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COMPARATIVE ANALYSIS OF DIGITAL ECONOMY DEVELOPMENT IN THE REGION

КОМПАРАТИВНА АНАЛИЗА РАЗВОЈА ДИГИТАЛНЕ ЕКОНОМИЈЕ У РЕГИОНУ

Summary: This paper analyzes the development of the digital economy in Southeast Europe, with a particular focus on Bosnia and Herzegovina. The digital economy serves as a framework for economic growth driven by information and communication technologies (ICT), the digitalization of business processes, and innovations in production and services. The aim of the paper is to present the current level of digital transformation, identify key challenges and opportunities, and assess the impact of digitalization on the labor market, productivity, and competitiveness. Through descriptive and comparative analysis with countries in the region, notably Serbia and Croatia, the paper highlights areas where Bosnia and Herzegovina lags behind and where it outperforms its peers. Bosnia and Herzegovina leads in ICT employment (4.8 %) compared to Croatia and Serbia (both 4.3 %), but lags in e-commerce (43.9 % versus 59.7 % in Serbia and 59.4 % in Croatia). Broadband penetration is very high (99.4 %), nearly equal to Serbia (100 %) and above Croatia (87.5 %). The paper concludes with policy recommendations emphasizing strategic investments in digital infrastructure, strengthening digital skills and the ICT sector, and stimulating e-commerce through legislative and economic measures.

Keywords: digital economy, Southeast Europe, Bosnia and Herzegovina, e-commerce, ICT employment.

JEL classification: O33, L86, F63

Резиме: Рад анализира развој дигиталне економије у Југоисточној Европи, са посебним освртом на Босну и Херцеговину. Дигитална економија представља оквир за економски раст заснован на информационо-комуникационим технологијама, дигитализацији пословних процеса и иновацијама у производњи и услугама. Циљ рада је приказати тренутни ниво дигиталне трансформације, идентификовати кључне изазове и прилике, те оцијенити утицај дигитализације на тржиште рада, продуктивност и конкурентност. Кроз дескриптивну и компаративну анализу са земљама региона, посебно Србијом и Хрватском, рад истиче гдје БиХ заостаје и гдје предњачи. Босна и Херцеговина предњачи у ИЦТ запослености (4,8%) у односу на Хрватску и Србију (по 4,3%), док заостаје у е-трговини (43,9% наспрам 59,7% у Србији и 59,4% у Хрватској). Бродбанд пенетрација је врло висока (99,4%), готово једнака Србији (100%) и изнад Хрватске (87,5%). Препоруке укључују: стратешка улагања у дигиталну инфраструктуру, јачање дигиталних вјештина и ИЦТ сектора, те стимулацију е-трговине кроз законодавне и економске мјере.

Кључне ријечи: дигитална економија, Југоисточна Европа, Босна и Херцеговина, е-трговина, ИКТ запосленост.

JEL класификација: O33, L86, F63

INTRODUCTION

The digital economy represents one of the most dynamic and rapidly expanding sectors of the contemporary global market. Its emergence and evolution have significantly transformed traditional business models, labor market structures, and consumption patterns, while broadband Internet access, ICT employment, and e-commerce have become key indicators of digital transformation. Importantly, the digital economy transcends national borders, connecting countries and enabling their faster integration into global economic flows.

Southeast Europe, a region characterized by a complex historical, political, and economic background, currently stands at a crossroads in the development of its digital economy. Bosnia and Herzegovina, as one of the key countries in this region, faces unique opportunities as well as substantial challenges in its digital transformation process. A fragmented political system, uneven economic development, and infrastructural deficiencies are among the factors influencing the pace and efficiency of digitalization.

The main objective of this paper is to analyze the state of the digital economy in Southeast Europe, with a particular focus on Bosnia and Herzegovina. Special attention is devoted to identifying the key components of the digital economy that contribute to macroeconomic growth and competitiveness. The central research question addresses how and to what extent the digital economy affects the economic development of Southeast European countries, and how Bosnia and Herzegovina is positioned in comparison to its regional counterparts. The analysis is based on quantitative indicators, including the Digital Economy and Society Index (DESI), the ITU ICT Development Index, GDP per capita, and investment levels in the ICT sector, as well as on relevant strategic and legislative documents (e.g., *Strategy for the Development of Broadband Access in BiH*, *Law on Electronic Documents of BiH*). The methodological framework relies on a comparative analysis of countries in the region (Bosnia and Herzegovina, Serbia, Croatia, Montenegro, North Macedonia, and Albania), aiming to identify key trends, challenges, and opportunities in the process of digitalization.

