics and Automation
		Connected and Automated vehicles
	Services	AI Services
	Ethics and Philosophy	AI Ethics
		Philosophy of AI

Source: Samoili et al. (2020: 23)

The EU has published the Artificial Intelligence Act (AI Act) with the aim of creating a legal framework. It was adopted by the European Parliament in March 2024, and it is proposing an assessment of new AI systems deployed in the EU and their categorisation according to the risk they could potentially pose to end users and citizens. The aim is to create a framework for human oversight of AI systems to prevent potentially harmful events. In this sense, AI systems operating on EU soil should be "safe, transparent, traceable, non-discriminatory and environmentally friendly" (European Parliament, 2024: n.p.).

The regulation defines 4 risk levels for AI systems (European Commission: 2024)

- Minimal risk
- Limited risk (for which there will be special transparency obligations)
- High risk
- Unacceptable risk.

IBM (n.d.) assesses AI technology differently and distinguishes between "weak" or "artificial narrow intelligence (ANI)", "artificial general intelligence (AGI)" and "artificial superintelligence (ASI)". AGI and ANI make up "strong" AI, which refers to the theoretical concept of an AI that would "surpass the intelligence and ability of the human brain" (International Business Machines Corporation IBM, n.d.: n.p.). This AI would be much more advanced than the author of this concept, Searle (1980) predicted. Searle, who only considered the theoretical idea of a strong AI, thinking it to be impossible to occur at the level of simulating human intelligence with consciousness. On the other hand, IBM, as a developer of AI systems, explains the concept to a wider audience without claiming whether it could exist in the future.

For the AI systems operable on the EU soil, impacting citizens located in the EU, EU will set the procedure for monitoring and authorising AI technologies according to their risk levels. The results of the implementation of the procedures remain to be seen.

3. Methodology of the research

The research design used descriptive and analytical approach using secondary data and publications indexed in the Web of Science (WoS) database. The data were collected through literature review of publications from academic journals, and analysed by analytical methods including comparative analysis, thematic analysis, and content analysis of existing literature.

The WoS database was used to find scientific peer-reviewed articles published in the first half of 2024. The reason for narrowing down the research field to articles published in the last 6 months is the fact that AI is a rapidly evolving technology where information becomes outdated very quickly. In addition, the articles indexed in the Web of Science were considered for the identification of the rigorously reviewed articles. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol was used, including keywords, abstracts and content analysis of the publications. The keywords used were: Artificial intelligence + Financial Management. Articles from the fields of Management 394, Business Finance 314, Business 305, Automation Control

Systems 240, Operations Research Management Science 234, Economics 230 were found (some of them correspond to several fields).

The research process is presented by Figure 2.

In first half of 2024, 578 publications were indexed in WoS. Through further analysis of the abstracts, 102 publications were filtered out as relevant to the field of this research. Of these, 63 were open source or available via licences that were accessible to researchers at the Josip Juraj Strossmayer University of Osijek and were included in the further analysis and relevant according to author's first screening. For the final review, after in-depth analysis, 50 articles were used. Table 2 presents the structure of the sample according to type of the research, systematic literature review or primary research used.

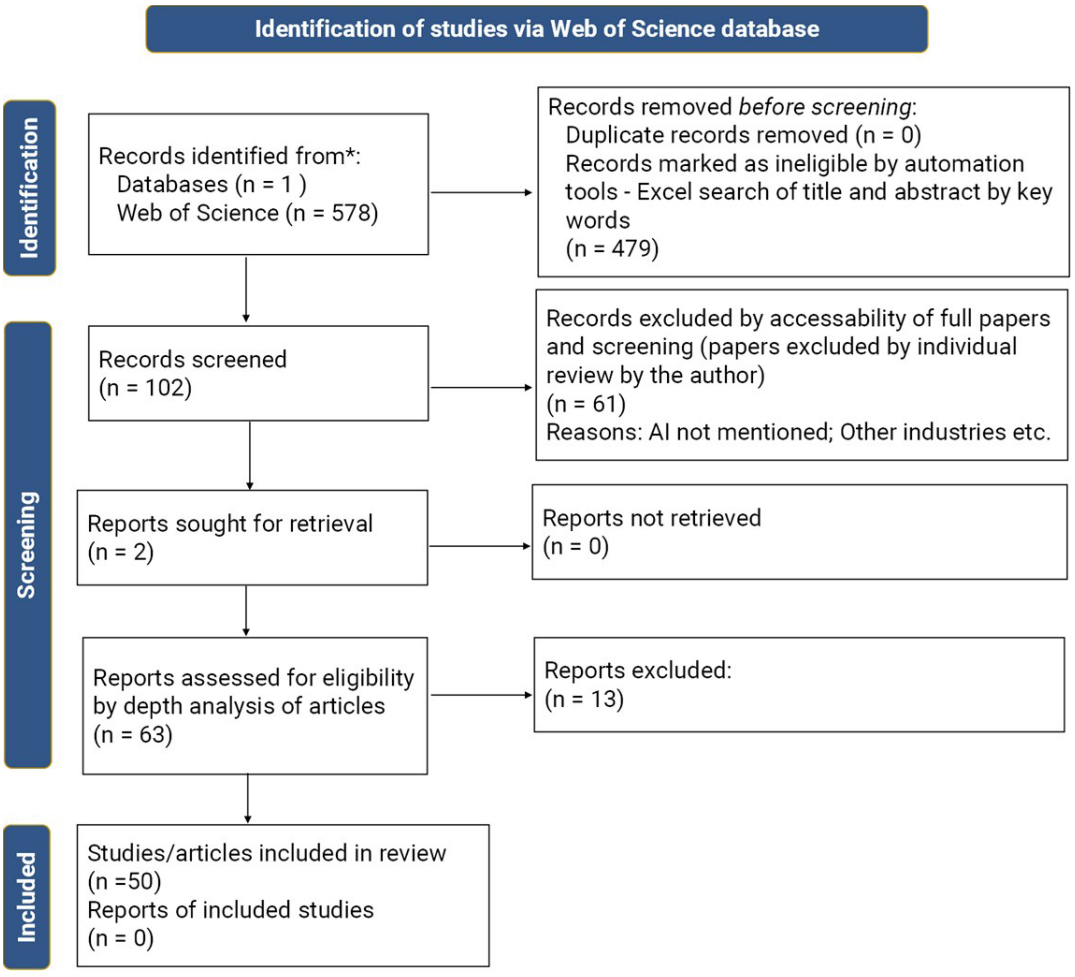


Figure 2. PRISMA 2020 flow diagram presentation of the research process

Source: Authors' work (based on methodology set by Page et al., 2021; Page et al. (n.d))

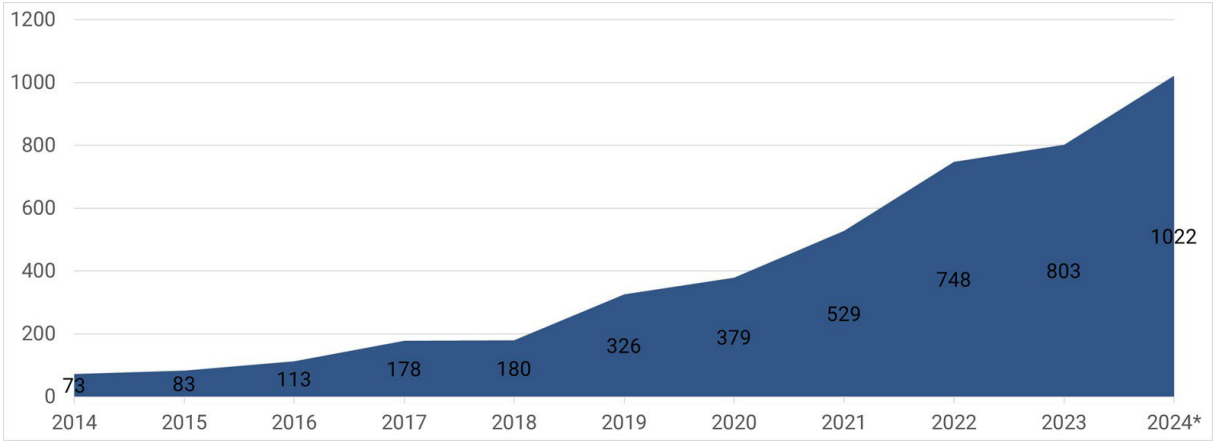
Table 2. Structure of the sample (articles included in research)

Research model description	Number	Share
Systematic literature review	14	28,0%
Primary research (case studies, interviews, AI new models testing, AI performance analysis)	36	72,0%
Total	50	

Source: Author's work

Figure 3 gives illustration of the rise of the scientific interest and the number of publications in this field.

The topic of intelligent machines of any kind has intrigued the public and researchers for decades, but the huge rise in interest is linked to the emergence of open-source AI technologies.



Note: Estimate of the number of indexed publications in the field of "Artificial intelligence in financial management" in 2024 based on 578 indexed articles up to 25 July 2024.

Figure 3. Illustration of the number of articles indexed in the WoS in the field of AI in financial management from 2021 to 2023 and forecast for 2024.
Source: Authors' work based on Web of Science

Table 3. Results of the literature review on the use of AI in financial management

AI Application in Finance	Author(s) (Year of Publication)	Number of papers
Portfolio management / trading	Sutiene et al. (2024); Shkalenko, Navareno (2024); Gedikli et al. (2024); Pelster, Val (2024); Li et al. (2024a); Almeida, Gonçalves, (2024); Zheng et al. (2024); Hung, Chen, Yu (2024);	8
Frauds and errors detection	Kureljusic & Karger (2024); Das et al. (2024); Shkalenko, Nazarenko (2024); Desyatnyuk et al. (2024); Ming, Mohamad, Innab, Hanafy (2024); Zheng et al. (2024); Xia et al. (2024)	7
Forecasting/prediction	Henriques, Pereira (2024); Kureljusic, Karger (2024); Pustokhina et al. (2024); Tkachenko (2024); Zheng et al. (2024); Li M et. al (2024b)	6
Credit scoring	Das et al. (2024); Tigges et al. (2024); Ali et al. (2024); Giudici et al. (2024); Jena et al. (2024); Tian et al. (2024)	6
Customer service enhancements	Kshetri (2024); Das et al. (2024); Desyatnyuk et al. (2024); Jena et al. (2024)	4
Risk management and analysis	Kshetri (2024); Das et al. (2024); Tian et al. (2024); Nakashima, Mantovani, Machado (2024); Pattnaik, Ray, Raman (2024)	5
Investment Robo-Advisory Services	Fatima, Chakraborty (2024); Nain, Rajan (2024); Adji, Karmawan, Lusianah (2024); Orzeszko, Piotrowski (2024)	4
Cybersecurity in Financial Services / Operational Risk Management	Thanathamathee, Sawangarreerak, Nizam (2024); Lavanya, Mangayarkarasi (2024); Elhoseny et al., (2024);	4
Anti-money laundering	Pattnaik, Ray, Raman (2024); Desyatnyuk et al. (2024); Giudici et al. (2024)	3

AI Application in Finance	Author(s) (Year of Publication)	Number of papers
Environmental Social and Governance (ESG); Corporate Social Responsibility (CSR)	Lim (2024); Tkachenko (2024); Shkalenko, Nazarenko (2024)	3
Accounting and Auditory	Smith, Lamprecht (2024); Kureljusic and Karger (2024); Liao et al. (2024)	3
Bankruptcy Prediction	Letkovsky, Jencová, Vasanicová (2024); Kureljusic & Karger (2024)	2
Financial Analysis	Kureljusic & Karger (2024); Nica, Delcea, Chirita (2024)	2
Algorithmic Trading	Das et al. (2024); Majidi, Shamsi, Marvasti (2024);	2
Extreme Scenario Analysis	Shkalenko, Nazarenko (2024); Zheng et al. (2024);	2
Policy Analysis	Shkalenko, Nazarenko (2024); Zheng et al. (2024)	2
Insurtech	Cosma, Rimo (2024); Ming, Mohamad, Innab, Hanafy (2024)	2
Sentiment Analysis / Sentiment Trading	Nair, Abd-Elmegid, Marie (2024); Kirtac, Germano (2024)	2
Corporate Governance	Albalawee, Fahoum (2024)	1
Improving the Quality of Financial Reporting	Mbaidin et al. (2024)	1
AI-Generated Financial Text	Arshed et al. (2024)	1
Rating Agencies	Davidescu et al (2024)	1
Fintech	Pattnaik, Ray, Raman (2024)	1
Banking Industry in general	Pattnaik, Ray, Raman (2024)	1
Card Default prediction	Talaat et al. (2024)	1
Cost Reduction / Optimization	Lytvyn et al. (2024)	1
Mergers and Acquisition (M&A) performance	Ding et al. (2024)	1
Financial Security	Desyatnyuk et al. (2024)	1
Startup Investing	Setty, Elovici, Schwartz (2024)	1
Internet Personal Finance Risk Management	Tian et al. (2024)	1

Source: Author's work

Although expected contrary, most of the papers were written on the basis of primary research results (72%), presenting results of research of AI implementation in different subfields in finance.

4. Results of the Research

Using the PRISMA 2020 flow method, 50 WoS-indexed articles were identified that were published in the first half of 2024 and deal with the narrow topic of the use of AI in financial management. The results of the systematic literature review are presented in Table 3.

A total of 30 different areas of application were identified, with some of the authors analysing more than one area. All the papers analysed show that there is great potential for the use of AI in different fields. Most of the recently published papers dealt with portfolio management/trading (8), fraud and error detection in general (6) and in accounting (1), forecasting/prediction (6) and credit scoring (6). On the other hand, money laundering (3) can also be considered as a subset of "fraud" giving it more emphasis.

At the same time, the authors pointed out some barriers and potential challenges in implementing AI in different areas of financial management. The systematic literature review identified the following 10 main concerns, with most authors emphasising the (non)understanding of the AI concept (black box model) (Table 4).

Table 3 presents a number of challenges, from the black box problem that affects the understanding of artificial intelligence as a concept and tool to upgrade work efficiency and precision to acceptance of use. The black-box problem and the acceptance of AI technologies for use (by financial services, managers and employees) are as well interconnected and could be influenced by various behavioral factors (Adji, Karmawan and Lusianah, 2024; Mbaidin et al., 2024).

The findings highlight the need educators to incorporate AI tools by enhancing students' IT knowledge to mitigate the black-box problem and improve AI adoption.

5. Discussion

The analysis of the literature shows that the new technologies in financial practise and industry bring efficiency gains, increased accuracy and cost reductions. At the same time, however, certain concerns were also expressed. The following word cloud shows the most important areas of the analysed literature on AI applications in finance.

