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IMPACT OF DIGITALIZATION ON THE INSURANCE INDUSTRY IN SERBIA

Marija Lukić¹
Tatjana Piljan²
Aleksandra Golubović-Stojanović³

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ABSTRACT

Digitization has brought significant changes to the insurance industry, reshaping the way insurance companies do business, improving customer experience and increasing the efficiency of operations. Digitization is a key factor of transformation in the insurance industry worldwide, including Serbia. This paper investigates the impact of digitization on the insurance industry in Serbia, analyzing technological innovations, advantages, challenges and perspectives of future development. Digital platforms, mobile applications, big data analytics and artificial intelligence have brought significant changes, enabling insurance companies to improve customer experience, reduce operational costs and personalize offers. However, digitization also brings challenges such as data security, regulatory requirements and resistance to change. Prospects for future development include further integration of advanced technologies, development of new business models and increased use of big data analytics. This paper concludes that insurance companies in Serbia that successfully overcome these challenges and take advantage of digitalization opportunities will be in the best position for long-term success in an increasingly digital business environment.

KEYWORDS

digitization, insurance industry, technological innovations, artificial intelligence, data security

INTRODUCTION

The insurance industry is undergoing a significant transformation fueled by the rapid development of digital technologies. Digitization has become a key driver of change, enabling insurance companies to improve their services, increase business efficiency and improve customer experience. This phenomenon has not bypassed Serbia either, where insurance companies are increasingly adopting digital technologies in order to adapt to new market conditions and client expectations.

Digital technologies such as big data analytics, artificial intelligence (AI), the Internet of Things (IoT) and blockchain are shaping the way insurance companies do business. Using big data analytics enables in-depth analysis of customer and risk data, leading to personalized offers and better business decisions. Artificial intelligence and machine learning enable process automation, reducing the time required to

¹ Faculty of Business Economics and Entrepreneurship, Belgrade, Serbia, marija.lukic@vspep.edu.rs

² Business College of Applied Studies "Prof. dr Radomir Bojković", Kruševac, Serbia, tatjana.piljan@visokaposlovnaskola.edu.rs, ORCID: 0000-0003-2144-3073

³ Business College of Applied Studies "Prof. dr Radomir Bojković", Kruševac, Serbia, aleksandra.golubovic@visokaposlovnaskola.edu.rs



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process requests and increasing efficiency. IoT devices provide insurance companies with real-time data, enabling more accurate risk assessments and premium adjustments. Blockchain technology ensures transparency and security in the processing of transactions, reducing the risk of fraud (The Role of Mobile Apps in the Digital Transformation of Insurance in Serbia, 2024).

The adoption of these technologies brings numerous advantages for insurance companies in Serbia, including reducing operating costs, improving user experience and increasing competitiveness in the market. However, digitization also brings certain challenges, such as the need for data protection, adaptation to regulatory frameworks and change management within the organization (Navigating Regulatory Change in Insurance, 2024).

This paper investigates the impact of digitization on the insurance industry in Serbia, with a special emphasis on technological innovations, their advantages and challenges, and future development perspectives. The aim of the paper is to provide a comprehensive overview of the current state of digitization in the insurance sector in Serbia and to identify the key factors that will shape the future of this industry.

SWOT ANALYSIS OF THE IMPACT OF DIGITALIZATION ON THE INSURANCE INDUSTRY IN SERBIA

A SWOT analysis of the impact of digitization on the insurance industry in Serbia provides insight into the key strengths, weaknesses, opportunities and threats that are relevant to the sector in the context of ubiquitous digital transformation.

STRENGTHS:

- **Improved efficiency of operations** – digitization enables the automation of many processes in the insurance industry, from processing insurance claims to managing policies and claims. This significantly increases the efficiency of operations, reduces costs and shortens the time required to process data and issue policies.
- **Improving the user experience** – online platforms and mobile applications allow customers easier access to insurance services, allowing them to quickly and easily receive offers, contract policies or report damage without the need to visit a branch office or contact agents directly. This improves the user experience and can increase customer satisfaction.
- **More accurate analysis and risk profiling** – digital technologies allow insurance companies to use large amounts of data to better understand and assess risk. This leads to more precise determination of premiums and better segmentation of the market.
- **Increasing reach and market penetration** – digital channels allow insurance companies to capture a wider market and attract new customers, including young generations who prefer digital services.

WEAKNESSES:

- **High initial costs** – the implementation of digital technologies can require significant initial investments in IT infrastructure and software. This can be a financial challenge, especially for smaller insurance companies.