The first section of the paper discusses the fundamental concepts of the digital economy and its significance in the contemporary world. The second section analyzes the state of the digital economy in Southeast Europe, with an emphasis on Bosnia and Herzegovina. The third section examines the challenges and opportunities of digital transformation in the region. The fourth section explores the impact of digitalization on the labor market and macroeconomic development. The fifth section presents a comparative analysis of the countries in the region. The sixth section provides concrete proposals and recommendations for improving the digital economy in Bosnia and Herzegovina, while the concluding section summarizes the main findings of the study.

This paper offers insights and recommendations intended for policymakers, business leaders, and the academic community to support the planning of digital development strategies. It highlights the key factors that constrain the development of the digital economy in Bosnia and Herzegovina and proposes potential solutions for overcoming these limitations.

1. THEORETICAL FRAMEWORK OF THE DIGITAL ECONOMY

The digital economy encompasses a set of economic activities based on the application of digital technologies and the Internet (Lazović 2018). This concept is not limited solely to the IT sector but refers to an entire ecosystem in which digital tools and processes transform traditional industries and business models. The key elements of the digital economy include digital platforms, e-commerce, digital services, and the infrastructure required to support them, such as broadband Internet, cloud computing, and mobile communications (Petrović 2022).

The digital economy is often divided into three interrelated components. The first component consists of digital platforms and services, which enable the exchange of goods and services via the Internet. This includes e-commerce, online banking, digital marketing, as well as platforms for remote work, social networks, and various applications (Jordanoski 2021). The second component is digital infrastructure, encompassing technical resources such as telecommunications networks, data centers, server equipment, and software systems (Commission, Country Profile: Bosnia and Herzegovina. European Innovation Scoreboard, 2024). Without developed infrastructure, access to digital services would be either limited or inefficient. The third component is digital literacy and skills, referring to the ability of individuals, businesses, and public institutions to effectively use digital technologies for work, learning, and innovation (Udruženje za digitalnu transformaciju 2023).

The macroeconomic significance of the digital economy lies in its capacity to enhance productivity and competitiveness. Digitalization facilitates faster information exchange, reduces production and distribution costs, improves access to international markets, and stimulates the creation of new products and services (Ristić 2025). Numerous studies have shown that countries successfully integrating digital technologies experience accelerated economic growth and higher innovation rates.

In a broader context, the digital economy also contributes to changes in the labor market. The emergence of new jobs in the IT sector, as well as the rise of digital platforms enabling freelancing and remote work, has altered traditional employment patterns and created opportunities for greater flexibility. At the same time, digital transformation can widen the gap between highly skilled and low-skilled workers, thus creating new challenges for social policy and education systems (Durmishi 2024).

In the context of Southeast Europe, the digital economy represents a significant potential driver of accelerated development (Durmishi 2024). Many countries in this region, including Bosnia

and Herzegovina, start from a relatively low base in terms of technological infrastructure and digital literacy, yet they are rapidly adapting to new technologies (UNDP 2023). For example, the growth of the IT sector in countries such as Serbia and Croatia demonstrates that the region possesses talented professionals and favorable conditions for the development of digital services and the export of software solutions.

However, digital transformation is not an automatic or obstacle-free process. Success in developing a digital economy depends on several factors, with institutional frameworks, legislation, and investments in infrastructure and education being the most crucial (Ministarsvo komunikacija i prometa BiH 2025). For instance, effective regulation can stimulate the growth of startups and attract foreign investments, while simultaneously protecting user rights and promoting market competition (European Commission 2024).

It is also essential to recognize that the digital economy can exacerbate existing inequalities, both among countries and within societies. The digital divide between urban and rural areas, between generations, or among educational groups can limit potential growth and create additional social challenges.

In conclusion, the digital economy constitutes a key driver of contemporary macroeconomic development. For Southeast European countries, including Bosnia and Herzegovina, the successful integration of digital technologies can significantly enhance competitiveness, innovation, and overall economic growth. Nevertheless, this process requires systematic and coordinated efforts at multiple levels—ranging from policy and education to infrastructure development and the promotion of entrepreneurship.