When analysing the publications published during first half of 2024, the main areas in which the use of AI was investigated were portfolio management and trading in general (Sutiene et al. 2024; Shkalenko, Navareno 2024; Gedikli et al. 2024; Pelster, Val 2024; Li et al. 2024a; Almeida, Gonçalves, 2024; Zheng et al, 2024; Hung, Chen, Yu, 2024); forecasting and prediction of future financial trends (Henriques, Pereira 2024; Kureljusic, Karger 2024; Pustokhina et al. 2024;

Tkachenko 2024; Zheng et al. 2024; Li et. al 2024b), fraud and error detection in finance and accounting (Kureljusic & Karger 2024; Das et al. 2024; Shkalenko, Nazarenko 2024; Desyatnyuk et al. 2024; Ming, Mohamad, Innab, Hanafy 2024; Zheng et al. 2024) and credit

scoring in the financial industry and market analysis (Das et al. 2024; Tigges et al. 2024; Ali et al. 2024; Giudici et al. 2024; Jena et al. 2024; Tian et al. 2024).

Table 4. Results of the literature review on the challenges of AI application in financial management

Challenges of AI Application in Finance	Author(s) (Year of Publication)
Influence of black-box model on reliability of the reasoning behind a recommendation of the AI model for the user's decision and for the purpose of risk management.	Talaat et al. 2024; Sachan, Liu, 2024; Martins et al. 2024; Sutiene et al., 2024; Almeida; Gonçalves, 2024; Kureljusic & Karger, 2024
Absence of a unified regulatory framework in finance.	Lytvyn et al., 2024; Cosma; Rimo 2024; Ali et al., 2024
Influence of the complexity (black-box model) on trust and users' perceptions	Nakashima, Mantovani, Machado; 2024; Davidescu et al., 2024
Challenges of acceptance by employees to use AI models and their computational expertise.	Henriques; Pereira, 2024; Kureljusic & Karger, 2024
Problem of identification of AI-generated contents (texts and datasets) in financial sector, but politics, media and law as well emphasizing reliability of insights derived from these sources.	Arshed et al. 2024; Tkachenko; 2024
Challenges of available data quality.	Henriques; Pereira, 2024
Question of responsible and transparent use.	Davidescu et al., 2024
Loss of potential gains by decision-making based on AI input per example in startup investments.	Setty; Elovici; Schwartz: 2024
Necessity for development of machine learning models and algorithms for every company which implicates high costs.	Tian et al., 2024
Resistance of traditional players.	Lytvyn et al., 2024

Source: Author's work

The most frequently expressed concerns related to AI implementation were: black box problem, which raises the question of the understanding and reliability of decisions based on AI-generated input, as well as user trust (Talaat et al. 2024; Sachan, Liu, 2024; Martins et al. 2024; Sutiene et al, 2024; Almeida; Gonçalves, 2024; Kureljusic & Karger, 2024; Nakashima, Mantovani, Machado; 2024; Davidescu et al, 2024), the rejection of the use of AI by potential users (e.g. employees or managers) (Henriques; Pereira, 2024; Kureljusic & Karger, 2024; Lytvyn et al, 2024) and the lack of a standardised legal framework in the financial sector (Lytvyn et al, 2024; Cosma; Rimo 2024; Ali et al, 2024).

The issue of the conscientious use of AI technologies is one of the main concerns raised in almost all contributions. For this reason, some of the authors have proposed policy recommendations and risk assessment methods. For example, Giudici, Centurelli and Turchetta (2024) have proposed the AI SAFEty (Sustainability, Accuracy, Fairness, Explainability) methodology – an integrated AI risk management framework for the financial industry (credit scoring, anti-money laundering, IT systems monitoring and

anomaly detection) to assess compliance with increasingly complex AI regulations. In addition, Kumary, Kuar and Swami (2024) provide policy recommendations for the industry and government to support the process of AI adoption in the financial industry.

Figure 4. Word cloud showing the frequency of use of AI in certain areas and the associated issues

Source: Author's work (created in online application Flourish)

There is a "need to rigorously and critically ethically consider important challenges such as the question of consent, algorithmic transparency, data quality, data misuse, representativeness, traceability, accountability, bias and discrimination" (Tigges et al., 2024: n.p.). Therefore, the EU and national procedures for dealing with the various AI technologies must be accepted at the level of the individual institutions.

6. Conclusion

It is now clear that AI technology itself cannot be treated as a new product of the technology sector, helping to operationalise and increase productivity and efficiency, but is increasingly becoming the individual industry itself, due to its wide application not only in the formal and social sciences, but also increasingly with great results in the natural sciences. It is therefore inherently multidisciplinary and taking its complexity and controversy in some aspects, deserves an approach recognising this.

It is clear that access to AI technology can be the decisive factor for economic and political supremacy. For this reason, the competition not only between industrial giants but also between countries for the supremacy of knowledge and the widespread implementation of this technology is understandable. Access to knowledge could be a problem for economies lagging in implementation technological advances. To keep up, teachers and students need

to improve their engagement to keep the knowledge up to date. Therefore, educational institutions and teachers need to adapt to these changes, acquire the necessary knowledge to develop financial study programmes that equip students for the future permeated with artificial intelligence and make the knowledge accessible.

This paper presented the results of systematic literature review by PRISMA 2020 flow method, of 50 WoS-indexed articles that were published in the first half of 2024 in the topic of AI in financial management. The results of the research show that most researchers find portfolio management and trading as most interesting field of AI implementation, followed by frauds and errors detection, forecasting and prediction of future trends and credit scoring. Therefore, it is necessary for the teachers to gain the knowledge which will enable them to present the students the possibilities of its use in these fields. Financial management study programmes would benefit from strengthening students' IT knowledge to increase their understanding of the technological characteristics of the AI systems they use. In this way, the black-box problem, which was highlighted as significant by numerous authors, would be reduced. In the future, AI could be used to develop personalised learning models and intelligent tutoring systems that deal with concrete case studies from the financial sector, enabling future generations to critically evaluate the possibilities and outcomes of AI use.

In general, the development of curricula that incorporate AI tools, the training of teachers and seminars on the use of AI technologies in financial management to enable future generations to deal with the challenges of more powerful AI, and the development of strong collaboration between practise and education with the aim of trialling, understanding the impact and proper application with critical reflection and reassessment of the AI results are necessary. In the coming years, guidelines for the implementation of AI and privacy considerations, the development of training programmes for financial professionals, and ethical guidelines by financial associations, all for the use of AI in financial practice need to be developed.

By all this, it is clear that the concept of Artificial Intelligence (AI) is very complex in terms of technology, implementation, impact and therefore regulation. It will have a far-reaching impact on various areas of life, including societal, ethical, safety, economic and environmental aspects (Davidescu et al., 2024). Therefore, there is a need to explore, scrutinise and carefully examine before widespread implementation.

Research limitations: The search focussed exclusively on the WoS database, which excluded high quality papers indexed in other databases or published in non-indexed journals, conference proceedings or reports. Although only recent studies were purposely considered in this work, it must be acknowledged that the narrow time frame (first half of 2024) excludes many papers published before or after this period. In addition, only papers published in English were considered.

Recommendations for future research: In future studies, more comprehensive statistical analyses could be conducted, analysing a larger number of papers from a broader time frame. In addition, the cross-sectoral benefits and challenges as well as the potential for integrated AI applications could be investigated. In the context of acceptance of new AI

technologies, the acceptance of experts, teachers and students of financial management could investigate theories relevant to AI, such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT) and others.

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DIGITAL TRANSFORMATION OF CITIES IN BOSNIA AND HERZEGOVINA: THE CASE OF CITY OF ŽIVINICE

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Abstract

Digital transformation within any legal entity should primarily result in the use of digital technologies to better connect internal resources with clients, creating a more convincing user experience. It also enables better coordination of internal operations and decision-making process improvement. Digital transformation promotes complementarity and synergy between proposed policy measures supporting digital transformation and existing policies, including digital priorities such as smart cities, digital city, and e-government. This paper explores the accelerated digital transformation era, significantly influenced by the pandemic. It emphasizes the importance of digitizing not only services and client interactions but also various functions within legal entities. The paper argues that successful digital transformation within any legal entity should primarily utilize digital technologies to enhance the connection between internal resources and clients, thereby improving the user experience. It also discusses the role of digital transformation in promoting complementarity and synergy between proposed policy measures and existing policies, including digital priorities such as smart cities, digital city, and e-government. The analysis presented in this paper aims to support the city of Živinice in creating and implementing digital policies that can significantly impact the daily lives of citizens, businesses, employees, and entrepreneurs. The paper concludes by emphasizing the potential of the digital transformation initiative in improving the quality of life for citizens, transforming services and production, stimulating growth, and attracting businesses and talents. This research can serve as a foundation for the city's digitization strategy and other strategic documents.

***Key words**: Digital Transformation, Change Management, Urban Economic Growth, Policy Measures, Bosnia and Herzegovina, City of Živinice.*

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1. Introduction

It is abundantly clear that the new normal is the age of digital transformation. Of course, it started much earlier, but the pandemic brought a quantum leap when it comes to the digitization of business, not only in terms of interaction with clients and digitization of services, but also in the organizational sense through the digitization of many functions within legal entities. By using modern technologies, we enable the achievement of sustainable economic growth in urban areas. The very value of digital technologies rests on more efficient coordination of resources.

Digital transformation within any legal entity should primarily result in the use of digital technologies to better connect internal resources with clients with the aim of creating a more convincing user experience. In addition, it enables better coordination of internal operations and improvement of the decision-making process. Digital transformation promotes complementarity and synergy between proposed policy measures supporting digital transformation and existing policies including digital priorities such as smart cities, digital city and e-government. It should be clear that digital transformation will not happen overnight and will vary, given the nature of the business, but any successful digital transformation must follow a clear vision that is focused on customer needs and shared by the entire team.

With an impact on both macroeconomic and microeconomic factors, digitalization is a major force behind economic progress. It increases a nation's appeal to investors and fosters regional economic cooperation. The Covid-19 epidemic has brought attention to the energy transition and digital transformation as important future paths. In order to keep up with digital developments, Bosnia and Herzegovina may need to increase growth and engage in economic cooperation with neighbouring regions.

Digitalization's main goal is to aid in the transformation of the public sector, the economy, and society by creating new types of value through innovation and digital technology. Digital transformation also aims to improve the effectiveness and efficiency of the public sector. Thus, the goal of this essay is to highlight the significance of digital transformation, raise awareness of it, and highlight how emerging nations like Bosnia and Herzegovina.

This analysis was created to support the digital transformation of city of Živinice in the creation and adoption of digital policies that have the potential to change the daily lives of citizens, businesses, employees and entrepreneurs. The digital transformation initiative includes helping cities to improve the quality of life for their citizens, using cutting-edge technology for the benefit of citizens and transforming services and production to increase productivity and drive growth, investing in vital infrastructure, technology and transparency and thereby attracting businesses and talent. This document can serve as a basis for the adoption of the City Digitization Strategy and other strategic documents.

2. Digital transformation

In the public sector, digital transformation entails new linkages, service delivery frameworks, and stakeholder involvement. On the other hand, little factual data is available regarding the definition of digital transformation used by public administrations, their project management methodology, and the anticipated outcomes of this process (Eggers & Bellman, 2015). Terms like "digitalization," "digital management," and "digital transformation" are used interchangeably in the literature. It is imperative for leaders to foster an atmosphere of empowerment and ongoing enhancement, and for employees to possess a distinct perspective on digital change. Digital maturity is directly impacted by leadership (Xanthopoulou & Dimitrios Karampelas, 2020). Strong central leadership and proactive actions by local and regional actors are necessary for the public sector to successfully implement digitalization (Millard, 2010).

The presence of digital technology by itself does not contribute value to organizations. Instead, organizational change is a dynamic process that, when applied in specific contexts, enables enterprises to uncover novel means of value creation. This highlights the importance of reevaluating business models (Osterwalder & Pigneur, 2010; Morakanyane et al., 2017). Citizens' view of the value they receive from e-government and digital management systems has a substantial impact on their efficacy (Scott et al., 2016).

The administration of information systems in public administration is growing progressively intricate. To enhance communication among various entities inside states and across them, it is possible to redirect existing information flows, revamp current applications, and create new applications that effectively utilize the available information resources (Nica et al., 2021; Kovacova & Lăzăroiu, 2021; Novak et al., 2021). The effectiveness of information technology systems in public administration has a substantial influence on decision-making systems (Bednárová et al., 2021). New information programs and procedures are needed to support the process of improving public institution management, reducing corruption, and improving the business environment (Ardielli, 2020; Maris, 2020; Gódány et al., 2021).

The global society and public administration are profoundly influenced by technological advancements, in conjunction with economic factors. Countries that fail to integrate digital technology across sectors will suffer. The adoption of digital technology in public services in industrialized nations indicates the necessity for digital transformation to enhance transparency, provide superior services, and counteract corruption. The advent of the digital revolution has fundamentally altered contemporary economies, corporations, and governmental administration. State governments should persist in the process of updating and improving public administration and services by incorporating information and communication technology (Dumitrica, 2015; Rymarczyk, 2021).

The implementation of digitalization has been effective in diminishing corruption in nations that have undergone digital reforms (Mouna et al., 2020). The digitalization of public organizations is crucial for the development of a smart community, since it enhances operational efficiency and promotes transparency. Digitalization streamlines the functioning of public institutions across internal, intra-institutional, and external

domains, fostering transparency and accessibility for a democratic society (Şandor, 2018; Afonasova et al., 2019; Balzer, 2020).

The process of digitalization is revolutionizing the labour market, leading to a greater demand for skilled professionals while also potentially resulting in job displacement and wage disparities. The impact of digital progress extends beyond just the quantitative changes in employment creation or loss, but also include the qualitative transformation of the work market (Fossen & Sorgner, 2018). AI's impact is evident at the individual level, posing a significant likelihood of individuals transitioning to different professions or facing unemployment. Although advanced digital technologies do not significantly impact the overall employment rate, they do result in a substantial shift of workers between different jobs and industries (Arntz et al., 2021). The impact of AI on employment can manifest in many ways, influencing distinct stages of development (Ping & Yao Ying, 2018).