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- **Resistance to change within the organization** – digital transformation can cause resistance among employees who are used to traditional work methods. Management must invest in training and changing the corporate culture to overcome this challenge.
- **The need for constant technology refreshes** – the rapid development of technology requires insurance companies to regularly update their systems and applications, which can further increase costs and technical requirements.
- **Data security** – as the volume and sensitivity of digitally collected data increases, the risk of cyber attacks and data theft increases. Insurance companies must invest in advanced security systems to protect customer data.

OPPORTUNITIES:

- **Development of new products** – digitization enables insurance companies to develop innovative products such as on-demand insurance or personalized policies based on user behavior.
- **Market expansion** – digital channels enable insurance companies to reach rural and less accessible parts of Serbia, where traditional sales methods were not effective.
- **Partnerships with technology firms** – cooperation with startups and technology firms can promote innovation and provide insurance companies with access to advanced technology solutions.
- **Globalization of services** – digital platforms allow insurance companies to offer their services not only on the local, but also on the international market, opening up new opportunities for growth.

THREATS:

- **Regulatory challenges** – digitization requires compliance with rigorous data protection and privacy regulations, which can pose compliance challenges.
- **Technological obsolescence** – the rapid pace of technological changes can lead to the rapid obsolescence of existing digital solutions, which requires continuous investments in new technologies.
- **Competition from non-insurance sectors** – technology companies, such as fintech and tech firms, entering the insurance sector can present significant competition to traditional insurance companies, especially in the areas of innovation and customer experience.
- **Cyber risks** – as more operations in the insurance industry move to digital platforms, cyber risks are becoming more prominent and pose a serious threat to insurance companies. In the context of digitization, cyber risks encompass a range of potential problems, including cyber attacks, data theft, data loss, cyber blackmail, and other forms of cyber crime.

Digitization is significantly transforming the insurance industry around the world, including Serbia. This transformation brings a series of changes that affect all aspects of business, from customer interaction, through data processing, to risk management and regulatory compliance. The impact of digitization on the insurance industry can be seen through several key aspects: improving user experience, more efficient data processing, innovation in products and services, increased availability of services, security and regulatory compliance, workforce transformation (Cybersecurity Challenges for Digital Insurance, 2024).



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For a full insight into the details, it is useful to consider specific aspects such as high initial costs, resistance to change within the organization, the need for constant technology refresh, data security, as well as the opportunities that digitization provides, including new product development, market expansion, partnerships with technology companies, the globalization of services, and threats such as regulatory challenges, technological obsolescence, competition from non-insurance sectors, and cyber risks.

TECHNOLOGICAL INNOVATIONS IN INSURANCE IN SERBIA

The insurance industry in Serbia is going through a significant transformation thanks to the increasing adoption of advanced digital technologies. These innovations allow insurance companies to improve their services, increase business efficiency and better respond to the needs of their clients. Insurance companies in Serbia are increasingly using various technological innovations to improve their services and business processes (Big Data Analytics in the Insurance Sector, 2024):

- online sales of insurance,
- mobile applications,
- big data and analytics,
- artificial intelligence (AI) and chatbots.

Online insurance sales – one of the most significant innovations in the insurance sector in Serbia is the development of online platforms for insurance sales. These platforms allow users to quickly and easily buy insurance policies online, without the need to visit physical branches. This not only increases the availability of insurance, but also reduces the cost of doing business for insurance companies. Examples: Uniqa Srbija and Dunav Osiguranje are among the first to introduce online sales of insurance policies, allowing users to buy different types of insurance through their websites (Employee Training for Digital Transformation, 2024).

Mobile Apps – are becoming increasingly popular in the insurance sector, allowing users to manage their insurance policies, report claims and access information about products and services via their mobile devices. These applications improve user experience and increase customer engagement. Examples: Generali Srbija and Wiener Städtische have developed mobile applications that allow users to easily manage their insurance, report claims and receive support.

Big data analytics – the use of big data analytics allows insurance companies to analyze large amounts of data about customers and risks, which helps in personalizing offers and making better business decisions. Data analytics help identify customer behavior patterns, assess risk and optimize premiums. Examples: insurance companies such as DDOR Novi Sad use big data analytics to better understand the needs of their clients and adapt their products and services (Educating Customers on Digital Insurance Services, 2024).