2. OVERVIEW OF THE DIGITAL ECONOMY IN SOUTHEAST EUROPE

Southeast Europe (SEE) comprises countries that have undergone complex political and economic transformations over the past decades. The region includes Serbia, Croatia, Bosnia and Herzegovina, Montenegro, North Macedonia, Albania, Kosovo, and Bulgaria. The digital economy in this part of Europe has experienced substantial development but continues to face challenges typical of transitional and developing economies.

2.1. General Trends and the State of the Digital Economy in SEE

Over the past decade, the digital economy has become one of the most important drivers of economic growth worldwide, and the SEE region is no exception. The increasing availability of the Internet and digital devices has enabled a growing number of users to access digital services (Ristić 2025). According to data from the International Telecommunication Union (ITU), the average Internet penetration rate in the region exceeds 70%, while in urban areas it can reach over 90%.

This expansion of Internet use has stimulated growth in e-commerce, digital banking, and the use of digital platforms for education, entertainment, and communication. The region has also witnessed significant growth in digital startups and technology companies targeting both local and global markets (Kacani 2024).

However, the digital economy is not equally developed across the region. Substantial disparities exist both between and within countries, for instance, digital literacy and infrastructure availability are considerably higher in urban centers than in rural areas. Moreover, the quality and speed of Internet connections remain below the European average in some areas, limiting the full development of digital services.

2.2. Development of Digital Infrastructure

Digital infrastructure represents the fundamental prerequisite for the development of the digital economy. It includes broadband Internet, telecommunications networks, data centers, and other technologies that enable data transmission and processing. In SEE, countries such as Croatia and Serbia have established solid foundations by investing heavily in broadband network development, whereas others, such as Bosnia and Herzegovina and Albania, still lag behind (Savić 2022).

These differences can be attributed to variations in political systems, economic capacity, and levels of foreign investment. For example, in Bosnia and Herzegovina, the complex multi-layered

governance structure at the state and entity levels hampers coordination in building digital infrastructure, thereby slowing down broadband Internet access in certain parts of the country (Ministarsvo komunikacija i prometa BiH 2025).

The European Union provides substantial financial assistance for improving digital infrastructure in the region through various funds and programs, especially in countries aspiring to EU membership (European Commission 2024). Projects aimed at developing 5G networks and strengthening the capacities of telecommunications companies are actively underway, helping to reduce the digital divide both within the region and between SEE and Western Europe.

2.3. Digital Literacy and Human Capital Development

Digital literacy, the ability to effectively use digital technologies, is one of the most crucial factors for successful digital transformation. Despite the growing interest in IT and digital skills across the SEE region, significant obstacles remain (Alfirević 2025).

Formal education systems in many countries are not fully aligned with the evolving requirements of the labor market. Many students lack access to quality courses that would prepare them for participation in the digital economy (Petrović 2022). There is also a pronounced generational gap: younger populations tend to be more digitally literate, while older cohorts face challenges in accessing and using new technologies.

As a response, various initiatives led by NGOs, the private sector, and public institutions are increasingly present across the region, providing training, workshops, and programs to enhance digital competencies. The rising number of IT firms and startups, particularly in Serbia, Croatia, and Slovenia, demonstrates that investments in human capital are gradually yielding tangible results (Durmishi 2024).

2.4. Key Sectors and Industries of the Digital Economy

The digital economy in the region is developing within several key sectors (Ristić 2025):

- *IT and Software Industry:* This sector records the fastest growth in the region. Serbia and Croatia are the leading countries, exporting software solutions worldwide. Bosnia and Herzegovina demonstrates considerable potential but faces challenges related to regulatory stability and institutional support.
- *E-Commerce:* Online sales have grown significantly, particularly in urban areas. However, issues such as logistics, consumer trust, and regulatory gaps continue to hinder broader market expansion.
- *Fintech and Digital Finance:* Mobile banking and digital wallets are gradually gaining popularity, though market penetration remains lower than in Western Europe. Nevertheless, the fintech sector holds substantial potential for innovation and growth.
- *Digital Media and Marketing:* An increasing number of companies utilize digital channels for advertising and consumer engagement, creating new dimensions of market competition and service development.

2.5. Political, Institutional, and Regulatory Challenges

Political complexity and institutional fragmentation constitute major barriers to digital economy development in SEE (UNDP 2023). Bosnia and Herzegovina is the most illustrative example; its multi-layered political structure complicates policy coordination and delays the adoption of unified digital strategies at the national level. This, in turn, slows infrastructure projects and the implementation of modern regulations.