3. Methodology

The adapted DTPA (Digital Transformation in Public Administration) methodology was used to assess the digital readiness of the city of Živinice with the aim of creating a digital transformation roadmap that will facilitate further development of future digital transformation projects and positioning within digital transformation strategies. This methodology was created as part of the United Nations Development Program (UNDP) project, which developed a set of tools for the implementation of the digital readiness assessment of Bosnia and Herzegovina's institutions with the aim of creating a road map for digital transformation, given the lack of a digital transformation agenda for institutions in Bosnia and Herzegovina, and if we consider the fact that Bosnia and Herzegovina is at the beginning of the path of digital transformation. The pillars of digital transformation on which the DTPA methodology is based are shown in Figure 1.

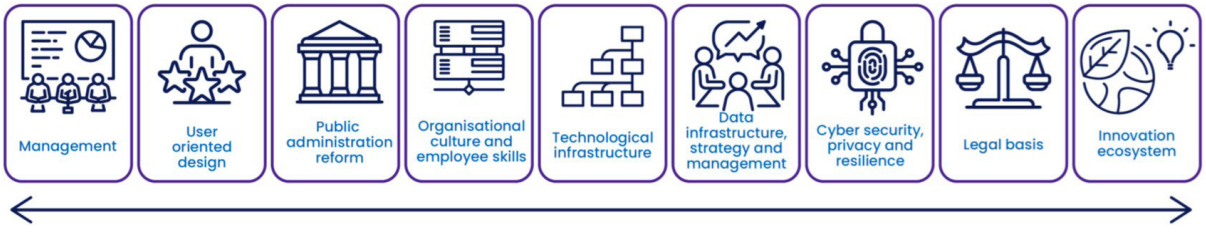

Figure 1. The pillars of digital transformation (UNDP BIH, 2022)

The methods for collecting primary data are based on scientifically based methodology, using semi-structured in-depth interviews and surveys. Interviews were conducted through conversations with interested parties, and in this way an effort was made to investigate the qualitative aspect of the phenomenon, while quantitative inputs necessary for valid statistical processing and analysis were obtained through surveys. The survey was conducted on a convenient sample of 30 respondents who are employees of the city administration of the city of Živinice. An originally created survey questionnaire was used as an instrument for data collection, and a descriptive statistical analysis was used to process the obtained data.

4. Analysis of pillars of digital transformation

Below is a presentation of the analysis of the pillars of the digital transformation of the city of Živinice through the analysis of the current situation. First, the indexes of digital readiness of the city according to the mentioned areas (pillars) of digital transformation were presented. Based on the calculated indices, and the total answers *Yes*, *No* or *Information not available*, it is possible to identify the current strengths and weaknesses of the city.

Answers *Yes* emphasize the advantages and possibilities of continuous development, while answers *No* and *Information not available* allow the city to determine priorities in areas where progress is needed and thus define its future activities.

Table 1. Indicators of readiness for digital transformation

Pillar of digital transformation	Index	Yes	No	Information not available
Management	0.71	3	3	0
User centred design	1.25	7	0	0
Public administration reform	0.67	2	1	0
Organisational culture and employee skills	0.44	0	0	5
Technological infrastructure	0.83	8	3	1
Data infrastructure, strategy and management	0.71	5	2	0
Cybersecurity, privacy and resilience	0.20	2	8	0
Legislative and institutional framework	1.00	5	0	0
Digital and innovation ecosystem	0.50	3	3	0

Then, quantitative results are given which are based on scoring the answers from the questions presented in the semi-structured questionnaire. Questions with a *Yes* answer were scaled by the evaluators on a scale from 1 to 3 in order to provide a more gradient insight into the level of development and readiness for digital transformation. This three-point scale indicates the perceived level of digitization where:

0 = Undeveloped level of digitization
1 = Low level of digitization – less developed, but aware
2 = Moderate level of digitization – moderately developed and aware 3 = Advanced level of digitization – highly developed and aware
Questions with the answer *No* and *Information not available* have a value of 0, undeveloped and unaware or information not available.

As can be seen in Table 1 and Figure 2, the assessment of the city of Živin ice readiness for digital transformation according to the indicators shows that *Technological infrastructure* and *User centred design* have mostly positive responses, while *Cybersecurity, privacy and resilience* have the most negative responses.

Figure 3 further indicates that the results show that only two areas have a score of 1 or more, namely *User centred design* (1.25) and *Legislative and institutional framework* (1.00). All other indicators are below 1 where the worst scores are *Cybersecurity, privacy and resilience* (0.20) and *Organizational culture and employee skills* (0.44).

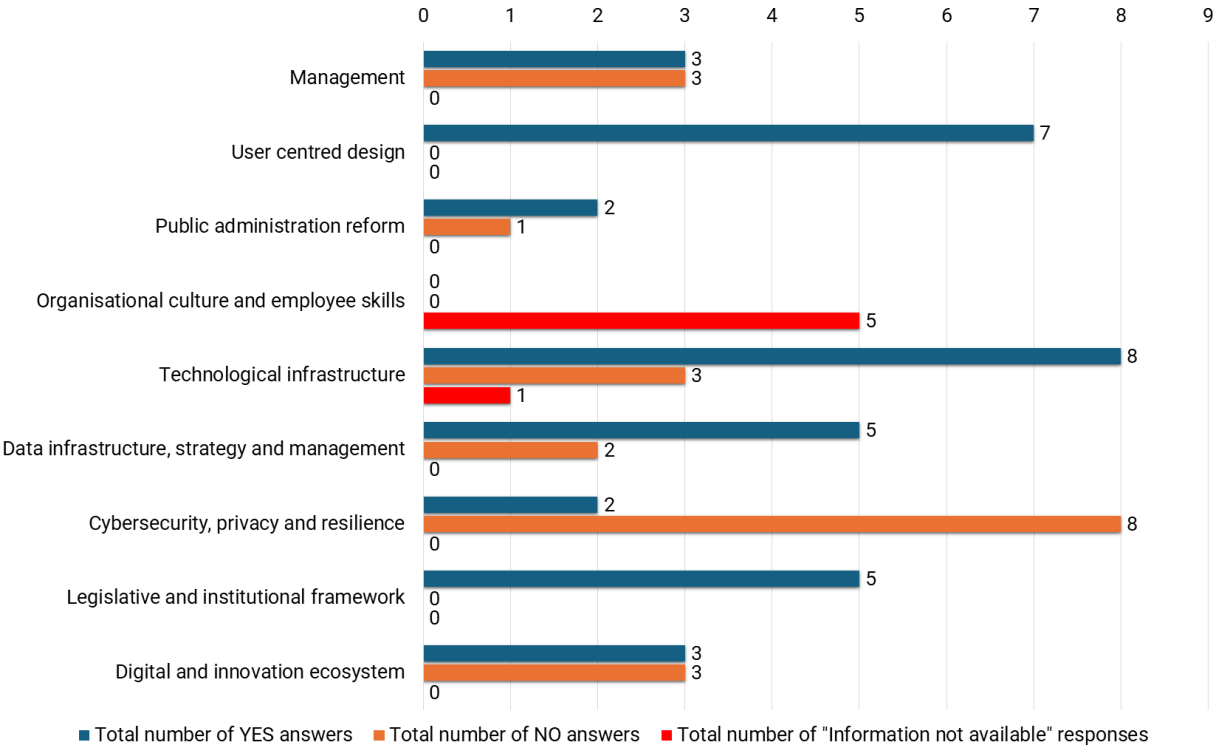

Figure 2. Analysis of readiness for digital transformation by area

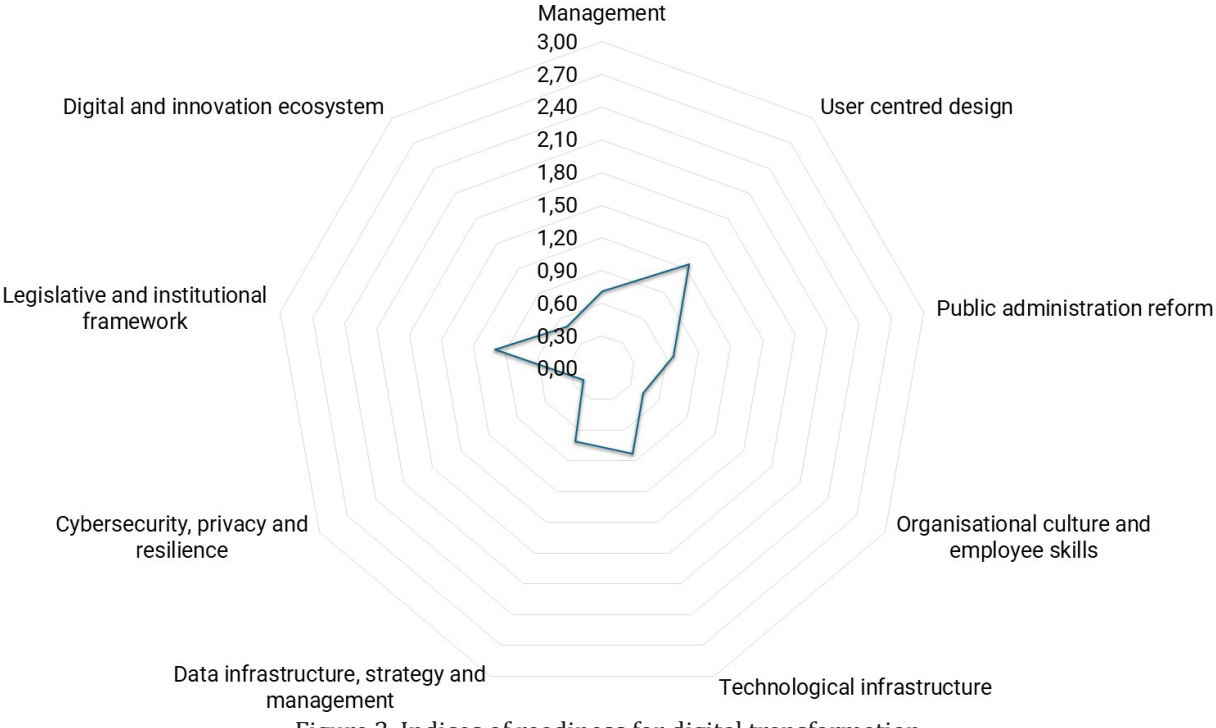

Figure 3. Indices of readiness for digital transformation

It is evident that the city has a lot of room for reaction within each of the indicators, and it is necessary to identify the priorities for further action based on each of the indicated indicators and the results of the survey of the attitudes of employees of the city of Živinice regarding digital transformation.

5. Results of the survey of the attitudes of employees of the city of Živinice regarding digital transformation

The aim of the empirical part of the research within this document was to examine the attitudes of employees of the city administration of the city of Živinice regarding various aspects of digital transformation. The following dimensions were observed:

- Attitude towards digital transformation,
- Institutional environment and support,
- Analysis of the current level of digital transformation and the readiness of human resources for that process,
- Obstacles to the digital transformation of the city of Živinice.

When it comes to examining the attitude of employees towards the digital transformation of the city administration, a five-point Likert scale was used (from 1 "absolutely disagree" to 5 "absolutely agree"). The average value of the respondent's answer to the statement "I believe that digitization will facilitate the work of the city administration and increase the quality of the services provided" is 4.1.

In the part of the assessment of the institutional environment and support for digital transformation, the respondents responded to two statements (table 2). Also, a five-point Likert scale was used (from 1 "absolutely disagree" to 5 "absolutely agree").

Table 2. Attitudes of respondents regarding the institutional environment and support

Statement	Mean
Institutional management (e.g. councillors, mayor, assistants, expert advisors, heads of departments, etc.) understand and support the vision of digital transformation.	2.6
The level of coordination in the planning and implementation of digital transformation activities with higher levels of government (cantonal/ federal/state level) is good.	2.4

We can see that the respondents believe that the institutional leadership does not understand and does not sufficiently support the vision of digital transformation. Also, they believe that coordination in this process with higher levels of government is very weak.

When it comes to the use of modern digital solutions in the daily work of city administration employees, 50% of them stated that they use the Docunova program, 35% of them stated that they also use some form of digital documents in their business. The fact that 50% of employees did not give an answer may also indicate insufficient understanding of what a digital solution in business entails. Information (documents) that are obtained

by official duty from other institutions are still predominantly in paper form (50%), while only 10% of them are obtained exclusively in electronic form.

Table 3. Respondents' views on human resources for digital transformation

Statement	Mean
I believe that there are enough trained and qualified employees (with business and technical skills) to implement the digital transformation.	2.6
I believe that there is a high-quality stimulation of professional IT personnel whose duty is to implement digital transformation.	2.5

Table 3 shows the views of respondents regarding human resources necessary for the implementation of digital transformation. A five-point Likert scale was used (from 1 "absolutely disagree" to 5 "absolutely agree"). The average values of the respondents' answers indicate that they believe that the city administration does not have a sufficient number of trained and qualified employees (with business and technical skills) to implement digital transformation, and that professional IT personnel are not properly stimulated to implement digital transformation.

Table 4 shows respondents' answers to questions related to human resources in the city administration, which includes the issue of education, training and job systematization, in the context of support for digital transformation. The answers of the respondents indicate that most of them do not participate in training and education programs related to the development of skills needed in the process of digital transformation, and consider that these skills are not even required in the systematization of jobs, i.e. that probably most jobs in to the city administration, according to the systematization, it does not require the skills of employees that are necessary in the process of digital transformation.

Table 4. Respondents' views on human resources for digital transformation (systematization and education)

Question	Yes	No	I don't have information
In the systematization of jobs, is there a clear overview of the required business and digital skills by job?	10%	35%	55%
In the systematization of workplaces, are there defined conditions for employees regarding the possession of certificates relevant to digital transformation and associated ICT technology?	10%	30%	60%
Are digital transformation projects using a multidisciplinary (team) approach and knowledge exchange when it comes to specific skills?	10%	20%	70%
Are the employees who work on the development of e-services familiar with (passed training) how to apply user-oriented services?	10%	10%	80%
Is there a system of targeted training and education for employees in your service, which includes the improvement of digital skills?	10%	20%	70%

What is very positive is the fact that the average score of respondents on the statement "I am ready for additional education in order to be ready for all processes of digital transformation of the city administration" is 4.8. A five-point Likert scale was used (from 1 "absolutely disagree" to 5 "absolutely agree").

In Table 5, the respondents assessed the obstacles to the digital transformation of the city administration. A five-point Likert scale was used (from 1 "absolutely disagree" to 5 "absolutely agree"). The average values of the respondents' answers indicate that the high costs of digital transformation and the insufficient IT education of employees represent the most significant obstacles for the digital transformation of the city administration. On the other hand, the resistance of management personnel in the city administration services was marked as the smallest obstacle.