Artificial intelligence and chatbots – are used to automate customer support, claim processing and claims assessment, thereby reducing processing time and increasing efficiency. Chatbots can provide quick answers to user questions, while AI can analyze insurance claims and assess risks. Examples: Triglav Osiguranje uses AI and chatbots to provide customer support and process insurance requests,



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thereby reducing waiting times and increasing customer satisfaction (Impact of AI on the Insurance Industry, 2024)

Blockchain technology – brings transparency and security in the processing of transactions, reducing the risk of fraud and enabling the creation of smart contracts. This technology can significantly improve data integrity and security in insurance processes. Examples: although the adoption of blockchain technology is still at an early stage in Serbia, insurance companies are exploring the possibilities of applying this technology to improve the security and efficiency of their operations (Blockchain Technology in Insurance, 2024).

ADVANTAGES OF DIGITAL INSURANCE IN SERBIA

Digitization brings numerous advantages for the insurance industry in Serbia, including improving the user experience, reducing operational costs, increased efficiency and the possibility of personalizing offers. These advantages allow insurance companies to respond better to the needs of their clients and to deal more effectively with competition in the market. The advantages of digitalization for insurance companies and their clients are (Digitalization of Insurance: Trends and Challenges in Serbia, 2024):

- improved user experience,
- reduction of operating costs,
- personalization of offers,
- increased efficiency,
- better risk assessment.

Improved customer experience – digitalization enables insurance companies to offer faster and simpler services to their customers. Using online platforms and mobile applications, clients can purchase insurance policies, report claims and monitor the status of their claims at any time and from any place. Examples: online platforms - companies such as Uniqa Srbija and Dunav Osiguranje offer online platforms that enable quick and easy purchase of insurance policies; mobile applications - Generali Srbija and Wiener Städtische have mobile applications that allow users to manage their insurance, report claims and receive support (Investing in Digital Infrastructure for Insurance, 2024)

Reduction of operating costs – automation of processes using digital technologies reduces the need for manual work, which directly reduces operating costs. Digital technologies also reduce the need for paper documents, which further reduces costs and contributes to environmental sustainability. Examples: claim processing automation - the use of artificial intelligence and automated processes to process insurance claims and claims reduces processing time and reduces costs; digitization of documentation - the use of digital platforms for storing and managing documentation reduces the need for physical space and paper (Technical Infrastructure for Digital Insurance, 2024).

Personalization of offers – the use of big data analytics allows insurance companies to collect and analyze customer data, which helps them better understand their needs and offer customized products. Personalized offers increase customer satisfaction and loyalty. Examples: big data analytics – DDOR Novi Sad uses big data analytics to better understand the needs of its clients and offer them personalized products and services; personalized products - companies can adjust premiums and sums insured based on customer data and their specific needs.



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Increased efficiency – digital technologies enable faster and more efficient processing of claims for insurance and compensation. Automated processes and artificial intelligence reduce the time required to perform these tasks, resulting in faster response times and greater customer satisfaction. Examples: AI and automation – Triglav Osiguranje uses artificial intelligence to process claims for insurance and compensation, which significantly reduces processing time; chatbots - the use of chatbots to provide customer support enables quick answers to customer questions and reduces the burden on human resources (Managing Change in Digital Transformation, 2024).

Better risk assessment – technologies such as big data analytics and IoT (Internet of Things) devices enable more accurate risk assessment. This allows insurance companies to better manage risks and optimize premiums, which can lead to lower costs for customers. Examples: IoT devices, such as smart sensors in vehicles and homes, provide real-time data to help assess risk and adjust premiums; risk analytics - the use of advanced analytical tools for risk assessment allows insurance companies to better manage their portfolios and reduce losses (IoT and Its Impact on the Insurance Industry, 2024).

These advantages allow insurance companies to better respond to the needs of their clients, increase their competitiveness and achieve long-term success in the market.

CHALLENGES OF DIGITAL INSURANCE IN SERBIA

The challenges of digital insurance in Serbia include several key aspects that require attention in order to improve this sector. Here are some of the most significant challenges:

1. **Technological integration** – integrating advanced technologies such as artificial intelligence, blockchain, and the Internet of Things (IoT) with existing systems is a common challenge. Older systems are often not compatible with new technological solutions, which makes it difficult to automate and digitize processes. This requires significant investment in infrastructure modernization and employee training.
2. **Regulatory challenges** – digital insurance in Serbia must comply with national and international laws that regulate this area, especially in the context of data protection and privacy. Adapting legislation that enables more efficient use of digital technologies while preserving the security of user data is crucial (Regulatory Challenges in Digital Insurance, 2024).
3. **Cyber security** – protecting data from unauthorized access, misuse or attack is the primary challenge for digital insurance. The development of robust security protocols and systems that can withstand cyber attacks is necessary to preserve user trust (The Importance of Data Protection in Digital Insurance, 2024).
4. **Changing consumer behavior** - consumer adaptation to digital services is not always quick or easy. Educating users about the benefits and security of digital insurance is key. Also, it is necessary to develop user interfaces that are intuitive and easy to use in order to facilitate the transition to digital platforms (Employee and Client Education in Digital Transformation, 2024).
5. **Market competition** - competition in the digital insurance market is increasing, both from domestic and international companies. Insurance companies must innovate and continuously improve their services to remain competitive. This includes personalization of offers, improvement of user experience, and more efficient processing of requests.



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Overcoming these challenges requires a coordinated effort from industry, regulatory bodies and educational institutions. Investments in technology, employee training, and the development of legal and regulatory infrastructure are key to the successful implementation and expansion of digital insurance in Serbia.

PERSPECTIVES OF THE FUTURE DEVELOPMENT OF DIGITAL INSURANCE IN SERBIA

Perspectives for the future development of digital insurance in Serbia focus on several key areas. The inclusion of advanced technologies such as artificial intelligence and the Internet of Things (IoT) promises to improve efficiency and accuracy in risk assessment and policy management. It is also expected to strengthen interaction with clients through digital platforms that allow easier access to services and information. However, all this is accompanied by the need for stricter regulation and data protection measures, in order to ensure the privacy and security of users. Additionally, there is a need for education to increase digital literacy among insurance users (Digital Adoption in Insurance: Overcoming Resistance, 2024).

The future of the insurance industry in Serbia will be marked by the further integration of digital technologies, which will bring additional innovations and changes. Some of the key trends include:

- Expanded use of AI and automation – further application of AI to improve processes, such as automatic damage assessment and risk management, is foreseen.
- Development of new business models – digitization will enable the creation of new products, such as on-demand insurance and microinsurance, adapted to the specific needs of consumers.
- Increased use of big data analytics – using big data to more accurately predict risk and optimize insurance processes will become the industry standard.

CONCLUSION

The conclusion about the impact of globalization on the insurance industry can be seen through different aspects that include both positive and challenging dimensions of this phenomenon. Globalization has transformed the insurance sector, allowing companies to expand their operations, access new markets, technologies and innovations, but it has also brought new risks and competition.

The positive impacts of globalization on the insurance industry are:

- Access to new markets – globalization allows insurance companies to expand their operations to international markets, which leads to increased income and diversification of risk portfolios. Entering new countries allows companies to capitalize on markets that are less saturated and potentially more profitable.
- Availability of sophisticated technologies – globalization encourages the exchange of technologies and best practices between countries and regions, enabling insurance companies to implement advanced technology systems, improve efficiency and optimize their operations.



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- Innovation in products and services – exposure to the global market encourages innovation and the development of new insurance products that are adapted to different cultural and economic contexts. This enriches the offer of insurance companies and allows them to better meet the needs of diverse clients.
- Investing in human capital – globalization encourages the exchange of knowledge and skills among the workforce, enabling insurance companies to improve the skills of their employees through training, seminars and working in an international environment.

The challenges of globalization for the insurance industry are:

- Increased competition – the entry of international insurance companies into domestic markets increases competition, which can put pressure on the margins and pricing strategy of local insurance companies. This requires domestic players to improve their operations and offerings to remain competitive.
- Regulatory challenges – different regulatory frameworks in various countries can make doing business internationally difficult. Insurance companies must navigate complex laws and regulations to ensure compliance in all markets in which they operate.
- Managing risks on a global scale – globalization brings new types of risks, including geopolitical, economic and cyber risks, that insurance companies must manage effectively. The need for a comprehensive understanding and management of global risks has never been greater.
- Cultural differences – understanding and adapting to cultural differences in customer behavior, marketing strategies and business practices is critical to success in international markets, which can be challenging for insurance companies expanding their operations.

Globalization is a double-edged sword for the insurance industry. While it brings numerous opportunities for growth, expansion and innovation, it also requires insurance companies to face new challenges and adapt their strategies to remain competitive in an increasingly dynamic global market. The key to success lies in the ability of insurance companies to effectively manage risks, innovate, and take advantage of global opportunities, while constantly complying with regulatory requirements and maintaining competitiveness.

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