Additionally, the absence of effective public policies and innovation support, together with bureaucratic inefficiencies, hampers the development of startups and digital services. In contrast, countries like Croatia, being EU members, benefit from regulatory alignment with European standards, which fosters the growth of the digital economy and ensures access to substantial financial resources (Savić 2022).

2.6. The Impact of European Integration and International Cooperation

The European Union plays a pivotal role in the development of the digital economy in Southeast Europe. Through various programs, funds, and technical assistance, the EU supports projects that enhance digital infrastructure, strengthen digital skills, and foster innovation. The *Digital Agenda for Europe*, regional development initiatives, and investments in research and innovation significantly contribute to reducing the digital divide between SEE and Western Europe (Jordanoski 2021).

For countries that are EU candidates or in the accession process, the harmonization of digital standards and legislation with EU frameworks presents both a challenge and an opportunity. The establishment of a unified digital market and adherence to cybersecurity standards open pathways for increased investment and the development of competitive digital services across the region.

3. DIGITAL CHALLENGES IN BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina represents a distinctive case within Southeast Europe when it comes to the development of the digital economy. The country stands at the crossroads of European integration, characterized by a complex political and institutional structure that significantly influences economic dynamics and digital transformation (UNDP 2023). Despite notable potential, Bosnia and Herzegovina's digital economy faces a range of challenges that hinder its full integration into contemporary global trends.

3.1. Current State of the Digital Economy in Bosnia and Herzegovina

Over the past decade, Bosnia and Herzegovina has experienced gradual growth in its digital economy, particularly in the segments of IT services, e-commerce, and digital marketing. According to data from the Agency for Statistics of BiH and other relevant studies, approximately 68% of the population uses the Internet, comparable to the regional average, yet considerably below the European Union average (Savić 2022). Most users are concentrated in urban centers such as Sarajevo, Banja Luka, and Mostar.

Although relatively small compared to more developed economies, the IT sector in Bosnia and Herzegovina features several dynamic companies and startups that develop software solutions for both domestic and international markets. Cities like Sarajevo and Banja Luka are emerging as IT industry hubs, attracting talent from across the region and the Bosnian diaspora (Agencija za statistiku, 2023).

The e-commerce market is expanding but remains constrained by underdeveloped logistics infrastructure, low consumer trust in online shopping, and regulatory shortcomings. Online payments are still limited due to the slow adoption of digital banking and the insufficient use of electronic wallets (Agencija za statistiku BiH 2023).

3.2. Infrastructure Challenges

One of the most significant obstacles to the development of Bosnia and Herzegovina's digital economy is outdated and unevenly distributed digital infrastructure. While conditions are relatively good in larger cities, rural areas lag substantially behind in access to fast and reliable Internet. This contributes to the creation of a digital divide that deepens existing social and economic inequalities (B2BIT 2021).

Moreover, the multi-tiered governance system, with state, entity, and cantonal levels, leads to poor coordination in infrastructure development and digital policy implementation. This issue is further complicated by inconsistencies in legislation and administrative procedures, negatively affecting the efficiency and pace of digital project realization (Savić, 2022).

3.3. Regulatory Framework and Institutional Capacities

The regulatory framework for the digital economy in Bosnia and Herzegovina is still evolving and faces numerous challenges. The absence of clear and unified legislation governing e-commerce, data protection, and cybersecurity creates uncertainty for entrepreneurs and investors (Petrović, 2022).

While Bosnia and Herzegovina has adopted certain fundamental laws, such as the *Law on Electronic Signature* and the *Law on Personal Data Protection*, their implementation remains inconsistent across different administrative levels. Additionally, there is a lack of comprehensive policies and long-term strategies to support digital transformation.

Institutionally, agencies responsible for promoting and overseeing digital development often lack sufficient resources and capacity to operate effectively (B2BIT 2021). A stronger commitment from both state and entity governments is required to define and implement a coherent national digitalization strategy.

3.4. Digital Literacy and Education

The quality and accessibility of education in the field of digital technologies are key determinants of digital economy development. In Bosnia and Herzegovina, the education system faces challenges in modernizing curricula and adapting to the rapid pace of technological change.

Although several universities and private institutions offer IT-related courses and training, access to such programs remains limited, particularly outside major cities. Moreover, digital skills are insufficiently integrated into primary and secondary education.

A pronounced generational gap also exists, while younger populations tend to be digitally proficient, older generations often remain excluded from digital transformation processes. To address these gaps, widespread awareness campaigns and lifelong learning programs are essential.