Table 5. Obstacles to digital transformation

Statement	Mean
I believe that the basic obstacle to the digital transformation of the city administration is the insufficient IT education of the employees.	3.8
I believe that the main obstacle to the digital transformation of the city administration is the lack of vision of the city administration.	3.6
I believe that the main obstacle to the digital transformation of the city administration is the resistance of the managerial individuals of the city services.	2.8
I believe that the main obstacle to the digital transformation of the city administration is the high costs of digital transformation.	3.9
I believe that the main obstacle to the digital transformation of the city administration is the existence of other priorities.	3.7

Figure 4 shows us the priority focuses that are necessary within each of the pillars of digital transformation. According to the pillars of digital transformation, the city of Živinice should improve and establish priorities within the pillars over which it has the greatest local control for changes.

6. Conclusion and recommendations

Employees of the city administration are aware that digital transformation would facilitate work and improve the quality of services to citizens. However, the institutional environment of the city administration does not sufficiently consider the vision and strategy regarding the digital transformation process. Also, there is a lack of employees with the necessary skills to successfully implement digital transformation. Education and training of employees in terms of improving digital skills are not at a high level and are not comprehensive. Despite this, employees showed a high readiness for additional education to prepare for all processes of digital transformation of the city administration. According

to the respondents, high costs of digital transformation and insufficient IT education of employees represent the most significant obstacles for a successful digital transformation of the city administration.

Based on the analysis and research, the following digital transformation plan for the city of Živinice is proposed:

1. **Digital transformation strategy:** First, it is necessary to adopt a digital transformation strategy for the city of Živinice.
2. **Identification of existing e-services:** Analyse existing e-services and assess their use by citizens and business entities.
3. **Digitalization of services to citizens:** Identify services that can be digitized within the existing legal framework.
4. **Creating user-friendly e-services:** Develop more user-friendly e-services, including the creation of a mobile application.
5. **Promotion of e-services:** Actively promote the use of developed e-services among citizens and business entities.
6. **Digitalization of internal processes:** Where it is possible according to the law, digitize internal processes and communication within the city administration.
7. **Employee Education:** Continuously educate employees to improve their digital skills and raise awareness of cyber security.
8. **Establishment of an IT service:** Introduce an IT service at the level of the city administration.
9. **Procedure for data:** Establish clear procedures for collecting, analysing and sharing data within the city administration.
10. **Security:** Establish protocols and procedures to ensure data security, authenticity and privacy.
11. **Security Testing:** Regularly test the security of digital services and assess risks.
12. **Public availability of decisions:** Through the platform and application, ensure public availability of all decisions of the city administration that are of interest to the citizens and business entities of the city of Živinice.
13. **Support for innovative companies:** Support the development of innovative companies through public procurement policy in the process of digital transformation of the city of Živinice.
14. **Network of business angels:** Support the creation of a network of business angels at the city level. Business angels are important for investing in start-up digital projects at an early stage when financial resources from other sources are not available to them. In addition to financial support, business angels offer access to business knowledge and contacts.
15. **Advocacy of legislative changes:** Actively advocate for legislative changes at higher levels of government in order to enable the smooth implementation of the digital transformation of local government.
16. Through the establishment of a more open and accessible public administration of the city of Živinice with an emphasis on high-quality digital public services and

digital communication with all interest groups, the digital transformation of the city can contribute to the overall improvement of the work of the city administration and transparency.

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IMPORTANCE OF FACEBOOK IN DIGITAL MARKETING

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Mustafa Bešić[2]

Abstract

With more people exploring social networking sites, Facebook has become one of the prime online sources for marketing your business. People learn more about products, organizations, artists and world events through it. By creating Facebook business pages, it offers a distinctive marketing opportunity for businesses. Facebook pages can be created and promoted easily. When it comes to marketing of your business, Feedback is of vital importance. It helps you to understand what are the customer's expectations and their buying behavior. This in turn helps you to market your business in a perfect way. Facebook provides brand exposure to a potentially new audience, which then helps your business to position themselves in better and unique ways. This work introduces the framework of this technology and the reasons for its creation, explaining how to use this technology can improve efficiency in finance and the economy, as it is the new form of business.

Key words*: Facebook, Digital Marketing, Social Media, Engagement, Ads.*

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1. Introduction

In the digital age, social media platforms have revolutionized the way businesses engage with their customers, and Facebook stands at the forefront of this transformation. For restaurant chains, leveraging Facebook marketing can be particularly effective in reaching a diverse and expansive audience. This paper delves into an in-depth analysis of a year's worth of Facebook ratings data for a chain of restaurants. By examining metrics such as the number of reviews, average star ratings, and the competitive landscape of local rivals, we aim to uncover the strategies that have proven successful and identify areas for

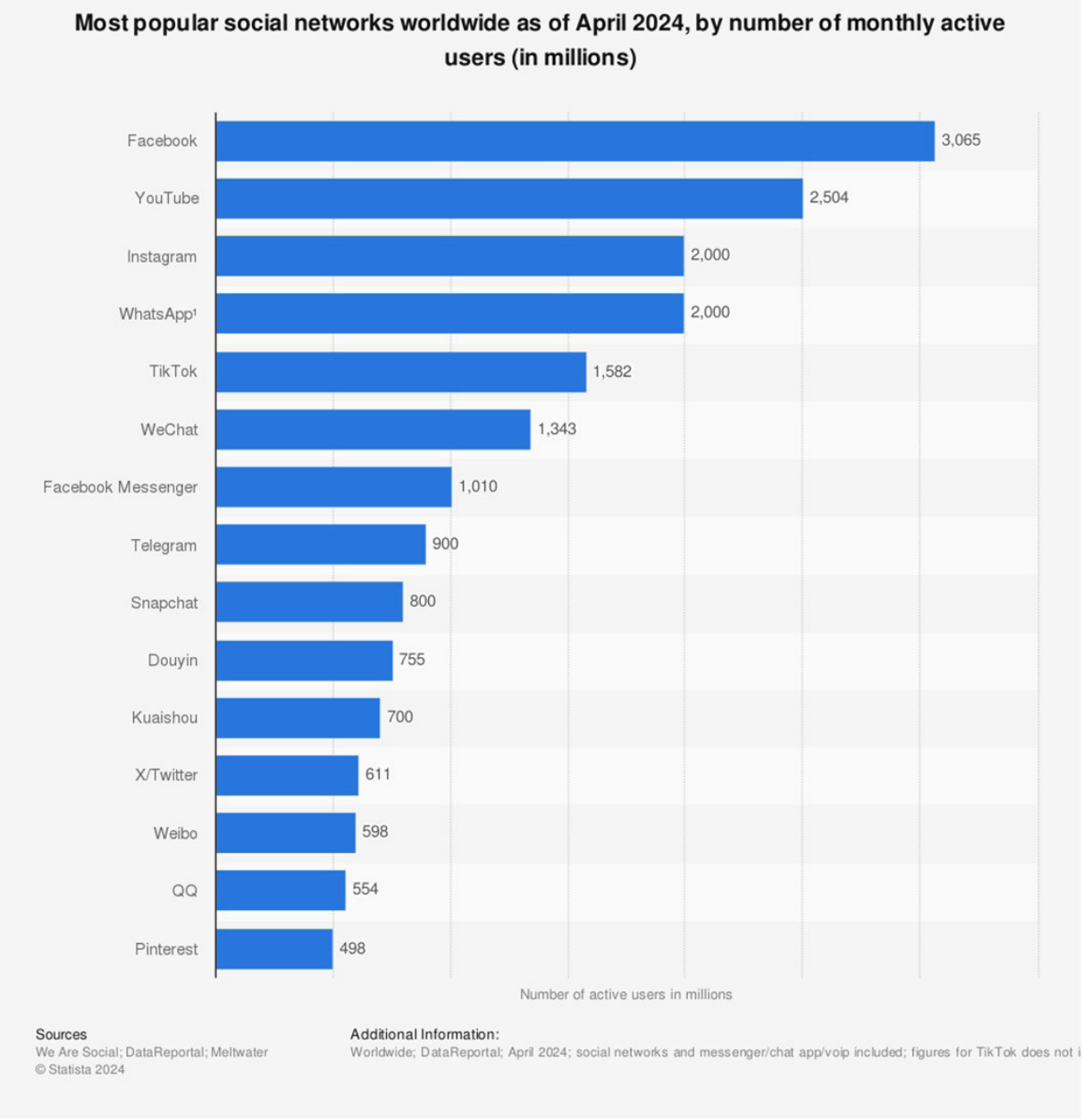

Figure 1. Worldwide; DataReportal; April 2024; social networks and messenger/chat app/voip included; figures for TikTok does not include Douyin
Source: © Statista 2024

improvement. Through this evaluation, we will highlight the critical role that Facebook ratings play in driving customer engagement, brand loyalty, and ultimately, business growth for restaurant chains. By understanding these dynamics over a twelve-month period, we can draw valuable insights into the effectiveness of Facebook as a marketing tool in the highly competitive restaurant industry.

Facebook, the market leader, was the first social network to surpass one billion registered accounts and currently has over three billion monthly active users (Statista Search Department, 2023). Meta Platforms owns four major social media platforms, each with over one billion monthly active users: Facebook (core platform), WhatsApp, Facebook Messenger, and Instagram.

1. 1. What customers want

The pandemic-era surge in social media usage wasn't just a passing trend. As consumers settle into a new normal, they continue to value their online connections and habits. Amid a cultural landscape, social media has emerged to fill a seemingly endless need for content. Brands benefit from offering a variety of it to support the full customer journey.

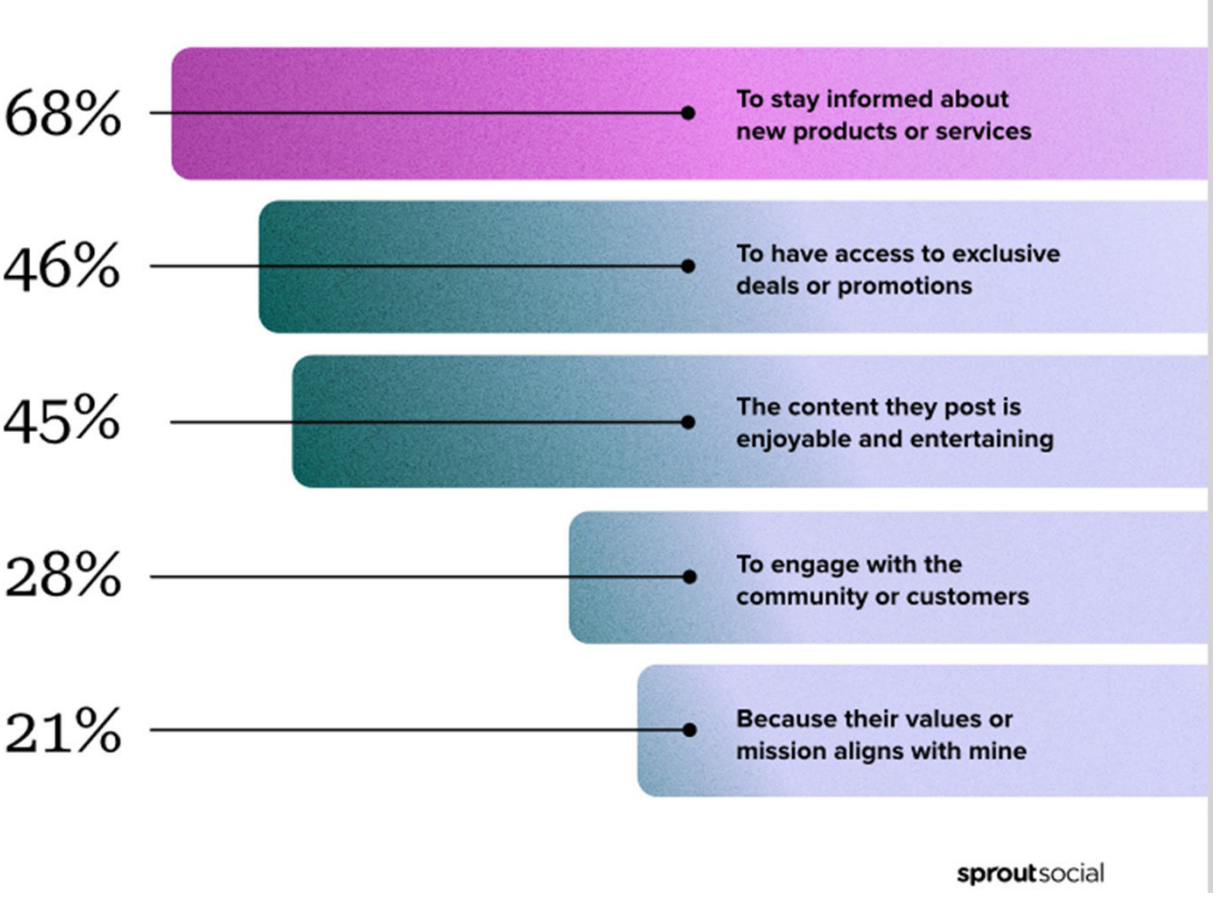

Figure 2. Consumers primary reason for following a brand on social

Source: © The Sprout Social Index™

53% of consumers say their social media usage has been higher over the last two years than the previous two years (The Sprout Social Index™, 2023).

During the discovery phase, audiences seek authentic content that promotes transparency around business practices and values. These posts help further establish your brand ethos and personality, driving credibility that builds deeper connections with consumers.

1. 2. Leaving a lasting impression

For all the discourse on generational differences, consumers of all ages have similar opinions on what makes a brand memorable.

A few years ago, brands taking a stand on tough issues was non-negotiable. Today, only 25% of consumers believe brands must speak out on causes and news that align with their values to be memorable. With skepticism around performative activism on the rise, audiences value brands that prioritize providing excellent service over public statements (The Sprout Social Index™, 2023).

The most memorable thing a brand can do across all age groups is respond to customers, proving that responsiveness leaves an impression on everyone. These one-on-one connections are even more important to younger consumers, who prioritize engagement over publishing volume and on-trend content.

1. 3. Delivering exceptional customer experiences

Social has amplified the importance of strong customer relationships for brands. A single interaction between a brand and their customer can create a lasting impression on more than just the individual. It can create connections with an entire audience, too.

But what it takes to make memorable customer experiences is changing. In the past, providing superior customer service was a matter of speed. But as consumer expectations continue to evolve, so does the need for quality, personalized care on social.

Today, the majority of consumers (76%) place equal value on brands that prioritize customer support and brands that respond quickly to customer needs. It's not enough to resolve an issue quickly anymore. Businesses need to meet their customers with the personalized service they're used to on channels beyond social (The Sprout Social Index™, 2023).