3.5. Challenges and Potentials for Digital Economy Development

A major challenge lies in the lack of trust in digital services, especially in financial transactions. High levels of informality and consumer caution slow the expansion of e-commerce and digital payments (Savić 2022). Furthermore, limited access to capital and insufficient startup incentives hinder the growth of innovative digital enterprises.

On the other hand, Bosnia and Herzegovina possesses considerable potential for digital economy development, owing to the relatively high educational level of young IT professionals, the presence of a globally experienced diaspora, and the growing interest in digital technologies. The country's geographic proximity to the EU and participation in programs such as the *EU Digital Agenda* and *IPA funds* provide additional opportunities for funding, knowledge transfer, and institutional cooperation (Kacani 2024).

3.6. Prospects and Recommendations for Future Development

For the digital economy in Bosnia and Herzegovina to achieve its full potential, a coordinated, strategic approach is required, encompassing the following key steps (UNDP 2023):

- *Improvement of digital infrastructure:* Focus on reducing the digital divide between urban and rural areas through broadband network development and support for telecommunications operators.
- *Education system reform:* Integrate digital skills and programming into primary and secondary education, and establish programs for adult lifelong learning and upskilling.
- *Regulatory framework development:* Harmonize laws and standards at the national level to provide legal certainty for users, investors, and digital entrepreneurs.
- *Support for innovation and startups:* Establish funding mechanisms, tax incentives, and mentorship programs to foster innovation and entrepreneurial activity in the digital sector.
- *Building consumer trust:* Conduct public awareness campaigns to educate citizens on the benefits and security of digital services and online transactions.
- *Enhancement of institutional capacities:* Strengthen the role, resources, and competencies of state and entity-level institutions responsible for digital transformation.

Considering current trends and available resources, Bosnia and Herzegovina's digital economy has the potential to become a key driver of growth and competitiveness in the region—provided that existing challenges are addressed through strategic, coordinated, and inclusive policies.

5.7. Data Analysis

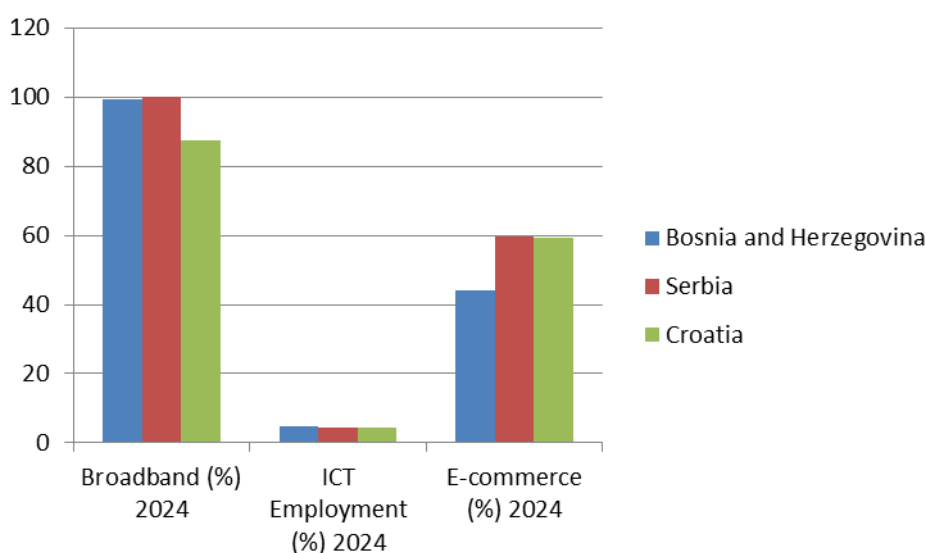
This section presents key digital economy indicators for Bosnia and Herzegovina in comparison with neighboring countries, Serbia and Croatia, for the period 2014–2024. The analysis focuses on broadband penetration, with data on ICT sector employment and e-commerce included where available. Data for other Southeast European countries, as well as for Croatia's e-commerce, were unavailable from reliable sources and therefore omitted from the table.