Achieving the level of personalization consumers desire can't be done without an integrated tech stack that enables a clear flow of information between marketing and service teams. Your team brings the compassion and skills; it's your job to supply them with the context needed to solve customer issues.

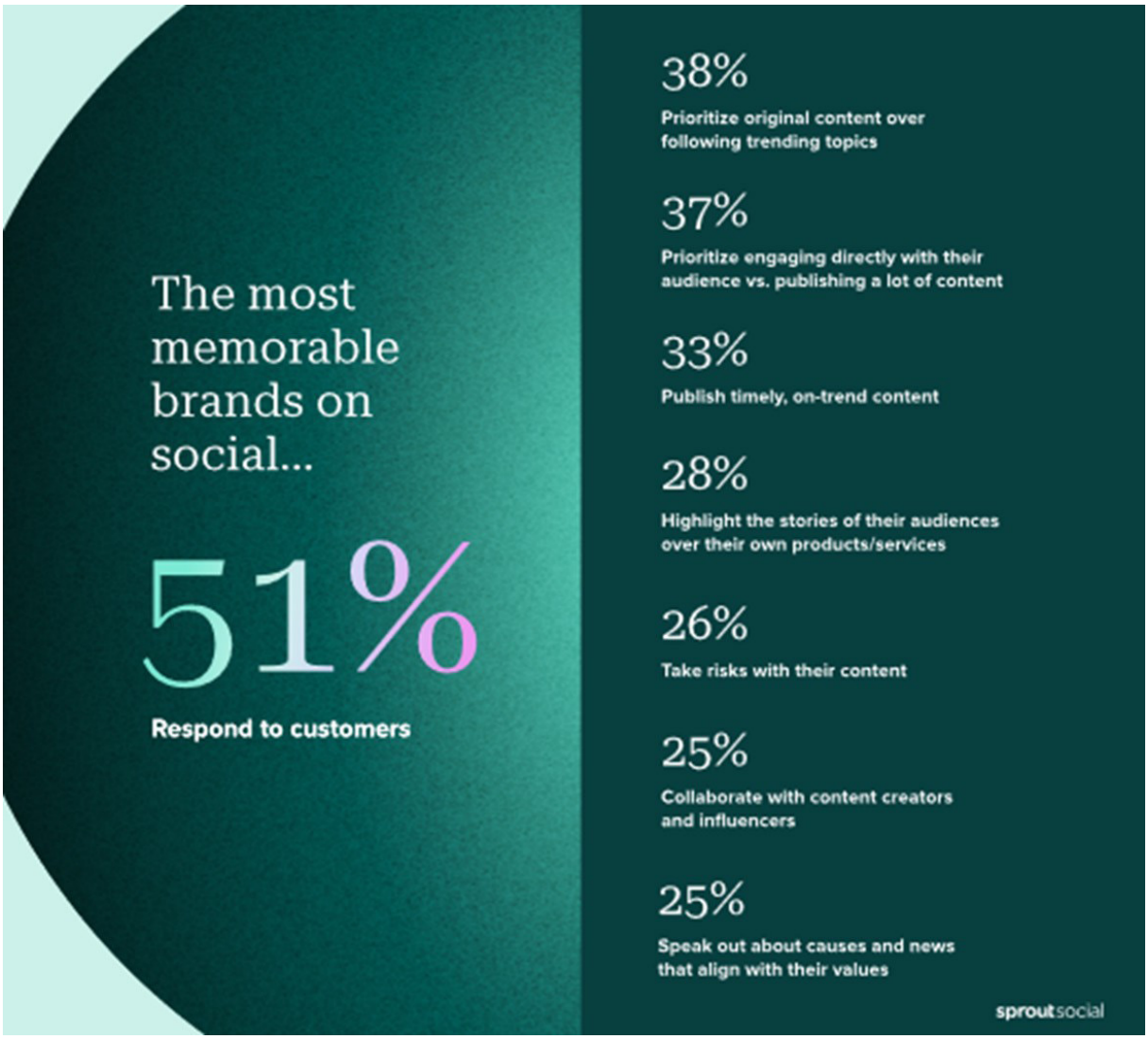

Figure 3. Responses to the most memorable brands on Social Media
Source: © The Sprout Social Index™

2. Evaluating a Year's Worth of Facebook Marketing for Restaurant Chains

In the digital age, social media platforms have revolutionized the way businesses engage with their customers, and Facebook stands at the forefront of this transformation. For restaurant chains, leveraging Facebook marketing can be particularly effective in reaching a diverse and expansive audience. This paper delves into an in-depth analysis of a year's worth of Facebook ratings data for a chain of restaurants. By examining metrics such as the number of reviews, average star ratings, and the competitive landscape of local rivals, we aim to uncover the strategies that have proven successful and identify areas for improvement. Through this evaluation, we will highlight the critical role that Facebook ratings play in driving customer engagement, brand loyalty, and ultimately, business growth for restaurant chains. By understanding these dynamics over a twelve-month

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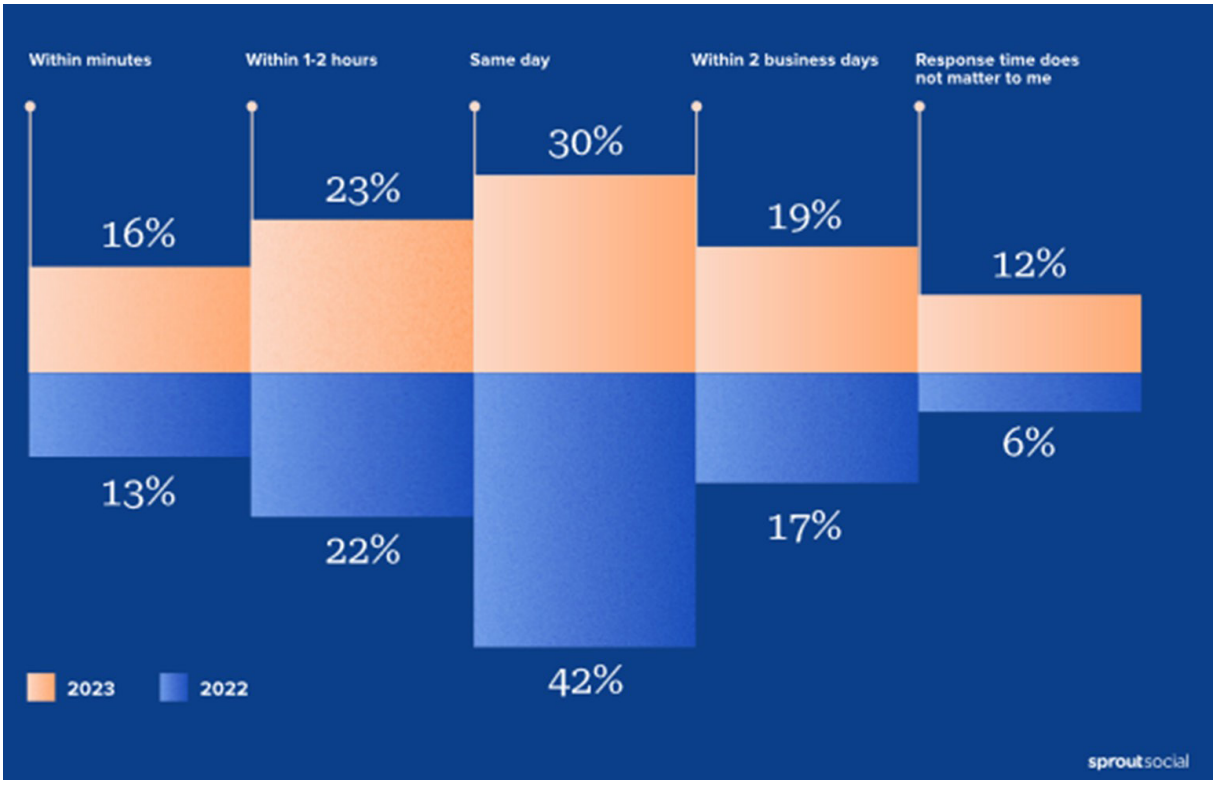

Figure 4. How quickly customers expect a response from brands on social
Source: © The Sprout Social Index™

2. 1. Data Collection

The data for this study has been collected from the official Facebook pages of a Popular Chain of restaurants in United States of America that owns 961 restaurants in 36 States. The review data has been collected over a twelve-month period. The dataset includes the number of reviews left by customers, the average star ratings (ranging from 1 to 5 stars), and data on local competitors, including their review counts and average ratings.

2. 2. Data Analysis

To analyze the collected data, we employed various statistical methods. We performed trend analysis to identify patterns in review counts and average ratings over the year. Comparative analysis was conducted to assess the restaurant chain's performance relative to its local competitors. Correlation analysis was used to explore the relationship between Facebook ratings and key business performance indicators.

3. Results of the Analytics

3. 1. Monthly Positive and Negative Reviews for "Our Brand" and "Local Competitor"

This clustered column chart provides a visual comparison of the number of positive and negative reviews received by "Our Brand" and a "Local Competitor" over a twelve-month period. The x-axis represents the months from January to December, while the y-axis shows the number of reviews. Each month includes four bars—two representing "Our Brand" (positive and negative reviews) and two representing the "Local Competitor" (positive and negative reviews).

The data reveals several key trends:

- **Monthly Fluctuations:** Both brands experience significant fluctuations in the number of reviews throughout the year. Notably, October stands out with the highest number of reviews for both brands, suggesting increased customer engagement during this period. "Our Brand" received 1747 positive and 592 negative reviews, while the "Local Competitor" received 1373 positive and 123 negative reviews.

- Overall Trends: "Our Brand" consistently receives more reviews than the "Local Competitor," indicating a higher level of customer engagement or a larger customer base. This trend is consistent across both positive and negative reviews.

- Positive vs. Negative Feedback: In most months, "Our Brand" has a higher number of positive reviews compared to negative ones, indicating a generally positive customer sentiment. For instance, in January, "Our Brand" received 1076 positive reviews and 404 negative reviews, while the "Local Competitor" received 611 positive and 53 negative reviews.

- Seasonal Trends: There is a noticeable increase in reviews during the holiday season (October to December). This seasonal trend could be due to increased customer activity and engagement during this period.

- Actionable Insights:
  - **Addressing Negative Feedback:** The significant number of negative reviews in October and December for "Our Brand" suggests areas for improvement in customer service or product quality.
  - **Leveraging Positive Feedback:** Analyzing the factors contributing to the high number of positive reviews during certain months can help replicate successful strategies and enhance customer satisfaction.

Table 1. Facebook Recommendations

	Facebook Recommendations					
	Our Brand			Local competitor Average		
Month	Positive	Negative	Average Rating	Positive	Negative	Average Rating
January	1076	404	3.8	611	53	3.9
February	5	3	4.0	1	0	4.5
March	35	7	4.0	12	3	4.5
April	92	14	4.1	21	2	4.5
May	202	40	4.0	59	6	4.4
June	278	64	4.0	69	8	4.5
July	237	70	3.8	105	10	4.5
August	689	319	3.6	443	55	4.4
September	733	262	3.8	678	48	4.4
October	1747	592	3.6	1373	123	4.3
November	917	289	2.1	685	58	2.8
December	1044	417	3.6	871	89	3.9

Source: Author

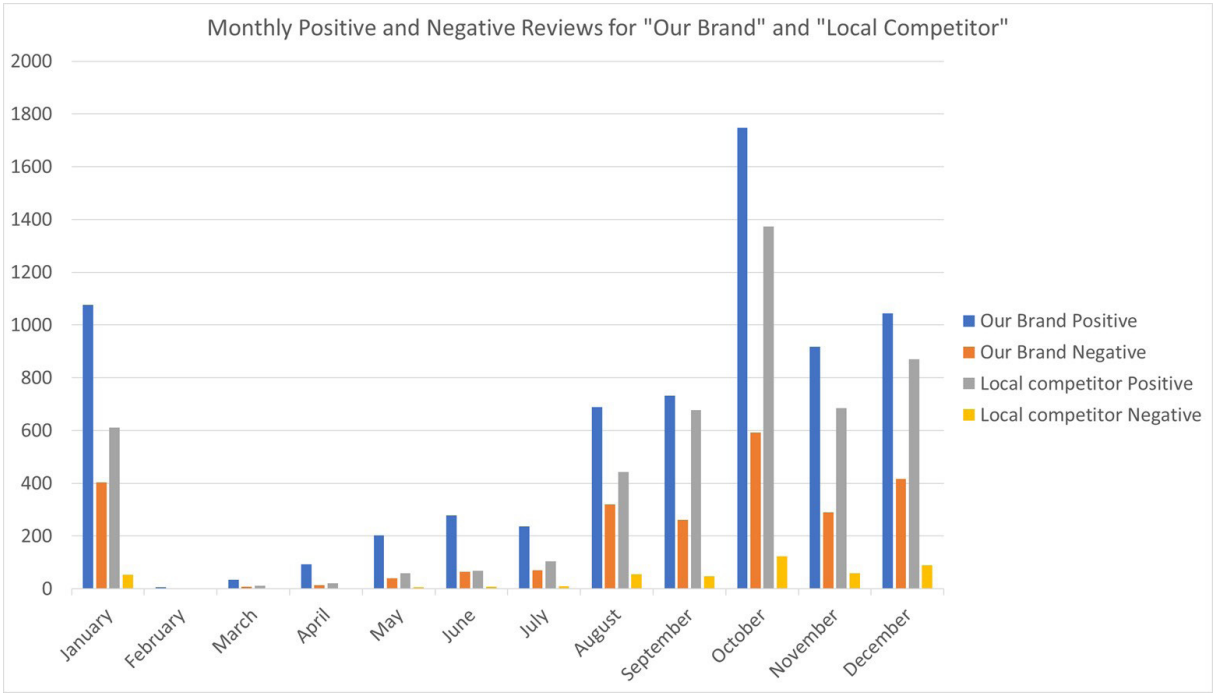

Figure 5. Monthly Positive and Negative Reviews

Source: Author

By analyzing these trends, "Our Brand" can identify key periods requiring additional focus and potentially adjust their marketing and customer service strategies to improve overall customer satisfaction and ratings.

3. 2. Average Monthly Ratings for "Our Brand" and "Local Competitor"

This line chart provides a visual representation of the average monthly ratings for "Our Brand" and a "Local Competitor" over a twelve-month period. The x-axis represents the months from January to December, while the y-axis represents the average star ratings, ranging from 1 to 5 stars.