Table 1: Digital Economy Indicators (2024)

Country	Broadband (%) 2024	ICT Employment (%) 2024	E-commerce (%) 2024
Bosnia and Herzegovina	99.44	4.8	43.91
Serbia	100.0	4.3	59.69
Croatia	87.53	4.3	59.39

Source: Eurostat 2025

Figure 1: Comparison of Digital Economy Indicators for Bosnia and Herzegovina, Serbia, and Croatia



Source: adapted from Eurostat 2025

The figure presents key digital economy indicators for 2024, based on Eurostat data. Serbia records the highest broadband Internet usage rate (100%), while Bosnia and Herzegovina closely follows with 99.44%. Croatia lags behind in this segment, with a rate of 87.53%.

In terms of ICT sector employment, all three countries exhibit similar values, ranging between 4% and 5%. The most pronounced differences are observed in the field of e-commerce, where Serbia and Croatia have significantly higher shares of online users (around 59%), whereas Bosnia and Herzegovina considerably trails with 43.91%.

4. COMPARATIVE OVERVIEW OF DIGITAL ECONOMY DEVELOPMENT IN SOUTHEAST EUROPE

The digital economy in Southeast Europe (SEE) has become a topic of growing academic and policy interest, as the region holds substantial potential for technological progress and innovation, while also facing numerous challenges linked to its economic, political, and infrastructural complexity. This section compares the development of the digital economy in Bosnia and Herzegovina with that of neighboring and regional countries, specifically Serbia, Croatia, Slovenia, and North Macedonia (Durmishi 2024).

4.1. Croatia as the Most Digitally Advanced Economy in the Region

Croatia is widely regarded as one of the regional leaders in digital economy development. Its EU membership since 2013 has granted access to structural funds and programs that promote digital transformation. The Croatian government actively implements digitalization strategies focused on infrastructure enhancement, e-government development, and startup ecosystem support (Eurostat 2025).

Croatia's digital infrastructure is relatively well developed, with high-speed Internet widely available across urban areas and much of the national territory. Digital literacy levels are increasing, while government support through tax incentives and grant schemes has created a favorable environment for innovation and entrepreneurship.

Nevertheless, challenges persist, including the digital divide between urban and rural regions and the need to improve digital competencies among older populations (Savić 2022). Overall, Croatia serves as a strong example of how EU integration and a coherent digital strategy can accelerate digital economy development.

4.2. Serbia: Rapid IT Sector Growth and a Strong Startup Ecosystem

Serbia represents one of the most dynamic IT markets in Southeast Europe, recognized for its robust developer community and numerous IT companies successfully operating beyond national borders. Cities such as Belgrade, Novi Sad, and Niš have emerged as regional hubs for technological innovation and startups (Petrović 2022).

The country's digital infrastructure is rapidly expanding, supported by government initiatives aimed at modernizing telecommunications networks and deploying 5G technologies. Serbia's government also provides subsidies and incentives for IT firms, along with programs promoting coding and digital education among youth (Durmishi 2024).

However, Serbia still faces challenges related to its regulatory environment—particularly concerning data protection and e-commerce—where additional reforms are needed. Moreover, better alignment between the education system and labor market is required to bridge the skills gap.

4.3. Slovenia: Integrated Digital Approach and Innovation Leadership

As an EU member state, Slovenia boasts one of the most advanced digital ecosystems in the region. Its digital transformation strategy encompasses a wide range of initiatives, from smart city development to digitalized public services and research and innovation promotion.

Slovenia's digital infrastructure is highly developed, with near-universal Internet access and high levels of digital literacy (Jordanoski 2021). The country also demonstrates effective collaboration between the private and public sectors in fostering digital innovation, evident in the success of numerous startups and tech enterprises.

Through EU membership, Slovenia has leveraged research and development funds and established programs supporting the internationalization of its IT sector. Nonetheless, challenges remain in adapting the labor market to rapid technological change and ensuring continuous workforce upskilling.

4.4. North Macedonia: Expanding Digital Services and E-Governance

North Macedonia is undergoing an accelerated digital transformation, marked by significant investments in digital infrastructure and electronic services. The government has introduced e-governance reforms, improving public service accessibility and promoting digital literacy among citizens (Kacani 2024).

Although still in the developmental stage, the country's IT sector is growing steadily, particularly in software engineering and outsourcing. Educational initiatives targeting young people in IT fields are expanding, while international cooperation contributes to sectoral development.

Key challenges include administrative inefficiency, limited regulatory capacity, and constrained financial resources for infrastructure modernization. Moreover, bridging the digital divide between urban and rural areas remains a priority.

4.5. Comparative Conclusions

A comparison of these countries with Bosnia and Herzegovina reveals that while all SEE nations share similar challenges and opportunities, EU membership emerges as a decisive advantage—providing access to financing, policy frameworks, and capacity-building programs. Serbia and Croatia lead in IT sector development, while Slovenia exemplifies a holistic digital transformation model.

Bosnia and Herzegovina, though rich in talented professionals and a growing IT base, must focus on improving infrastructure, regulation, and intergovernmental coordination. Learning from the experiences of neighboring countries can help Bosnia and Herzegovina accelerate its digital economy development and enhance competitiveness in the region.

5. THE IMPACT OF THE DIGITAL ECONOMY ON MACROECONOMIC DEVELOPMENT IN SOUTHEAST EUROPE

The digital economy is not merely a technological shift but a fundamental driver of macroeconomic development, influencing labor market structures, productivity, innovation, and overall economic growth. In Southeast Europe, digitalization holds significant implications for economic potential, competitiveness, and global integration (Todorović 2025).

5.1. Increasing Productivity and Efficiency

One of the most important effects of digitalization is the increase in productivity across various sectors. The adoption of digital tools, software solutions, and automation enables companies to enhance efficiency, optimize resource management, and reduce production and distribution costs (Todorović 2025).

In SEE economies, firms that embrace digital technologies generally report higher revenue and export growth, particularly in sectors such as IT services, manufacturing, logistics, and finance (Alfirević 2025). The digital economy also facilitates easier access to international markets, thereby contributing to trade expansion and strengthening economic resilience.

5.2. Labor Market Transformation and Employment

The digital economy significantly transforms labor market structures. The emergence of new jobs in IT, digital marketing, and e-commerce creates employment opportunities, especially for young and highly educated individuals.

However, digital transformation also brings challenges, automation can replace certain traditional occupations, creating the need for continuous workforce reskilling (Jordanoski 2021). In SEE countries, labor markets often struggle with digital skill shortages and a mismatch between educational programs and employer demands.

Countries that successfully integrate digital technologies can reduce youth unemployment and promote inclusive growth, whereas those that lag behind risk deepening existing socioeconomic disparities.

5.3. Fostering Innovation and Entrepreneurship

The digital economy serves as a powerful catalyst for innovation and entrepreneurship. In SEE, IT startups and technology firms increasingly contribute to economic diversification and competitiveness, offering products and services capable of competing on global markets (Petrović 2022).

Countries investing in digital incubators, venture capital, and entrepreneurship education are more likely to develop sustainable innovation ecosystems. These initiatives not only boost economic growth but also enhance regional collaboration and knowledge exchange.

5.4. Impact on the Public Sector and Digital Governance

Digitalization also transforms public sector operations. The introduction of e-governance, digital administration, and open data initiatives enhances transparency, efficiency, and accountability while reducing corruption.

SEE countries that have implemented effective digital public services show higher levels of citizen trust in institutions and improved collaboration between government and the private sector. Such reforms are essential for building a favorable business environment and achieving sustainable economic development (Todorović 2025).

CONCLUSION

The digital economy stands as one of the most significant drivers of contemporary macroeconomic development, particularly in Southeast Europe. Amid rapid technological change and global digitalization, the region's countries—including Bosnia and Herzegovina—face both substantial challenges and considerable opportunities to strengthen their economies.

The analysis demonstrates that EU membership and access to European funds can greatly accelerate digital transformation, as evidenced by Slovenia and Croatia. Conversely, non-EU countries such as Bosnia and Herzegovina and North Macedonia must intensify efforts to strengthen infrastructure, education, and regulatory frameworks to close the digital gap and create a favorable environment for digital development.

The impact of the digital economy on macroeconomic performance manifests through higher productivity, job creation, innovation, and improved public sector efficiency. However, this transformation requires systemic collaboration among government institutions, the private sector, and educational entities, alongside the adaptation of labor markets to new technological demands.

For Bosnia and Herzegovina, key challenges remain in improving coordination between government levels and enhancing capacities for digital education and innovation. Investment in digital infrastructure, IT sector growth, and the adoption of European standards could serve as critical drivers of accelerated development and regional competitiveness.

In conclusion, the digital economy should be viewed not only as a technological transition but also as a strategic opportunity for Southeast Europe to overcome structural barriers and achieve sustainable, inclusive, and innovation-driven economic growth. Continued reform efforts and investment in digital potential can significantly improve citizens' quality of life and ensure greater economic stability in the years to come.

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