The data shows that the "Local Competitor" consistently received higher average ratings compared to "Our Brand" throughout the year. Notably, "Our Brand" experienced a significant decline in ratings during November, dropping to 2.10 stars, while the "Local Competitor" also saw a decline but maintained a higher average rating of 2.80 stars.

Overall, the "Local Competitor" maintained relatively high and stable ratings, with peaks at 4.50 stars in several months (February, March, June, July), whereas "Our Brand" showed more fluctuation, with ratings ranging from 2.10 to 4.10 stars.

These trends highlight areas where "Our Brand" can focus its efforts to improve customer satisfaction, particularly during months where there are significant drops in ratings. Additionally, the consistent performance of the "Local Competitor" suggests that they might have effective customer engagement and retention strategies that could serve as a benchmark for "Our Brand".

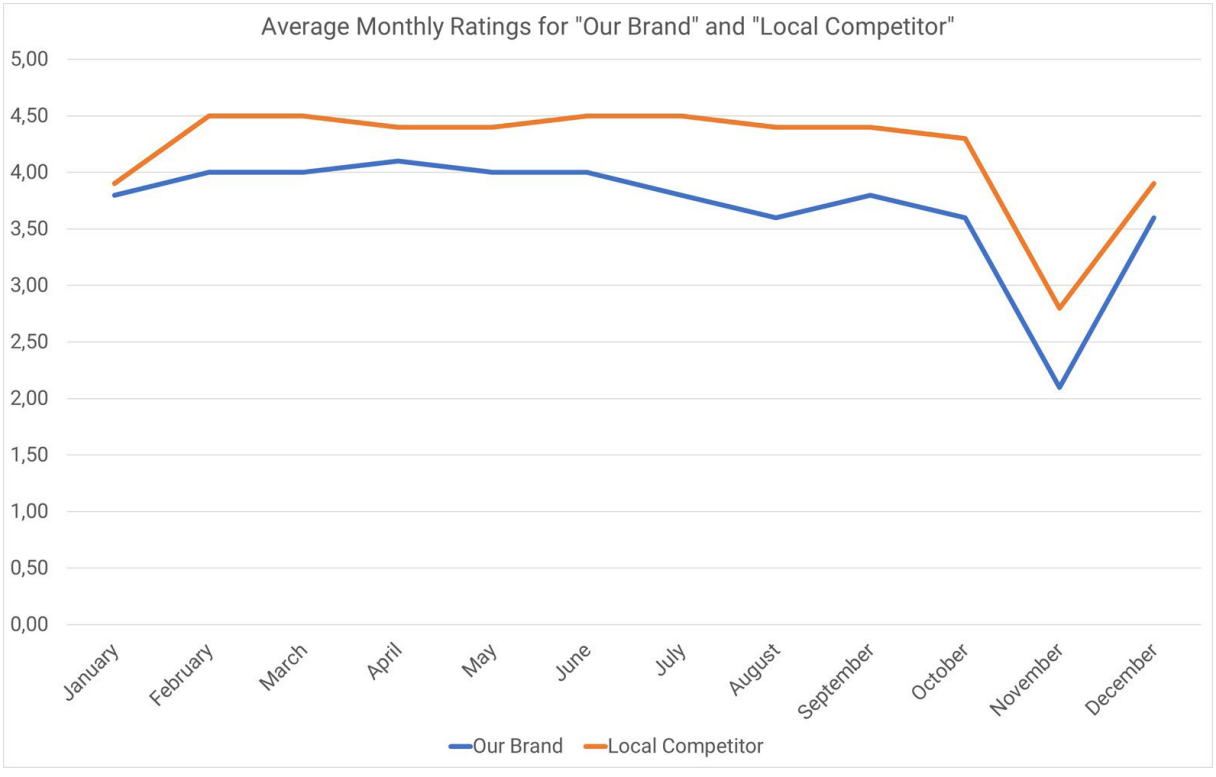

Figure 6. Average Monthly Ratings

Source: Author

By analyzing these trends, "Our Brand" can identify key periods requiring additional focus and potentially adjust their marketing and customer service strategies to enhance overall customer satisfaction and ratings.

3. 3. Distribution of Restaurants by State

This bar chart illustrates the distribution of the 961 restaurants owned by the popular chain across 36 states in the United States.

The data reveals significant variations in the number of restaurants per state, reflecting the chain's market penetration and regional focus. For example, Texas emerges as the state with the highest number of restaurants, housing 206 of the chain's outlets. This indicates a strong market presence and potentially high customer demand in Texas.

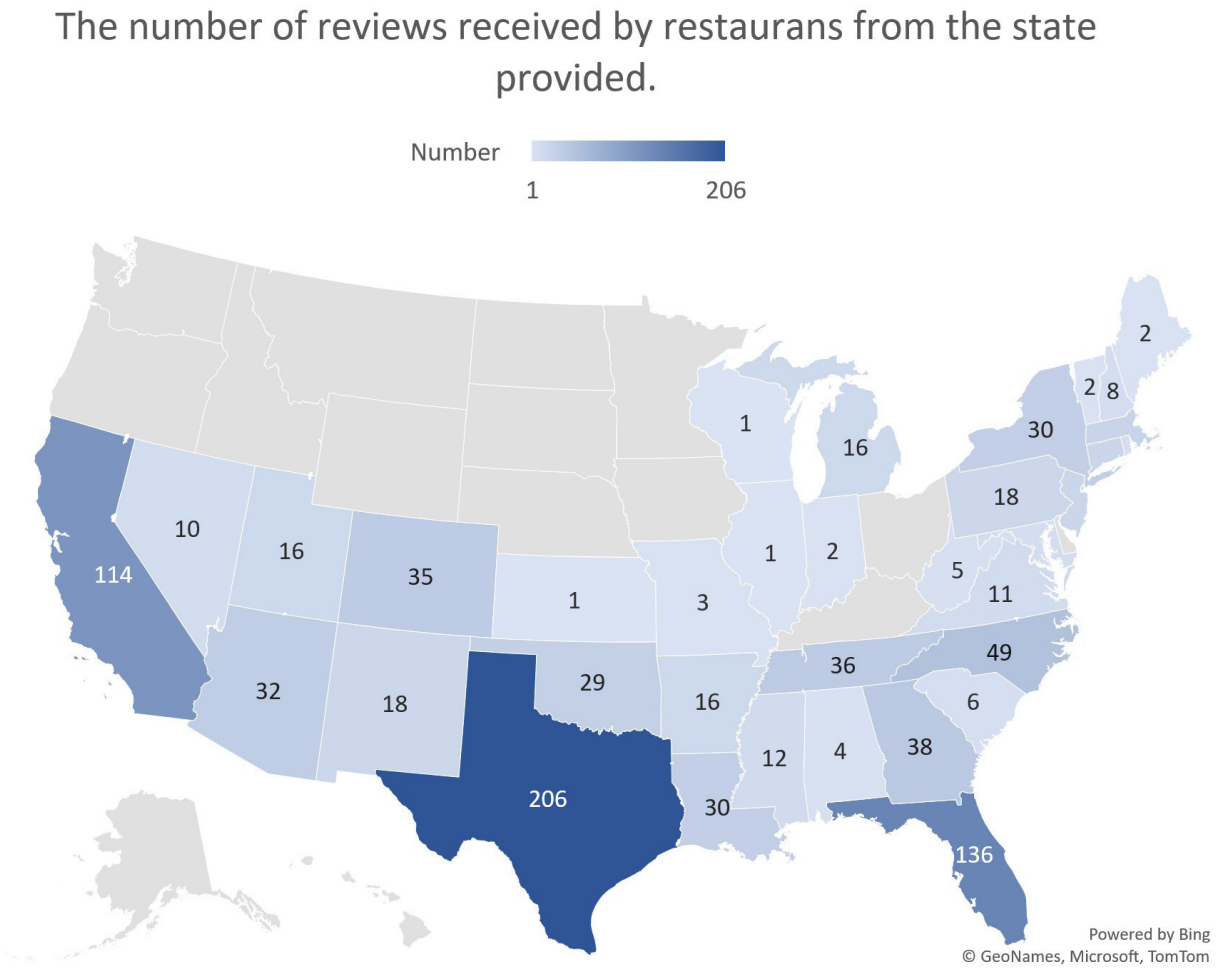

Figure 7. The number of reviews received by restaurants from the state provided
Source: Author

In contrast, states like Michigan have a relatively lower number of restaurants, with only 16 outlets. This suggests potential opportunities for market expansion and increased brand presence in such states. By targeting states with fewer restaurants, the chain can explore new markets and grow its customer base.

The distribution pattern also highlights key insights for strategic planning. States with a high concentration of restaurants, such as Texas, require efficient supply chain logistics to ensure timely delivery of products and services. Additionally, marketing efforts can be tailored to reinforce brand loyalty and attract new customers in these regions.

Conversely, states with fewer restaurants might benefit from increased marketing efforts to raise brand awareness and attract potential customers. This approach can help in balancing the distribution and ensuring a more uniform market presence across the country.

Overall, the distribution of restaurants by state provides valuable insights into the chain's market strategy and helps identify areas for potential growth and improvement. By analyzing this distribution, the chain can make informed decisions to enhance its market presence and achieve sustained growth.

4. Conclusion

The analysis of a year's worth of Facebook marketing data for a chain of restaurants underscores the platform's vital role in digital marketing. By understanding customer engagement trends, competitive performance, and effective strategies, businesses can leverage Facebook to enhance customer satisfaction, drive brand loyalty, and achieve sustained growth.

Over the twelve-month period, the restaurant chain saw fluctuations in the number of reviews and average ratings. Notably, there was a peak in reviews during the holiday season, corresponding with higher customer footfall. The average rating remained relatively stable, with slight variations that aligned with major promotional campaigns.

As of impact of reviews on business performance, the analysis revealed a strong positive correlation between the number of reviews and customer visits, suggesting that increased engagement on Facebook translates to higher instore traffic. Similarly, higher average ratings were associated with increased sales, underscoring the importance of maintaining positive customer feedback online.

On the other hand, if we take a look on the competitive analysis when compared to local competitors, the restaurant chain generally maintained a higher average rating but had fewer total reviews. This indicates a strong base of loyal customers but highlights the potential for increasing engagement to match or exceed competitor review counts.

Effective Facebook marketing strategies shows us that the data indicate the promotional campaigns and special events drive increased customer engagement and positive reviews. Strategies such as regular updates, engaging content, and prompt responses to customer feedback have proven effective.

Despite positive ratings, the restaurant chain can benefit from strategies aimed at increasing the total number of reviews. Encouraging satisfied customers to leave reviews

and engaging with dissatisfied customers to address their concerns can help enhance online presence.

The competitive analysis highlights the influence of local rivals. Keeping track of competitor strategies and adjusting marketing efforts accordingly is crucial for maintaining a competitive edge.

Customer experience should be a driving force for any social program, and yet few organizations have dedicated resources or infrastructure to support sophisticated social customer care.

Creativity and authenticity are key to success on social. Team bandwidth has long threatened both, and AI offers a solution. Although, we can use AI tools to generate the content for our customers, we need to be humans and decide it the created content robotized or humanly accessible. Organic posts are something that will never get out of the trend. Customers always appreciate care and love when they feel that they are important and that they are not just a static number for the brand.

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IT IS NOT AN EU LAW: THE CRITICAL OVERVIEW OF THE DRAFT LAW ON THE INTERNAL TRADE OF THE FB&H

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Abstract

IIn December 2023, the Federation of Bosnia and Herzegovina (FB&H) Ministry of Trade, initiated proposing the new Law on Internal Trade in FB&H. The FBiH Government accepted this Ministry's initiative and put forward the draft Law on Internal Trade of the FB&H to the parliamentary procedure. The FB&H Government, namely, intends to replace the current Law on Internal Trade from 2010 and introduce this new Law that brings novelties regarding trade in the FB&H. The novelties interesting in the context of this text are Internet sales, bearing in mind its growing share in total retail sales. The evolution of Internet sales has brought certain deviations in FB&H's internal trade market due to the imprecise legal solutions and even so unregulated matters regarding the electronic business market in FB&H. This study critically overviews this draft Law from the legal and economic perspectives. Using comparative methods, this paper argues the draft Law does not significantly match European Union requirements regarding Internet sales. In addition, this paper argues the changes in the draft Law are not suitable to the contemporary requirements of the market regarding Internet sales. Therefore, this paper suggests what changes should be made, instead of the changes proposed in the draft Law, to make Internet sales regulations, legally and economically suitable to the contemporary requirements of the EU and the market in the FB&H.

Key words*: Internet Sales, Federation of Bosnia and Herzegovina, European Union Internet Sales Market, EU Integration.*

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1. Introduction: legal and economic background of electronic commerce

1. 1. Economic background

The first form of shops operated according to the principle of barter, but with the emergence of money and new consumer needs, people created permanent places for the exchange of goods, which we now consider as the first stores. Further development of stores largely depends on technological advancements, particularly noticeable in communication and information technology (Pleša Puljić, Celić, Puljić, 2017), also referred to as the fourth disruptive innovation (Kozák, 2019). Information and communication technologies form the foundation of modern economies (Mešić, 2022), and online shopping is arguably the fastest and most cost-effective method of purchasing (Babić, Krajnović, Radman Peša, 2011), bridging geographical trade barriers (Miljelja Žaja, 2022). Nowadays, information technologies play a crucial role in everyday life, particularly in the business sphere. It would be barely impossible to imagine successful business operations and establishing connections with partners, in a domestic and international sense, without the Internet. The advantages of this business approach are best reflected in the speed of response and the ability to communicate with potential partners around the globe. However, there are challenges such as a lack of information about clients, their business reputation, and their ability to fulfill agreed obligations, as well as legal issues related to contract conclusion. Internet trading or e-commerce is increasingly prevalent, growing each year (Mandušić, Markić, Grbavac, 2004). The rapid pace of development sometimes makes regulation challenging (Trivun and Mahmutćehajić, 2008). Unlike traditional stores that require significant investment in infrastructure, staff, and equipment, organizing an online shop (often called an online store) is much more cost-effective. It is typically launched alongside a physical store but can also operate independently (Perenda, 2017). On the other hand, successful e-commerce requires investment in virtual environments, their maintenance, swift order processing to warehouses, and expedient customer delivery (Dunković et al, 2010). In terms of appearance in e-commerce, one can identify: B2B (business-to-business), B2C (business-to-consumer), and categories involving internet use by companies, governments, and other organizations for selling and purchasing (Ružić et al, 2014).

1. 2. Legal background

In the early stages of information society development, at the time of the Internet's emergence as a technical solution comprising a network of interconnected global computer networks exchanging data based on standardized protocol, there was a belief that legal regulation of this area was almost impossible to achieve. However, less than two decades later, the Internet has become an integral part of the lives of more than a quarter of the world's population, including legal relationships, given the development of legislation regulating its various forms or activities conducted electronically (Uzelac and Protić, 2011, p. 101). Electronic commerce (e-commerce) represents one of the most significant forms of commercial internet use. Since its emergence in its current form in the mid-1990s, electronic commerce has experienced exceptional expansion, simultaneously with the digitalization process of communication that necessarily accompanied

internet development, as well as other forms of data exchange electronically (Uzelac and Protić, 2011, p. 102). Electronic commerce is a set of procedures and technologies that automate financial transaction processes using electronic means. Furthermore, according to some authors, electronic commerce is defined as a new concept that is developing and encompasses the process of buying and selling or exchanging products, services, or information over computer networks, including the Internet. Electronic commerce is not limited solely to buying and selling, but it encompasses all pre-sale and post-sale activities along the supply chain (Đerić, 2016, p. 133). Legal transactions in electronic commerce may involve various material and immaterial goods, as well as data or information. In electronic commerce, there is no physical point of sale, but rather an abstract web location. In this sense, it follows that the seller is invisible to the buyer, and the buyer to the seller. The goods being sold are often also invisible, sometimes not yet even existing. The technical capabilities of the Internet, as a highly liberal technical communication platform, have become the foundations upon which an exceptionally broad, rich, and liberal market platform has been built, facilitating intensive trade in a wide and deep assortment of goods and services. In addition, the cost-effectiveness of electronic communication, alongside the aforementioned technological and demographic prerequisites, has enabled the intensification and diversification of specific services offered by the information society (Uzelac and Protić, 2011). In connection with this, in electronic commerce, consumers need to trust that by entering their purchase requirements on an abstract web location (e.g., an internet sales page) and paying (e.g., using a credit card), they will receive purchased products delivered by mail within a few days (Vančina, 2000, p. 110). Several elements help strengthen consumer confidence in electronic commerce, such as: Emphasizing the physical existence of the trading enterprise, achieved today through the construction of websites and mandatory provision of essential company information (address, phone numbers, key characteristics of managers, list of employees, etc.); Demonstrating professionalism, which implies that websites should be professionally designed, and their content tailored to target consumers, e.g., by language, design, price, interest, etc.; Demonstrating a visible intention to build a professional relationship such as offering free services, sending interesting information to former and potential customers via email, creating their own "internet communities," etc.; Maintaining business promises, which includes efficiency in terms of promptly and regularly responding to customer inquiries via email (Vančina, 2000, p. 110).

2. International legal framework of electronic commerce

2. 1. UNICITRAL Model Law on Electronic Commerce

The need to define the legal dimension of relationships established through electronic communication, primarily on the Internet, was recognized early on. In the context of electronic commerce, this need took on specific regulatory outlines through the UNCITRAL Model Law on Electronic Commerce.[4] The United Nations Commission on International

4 United Nations Commission on International Trade Law, UNCITRAL Model Law on Electronic Commerce, with Guide to Enactment, 1996: with Additional Article 5 Bis as Adopted in 1998. New York: United Nations, 1999.

Trade Law (UNCITRAL) proposed this Model Law on Electronic Commerce in 1996.[5] The United Nations General Assembly adopted this proposal as a resolution, offering it to UN member states for their national codifications of electronic commerce as an alternative to traditional paper-and-ink methods. This Model Law aims to provide national legislators worldwide with a functional set of rules adapted to the needs of seamless international trade, creating legal certainty and a conducive legal environment for the development of electronic commerce and the unhindered conclusion of electronic contracts (Trnavci, 2009, p. 452). In other words, this law aims to eliminate potential legal obstacles in various national legislations that could question the legal validity of exchanging legally relevant data without written documents or other forms of written evidence, thereby ensuring legal certainty in electronic commerce. This goal was to be achieved by transposing the principles and standards established in this document (Uzelac and Protić, 2011). This foundational regulatory model in the field of electronic commerce gained particular importance in the legal domain of the European Union with the adoption of Directive 2000/31/EC on electronic commerce, which structurally, conceptually, and in terms of most regulatory solutions, is based on the Model Law (Uzelac and Protić, 2011).

2. 2. Directives of the European Union on Electronic Commerce

In the legal system of the European Union, two directives have been enacted: the Directive on Electronic Signatures from 1999 (Directive on Electronic Signatures)[6] and the Electronic Commerce Directive of the European Union from 2000 (Electronic Commerce Directive).[7] These directives aimed to create a unified legal framework for electronic commerce within the common market, ensuring legal certainty for both business entities and consumers (Trnavci, 2009, p. 452). According to Article 5 of the Treaty on European Union8, which establishes the principle of subsidiarity in EU law, this goal is achieved through the technique of harmonizing national regulations concerning the conclusion and legal effects of electronic contracts. These directives cover a wide range of activities involving the electronic distribution of goods and services, such as online book purchases, booking of tourist services, provision of banking services, access to newspapers, downloading music, etc. (Trnavci, 2009). The Directive on Electronic Signatures aims to recognize the validity of contracts concluded in electronic form and to equate their evidentiary value with those concluded in traditional written form. It is important to note that the Electronic Commerce Directive encompasses both gratuitous contracts (gifts) and onerous contracts, concluded between civil law entities as well as commercial law entities. Following the principle of proportionality, the measures provided for in Directive 2000/31/EC are strictly limited to the minimum necessary to achieve the goal of proper

5 The UNCITRAL Model Law on Electronic Commerce with Guide to Enactment was adopted at the 29th session of that body on June 12, 1996, and accepted by Resolution 51/126 of the UN General Assembly on December 16, 1996. Article 5 bis was subsequently adopted in 1998, so the document now appears under the full title UNCITRAL Model Law on Electronic Commerce (1996) with added Article 5 bis adopted in 1998 and Guide to Enactment.

6 Directive, 1999/93/EC

7 Directive, 2000/31/EC

8 Article 5 of the Treaty establishing the European Economic Community signed on March 25, 1957, in Rome.

functioning of the internal market[9], taking into account different national legislations and internal regulations, as well as legal barriers to the development of the information society within all member states (Trnavci, 2009. p. 456). Furthermore, Directive 2000/31/EC also refers to the principle of the internal market clause, which implies that if a business entity starts electronic commerce activities in accordance with the regulations of the member state where it is registered, the member state where the service or product is distributed through electronic commerce cannot prohibit or restrict such distribution in any way.[10]

3. Economics aspects of Electronic Commerce in Bosnia and Herzegovina

In Bosnia and Herzegovina, online sales or e-commerce is a significant segment of the economy, although comprehensive and accessible data are lacking due to its mostly informal nature (Ziegler, 2024). Therefore, e-commerce initiatives are driving innovations in tax models and collection methods (Berzjak, 2012). Similarly, as observed worldwide, e-commerce in Bosnia and Herzegovina has significantly evolved, especially during the COVID-19 pandemic in 2020. Online shopping and card payments have been on the rise in BiH over the past four years, according to research by the eCommerce Association. Through a survey consisting of 30 questions, responses from over 1,700 participants were analyzed. The research indicates that over 60% of customers have made at least one online purchase in the last three months. This demographic primarily includes individuals aged 25 to 45 years (Kerezović, 2024), which is expected given that younger generations are more inclined to share information online (Strugar, Knežević, Jaković, 2011). In contrast to these findings, according to research by Valicon/Market Makers, only 0.8 million citizens in Bosnia and Herzegovina make purchases online. However, when it comes to the use of bank cards, a prerequisite for online shopping, Bosnia and Herzegovina is not lagging behind. According to data from the Central Bank of BiH, there were a total of 2.3 million active cards in 2022. In 2022, over 448 million BAM was transacted online, compared to 265 million BAM in 2021 (Musić, 2023). Research presented by the eCommerce Association of Bosnia and Herzegovina shows that a significant 83.4% of e-commerce transactions are conducted via mobile phones (Kucukalić, 2021). This highlights the need to invest in and develop appropriately mobile-optimized websites and mobile applications for e-commerce purposes. Despite challenges, there is an annual upward trend in online transactions. After a comprehensive analysis of the e-commerce market in Bosnia and Herzegovina, the eCommerce Association recently presented more detailed research, indicating a noticeable growth in trust in the online market, with nearly 60% of surveyed customers making between 2 and 5 online purchases in the last three months (Vukadin, 2024). A 2011 study by Peštek et al. revealed that 55% of citizens in Bosnia and Herzegovina did not engage in e-transactions, citing reasons such as lack of security in payments, security threats (e.g., personal data), poorly organized and overly complicated websites, lack of face-to-face interaction, and inability to physically inspect products before delivery, alongside a general lack of information. Distrust is a key barrier preventing significant development of e-commerce in Bosnia and Herzegovina. Operating in the new

9 The Preamble of Directive 2000/31/EC, point 10.

10 Article 5 of Directive 2000/31/EC

economy hinges on trust, long-term partnerships, innovation, and enhancing societal well-being (Šarenac, Rebić, 2011). Hence, adopting necessary legislative regulations, as pursued through specific provisions in the Law on Internal Trade of the Federation of Bosnia and Herzegovina, is crucial. That question, therefore, will be discussed in the next section.

4. Legal Framework of Electronic Commerce in Bosnia and Herzegovina

Electronic commerce in Bosnia and Herzegovina is regulated by a total of two provisions in the entity's laws. In Republika Srpska, the field of electronic commerce is regulated by the provisions of Article 61 of the Trade Law of that entity, norming that electronic commerce constitutes a part of distance selling, where goods or services, i.e., the subject of sale, are ordered and sold via the internet.[11] Furthermore, the use of electronic commerce in the same law is envisaged to be conducted through electronic stores, representing the primary form of electronic commerce, as well as through electronic platforms connecting consumers and producers, namely sales via e-commerce platforms, and finally, sales through social networks and drop shipping.[12] In the Federation of Bosnia and Herzegovina, electronic commerce is more narrowly regulated compared to the Republika Srpska entity. In the Federation of Bosnia and Herzegovina, electronic commerce constitutes a form of retail trade in goods and services offered by the manufacturer or trader to the consumer through various means of communication, where the direct presence of the consumer is not necessary in order to fulfill the conditions for concluding distance contracts.[13] Furthermore, it is regulated that a distance sales contract is concluded in accordance with the provisions of the law regulating consumer protection in Bosnia and Herzegovina.[14] For such a contract to be valid, it can only be organized by a trader registered for distance selling. In addition to these entity laws, Bosnia and Herzegovina adopted the Law on Electronic Signature[15] in 2006 and the Law on Electronic Legal and Business Transactions[16] in 2007 at the state level. Through the Law on Electronic Legal and Business Transactions, the Bosnian legislator regulates the methods of concluding electronic contracts and contracts via the Internet. According to international sources present in Bosnian law, an electronic contract may be concluded in any manner that manifests agreement, explicit offer and acceptance, the conduct of negotiating parties (implied actions), or the operation of electronic intermediaries (Trnavci, 2009, p. 461). Under the Law on Electronic Signature of Bosnia and Herzegovina, the electronic form of contracts is equated with traditional written form in situations where written form is a requirement for the validity of the contract, even in cases where a handwritten signature is required (Trnavci, 2009). Based on these provisions at the state level, which form the basis for the functioning of electronic commerce in terms of contract conclusion, it can

11 Article 61 of the Trade Act of Republika Srpska, Official Gazette of RS, No. 105/2019

12 Ibid. Article 61, paragraph 7

13 Article 47 of the Law on Internal Trade of FBiH, Official Gazette of the Federation of Bosnia and Herzegovina, No. 40/2010 and 79/2017

14 The Law on Consumer Protection in Bosnia and Herzegovina, Official Gazette of BiH, No. 25/2006 and 88/2015

15 The Law on Electronic Signature in Bosnia and Herzegovina, Official Gazette of BiH, No. 91/06

16 The Law on Electronic Legal and Business Transactions, Official Gazette of BiH No. 88/07

be concluded that the legislator aims to align with the social changes brought about by digitalization, intending to provide appropriate protection to the information society in Bosnia and Herzegovina.

5. Novelties in e-commerce according to the Draft Law on Internal Trade of FB&H

Regulating Internet commerce holds economic significance for institutional trade development, essential for creating conditions for a stable market with predictability in transactions and outcomes. Legislative regulation paves the way for further development of Internet commerce. As stated by the relevant ministry, the Ministry of Trade of the Federation of Bosnia and Herzegovina "Distance selling requires specific regulation, as it involves transactions where the buyer cannot negotiate face-to-face with the seller or physically inspect the offerings in real space and time." This lack of trust can lead to reluctance to conduct e-transactions. European Union's rules on consumer protection ensure that when purchasing goods and services within the European Union, you receive clear information about the product or service, its price, delivery costs, and your rights in case of issues. Transparency on the internet means you have the right to know the status of every online seller. Online marketplaces must specify whether the seller is a trader (registered company or sole trader) or an individual. This distinction is crucial because, under the European Union consumer protection legislation, you are only protected when purchasing from a trader. If you choose an offer from an individual, the online marketplace must alert you to this fact (You Europe, 2024).

The House of Representatives of the Parliament of FBiH adopted the Draft Law on Internal Trade of FBiH in April 2024, and the House of Peoples of the Parliament of FBiH adopted the same draft in May 2024. In general, the draft aims to enhance trade as a significant economic activity within the entity of FBiH. In addition to its general objectives, the draft also specifies goals, notably the regulation of new forms of trade and combating the informal economy in the trade sector, both of which are directly related to the operation of electronic commerce in the FBiH entity. Considering the favorable legal framework for electronic commerce in Bosnia and Herzegovina, the draft introduces changes aimed at establishing more suitable and secure electronic trading in the Federation of FBiH. Article 1 of the draft Law on Internal Trade of FBiH explicitly lists European Union directives adopted by this law into the legislation of the Federation of FBiH, including Directive 2011/83/EU on consumer rights, which regulates consumer protection in contracts concluded using distance communication means (Petrović, 2015, p. 133). Directive 2011/83/EU defines distance contracts as contracts concluded between a trader and a consumer based on an organized system of sales or service provision at a distance, which does not require simultaneous physical presence of the trader and the consumer, exclusively using one or more means of remote communication.[17] Under the term "organized system of sales or service provision at a distance", European legislation encompasses systems used by traders offered by third parties other than the trader, such

17 Article 2, point 7 of Directive 2011/83/EU

as online platforms.[18] Considering that the current Law on Internal Trade of FBiH does not currently foresee organized systems of sales or service provision at a distance leading to the conclusion of such contracts, the proposer of the draft introduces for the first time into the legislation of the Federation of FBiH legally defined terms such as "electronic platform"[19] and "electronic store"[20], which are aligned with the definition of organized systems of sales or service provision at a distance under European legislation.

The Draft introduces the concept of electronic commerce into the legislation of FBiH as a form of distance selling where goods or services are offered, ordered, and sold via the Internet.[21] The proposer emphasizes the distinction between electronic commerce and other forms of distance selling (such as catalog sales, radio, and TV sales) in the Draft Law on Internal Trade of FBiH. The current law regulates distance selling broadly without delineating different forms and methods of conclusion. Highlighting electronic commerce concerning other forms of distance selling represents an innovation aligned with the trend of digitization and rapid technological changes. Given that electronic commerce operates via efficient and fast internet services, it is realistic to expect that with further internet development, electronic commerce will establish itself as the dominant form of distance selling, displacing other forms. In addition to introducing the concept of electronic commerce into FBiH legislation, the draft proposer lists three specific methods through which electronic commerce can be conducted:

- Sale of goods or services through an electronic store, representing the primary form of electronic commerce;
- Sale of goods or services through an electronic platform, and;
- Drop shipping.[22]

Such detailed regulation of electronic commerce could undoubtedly result in increased consumer trust in online commerce in Bosnia and Herzegovina. According to the provisions of the Law on Consumer Protection of Bosnia and Herzegovina, a trader is obliged to inform the consumer, before concluding a sales contract, primarily about general information regarding the trader, such as the name, registration number, full address of the trader and supplier, tax number, as well as telephone numbers, fax, and email addresses.[23] This obligation to provide such general information, i.e., information about the trader's identity, is also envisaged by Directive 2011/83/EU. This directive exhaustively regulates all obligations of the trader to inform the consumer when

18 The Preamble, point 20, Directive 2011/83/EU

19 An electronic platform is a tool through which a person, at the request of the user, usually for remuneration, provides a service of connecting parties engaged in electronic commerce, and manages the electronic platform, and may also carry out the sale of its own goods or services through that platform. Article 2, point m) of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina.

20 An electronic store is an online store through which a merchant offers goods or services. Article 2, point n) of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina.

21 Article 48, paragraph 6 of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina.

22 Sale of goods through an online store or electronic platform, where the trader does not have the goods in stock but orders them in their own name and on their own account from a third party, manufacturer, or trader, who then directly delivers the goods to the consumer. Article 49, paragraph 7, point c) of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina.

23 Article 44, paragraph 1, point a) of the Consumer Protection Act of Bosnia and Herzegovina, Official Gazette No. 25/2006 and 88/2015.

concluding distance sales contracts.[24] Directive 2000/31/EC, on the other hand, expands the list of obligations, i.e., information that the trader must provide to the consumer in cases of electronic commerce.[25] In the draft Law on Internal Trade of the Federation of Bosnia and Herzegovina, although not explicitly stated in the preamble that the adoption of this law includes Directive 2000/31/EC on electronic commerce into the legislation of the Federation of Bosnia and Herzegovina, Article 50 regulates the obligations of the trader to provide information to the consumer and competent inspection authorities, corresponding to the obligations envisaged by the Directive on electronic commerce. Thus, the draft requires the trader to provide information about the name under which it is registered in the appropriate register, as well as the registered office address, the name, and number of the register in which the trader is registered if a taxpayer, then also the VAT number, and other data based on which the consumer or competent inspection authorities can quickly and unhindered contact the trader.[26] Compared to the currently valid law, the draft provides a higher level of consumer protection, especially considering the obligation to inform competent inspection authorities about the aforementioned information. Referring to the provisions of the Law on Consumer Protection of Bosnia and Herzegovina, as is the case in the Law on Internal Trade of the Federation of Bosnia and Herzegovina in force, without emphasizing the obligations that the trader has towards the consumer, does not provide a good basis for gaining the trust of consumers, and certainly does not comply with the minimum standards set by European directives regulating distance selling. Furthermore, Directive 2011/83/EU, as well as the Law on Consumer Protection of Bosnia and Herzegovina, regulates that the consumer, before concluding a distance sales contract, must be informed about the total price of the goods or services, including taxes, transportation costs, and all additional costs. The current Law on Internal Trade of the Federation of Bosnia and Herzegovina is not detailed in this regard but refers to the provisions of the Law on Consumer Protection of Bosnia and Herzegovina. On the other hand, the draft specifies that the distance sales contract must obligatorily include the price and other terms of sale. It is emphasized that prices must be clearly and unambiguously indicated, including all costs that could in any way affect the displayed price.[27]

The draft aims to protect consumers from unwanted consequences regarding sudden and unexpected prices, but it cannot be concluded that the draft has aligned these provisions with the requirements of the Directive and the Law on Consumer Protection of Bosnia and Herzegovina in this regard. Namely, legal acts provide for the obligation to form the final price together with all costs, as well as the obligation to inform consumers about the same price before the conclusion of a distance sales contract. In the draft law, the proposer explicitly states that the distance sales contract must obligatorily include the price and other terms of sale.[28] Given that without a specific, or at least determinable price, the sales contract will not have legal effect[29], this provision will not provide legal security

24 Article 6 of Directive 2011/83/EU

25 Article 5 of Directive 2000/31/EC

26 Article 50 of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina

27 Article 49, paragraph 5, of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina

28 Ibid.

29 Article 462, paragraph 1, of the Law on Obligations Relationships of the Federation of Bosnia and Herzegovina, Official Gazette of the SFRY, No. 29/1978, 39/1985, 45/1989 decision of the Supreme Court of Yugoslavia, and

to consumers, which is why it should be revised to align with the requirements set out in the Directive and the Law on Consumer Protection of Bosnia and Herzegovina because only in this way will the proposer's intention to obligatorily form and inform consumers about the final and total price truly make legal sense and as such produce legal effects. A positive aspect of the draft is that it envisages a sanction for failure to provide information to the consumer in accordance with Article 51 of the Draft. Namely, in case the trader fails to inform the consumer about general information about the trader, they will be fined with a monetary penalty ranging from 3,000.00 BAM to 30,000.00 BAM.[30] With this penal provision, the proposer has tightened the sanctions against traders, increasing the amount of the monetary fine compared to the current Law which ranges from 2,000.00 BAM to 10,000.00 BAM.[31] The proposer clearly emphasizes the weaker contractual position of the consumer by providing protection in case of misinformation, but in addition to the information provided by Article 51 of the Draft, it was necessary to oblige the trader to provide information to the consumer regarding the terms for fulfillment and termination of the contract, the right and period for withdrawal from the contract, rights in case of disproportionality or damage to the goods, etc., as envisaged by the Law on Consumer Protection of Bosnia and Herzegovina[32] and Directive 2011/83/EU. In this way, absolute protection would be provided to both contracting parties in distance contracts. Namely, the trader would be informed about all the information they are obligated to provide before concluding a contract with the other party, thus avoiding a situation in which the trader could be held liable for non-compliance with regulations of stronger legal power compared to the Law on Internal Trade of Bosnia and Herzegovina. On the other hand, the consumer, as the weaker contractual party, would be provided with all the information about their rights, thus avoiding the risk that the consumer, due to lack of knowledge, does not invoke the legal rule intended for their protection.[33]

6. The Republic of Serbia as the role model for the Federation of Bosnia and Herzegovina

In the Republic of Serbia, distance selling, i.e., electronic commerce as a form of distance selling, is regulated in the same way as proposed in the Draft of the new law in the territory of the Federation of Bosnia and Herzegovina. Therefore, under the Law on Trade of the Republic of Serbia, electronic commerce represents a form of distance selling conducted via the Internet. The Serbian legislator similarly regulates three forms or methods through which electronic commerce can be conducted (via electronic stores, electronic platforms, and drop shipping), and also distinguishes between electronic commerce and other forms of distance selling.[34] Furthermore, both compared acts prescribe the obligation to keep

57/1989, Official Gazette of the RBiH, No. 2/1992, 13/1993, and 13/1994, and Official Gazette of the FBiH, No. 29/2003 and 42/2011

30 Article 125, point f), of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina

31 Article 64, point f), of the Law on Internal Trade of the Federation of Bosnia and Herzegovina

32 Article 44 of the Consumer Protection Law of Bosnia and Herzegovina

33 The EU Court has established, based on its established case law, the concept of the consumer as the weaker party in relation to a business entity, both in terms of negotiating power and level of information, and identified a significant risk that consumers might not invoke legal rules intended for their protection due to lack of knowledge. Judgment of the EU Court in case C-497/13, Faber, ECLI:EU:C:2015:357.

34 Article 17 of the Law on Trade of the Republic of Serbia, Official Gazette of RS, No. 52/2019.

records of goods transactions based on purchase documents (shipping invoices, invoices, delivery notes, receipt notes, etc.), as well as ensuring the availability of records to competent authorities. One difference compared to the Draft law is that in the Republic of Serbia, the legislator allows these documents, i.e., documents on goods, to take the form of electronic documents[35], whereas the Draft does not specify in which form these documents, may be, implicitly suggesting that the legislator adheres to the traditional physical form of documents. Although this aspect does not warrant extensive discussion in this work, it is necessary to emphasize that while the legislator strives to address the challenges of digitalization, it inconsistently approaches its task and leaves room for slower and more complex action through traditional means, "via a paper". Another difference in this regard is that in the Republic of Serbia, for distance trade, records are kept at the level of the entire distance trade of that trader in the market of the Republic of Serbia or specifically for individual organizational units in accordance with a previously adopted decision of the trader[36], while the Draft specifies record keeping for distance trade in the same manner as for other forms of retail trade, without a specific distinction on the scope and method of trading. The Law on Trade of the Republic of Serbia regulates the internal market of the territory of the Republic of Serbia, as well as cross-border trade. In this regard, the Law generally regulates the manner of conducting distance sales, but the Serbian legislator in 2009 adopted a specific (lex specialis) Law on Electronic Commerce, as an expression of the process of harmonizing Serbian legislation with the regulations of the European Union. By adopting this law, conditions for the legal validity of contracts fully concluded electronically are provided for the first time in the legal system of Serbia, i.e., in the form of an electronic contract (Uzelac and Protić, 2011, p. 107). The Law represents a complete transposition of the rules of relevant community law, specifically the cited Directive 2000/31/EC on electronic commerce, as well as certain provisions of Directive 98/48/EC amending Directive 98/34/EC (Uzelac and Protić, 2011). The Law on Electronic Commerce of the Republic of Serbia introduces the term "services of the information society" into the legislation of the Republic of Serbia, specifies the obligation of the trader to provide certain information to the consumer and competent authorities, introduces the term "commercial message" as a service of the information society and conditions for its validity, and finally, most importantly, regulates provisions regarding electronic contracts, their validity, duration, termination, etc.[37] All of the above is fully aligned with the requirements of Directive 2000/31/EC on electronic commerce, unlike the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina, where the proposer failed to refer to the adoption of the Directive on electronic commerce in the preamble of the Draft itself, and further failed to introduce provisions into Bosnian-Herzegovinian legislation that are crucial for the validity of electronic contracts, which constitute the foundation of electronic commerce. Considering that the process of harmonizing Bosnian-Herzegovinian regulations with the legal acquis of the EU began before the formal obligation with the signing of the SAA[38] in 2008, it is necessary to emphasize Bosnia and Herzegovina's, or entity's, obligation to adopt Directive 2000/31/EC, both for harmonization with EU

35 Ibid. Article 29, paragraph 5

36 Ibid. Article 30, paragraph 4

37 Article 9 of the Law on Electronic Commerce of the Republic of Srpska, Official Gazette of the Republic of Srpska, No. 41/2009, 95/2013, and 52/2019.

38 Stabilization and Association Agreement between the European Communities and their Member States, of the one part, and Bosnia and Herzegovina, of the other part, OJ L 164, 30.06.2015.

community law and for enhanced consumer protection and ensuring a safer market for electronic commerce.

7. Conclusion

With the development of internet sales, certain deviations arise due to the legally unregulated state of electronic business in the Federation of BiH and imprecise legal solutions that minimally regulate this area; hence it was necessary to foresee adequate mechanisms to sanction such behavior. The Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina, adopted in April 2024, marks a significant step towards modernizing and regulating electronic commerce within the entity and filling the legal gap. This law aims to enhance regulation in the trade sector, with a particular focus on electronic commerce as a critical segment of the economy. By aligning with European standards, introducing definitions of electronic commerce, electronic platforms, electronic stores, and comprehensive regulation of distance contracts, the Draft provides a foundation for more efficient business operations in the digital environment. The advantages of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina are numerous. Firstly, compliance with EU standards ensures that Bosnia and Herzegovina keeps pace with the Europeanization of its legislation, facilitating access to the European digital market and reducing administrative barriers for domestic companies. Secondly, the law mandates that traders provide comprehensive information to consumers in accordance with European legislative requirements, thereby strengthening consumer trust in online commerce and providing them with necessary protections. Despite these advantages, the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina also has several shortcomings that require attention. The lack of specificity in areas such as data protection, online dispute resolution, and precise alignment with specific European directives like Directive 2000/31/EC poses a significant challenge to fully adopting European standards and ensuring legal certainty for all stakeholders in electronic commerce. In conclusion, aligning with Directive 2000/31/EC is a crucial step for Bosnia and Herzegovina towards creating a stable and prosperous environment for electronic commerce. This is not only a legal requirement but also an opportunity to enhance the business environment, increase the competitiveness of domestic companies in the global market, and improve the consumer experience as they increasingly use the internet as a channel for purchasing goods and services. Moreover, a fundamental drawback of this solution is the lack of a legal definition regarding the return of goods, which is problematic and can contribute to further mistrust (Vukadin, 2024). The Law on Internal Trade also does not recognize social media on the Internet. In addition, practice indicates that a significant number of businesses engage in distance selling via the Internet. What defines Article 2 of the Draft Law is that "Only a trader registered for such type of trade can organize distance selling." This could be problematic as it reduces the number of participants/providers within the e-commerce sector in the FBiH. Articles 4 and 5 of the amendment to the law should follow EU practices, and promote competition and new technologies, including the significant role of social media on the internet. Further development of the Draft Law on Internal Trade of the Federation of Bosnia and Herzegovina should focus on addressing these shortcomings and ensuring that the legal framework supports comprehensive protection and innovation in electronic commerce.

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