March 21–22, 2024, Brno, Czech Republic

HOW DOES A COUNTRY'S LEVEL OF ECONOMIC DEVELOPMENT INFLUENCE DIGITAL ADVANCEMENT? EVIDENCE FROM EUROPEAN COUNTRIES

Anđelka Stojanović[1], Isidora Milošević[1], Sanela Arsić[1]

[1]Technical Faculty in Bor, University of Belgrade, VJ 12, 19210 Bor, Serbia

ABSTRACT

Recent years have brought numerous challenges to Europe and the world in the form of a complex geopolitical situation, threats to the safety and health of the population, deepening economic differences, and a lack of natural resources. Dealing with some of the challenges mentioned above is carried out through digitization and the development of the single market. The European Commission enacted numerous documents and implemented a series of activities aimed at strengthening the European digital market. Actions and policies aim to support digitization to increase economic activity and achieve other social benefits such as empowerment of people, solidarity and sustainability. Due to unequal initial levels of development and the readiness of states, companies and individuals for the changes brought by information technologies, a digital divide emerged. The main research question in this paper is whether the achieved level of economic development conditions the level of digitization. It also examines which elements in the digital transformation can be most influenced to reduce the digital divide. Structural equation modeling (SEM) is applied to answer the research question. The importance of the results is reflected in the fact that by confirming the connections between the digital level and economic parameters, the direction of influence on the reduction of digital divides and the fulfillment of globally set goals related to social equality can be defined.

Keywords: digital development, economic development, European countries, digital society and economy index

JEL Code: F63, O33, O52

https://doi.org/10.11118/978-80-7509-990-7-0148

1 INTRODUCTION

Digital technologies such as the Internet, electronic devices, and applications that collect, store, analyze, and share information are changing the world by altering how people go about their lives and businesses. These technologies provide new opportunities for people to establish their lives and businesses globally. However, in the context of the pandemic, wars, and environmental issues, the ongoing global crisis is becoming more severe and worsening the world's economic situation.

Digital development in developed countries happened rapidly with the help of governments and financial institutions but also with the support of international institutions. Developing countries, on the other hand, faced a lack of investment funds and a weak ITC infrastructure. Due to unequal initial levels of development and the readiness of states, companies and individuals for changes brought by the expansion of information technologies, the emergence of a digital divide has occurred, especially in cases of poorly developed and underdeveloped economies (Mubaraket al., 2020; Habibi and Zabardast, 2020). Even within the EU, not all member states have the same understanding and acceptance of digital transformation (Balcerzak and Pietrzak, 2017; Traşcă et al., 2019). Accordingly, the European Commission adopted numerous documents and implemented a series of activities aimed at strengthening the European Digital Single Market (European Commission, 2021a; European Commission, 2021b). The goals of the activities and policies are not only to support digitization to increase economic activity, but other social benefits should be achieved. The new vision of the European Union named 2030 Digital Compass states that digitization is a new force and imperative for achieving solidarity, sustainability and empowerment of people and businesses. Looking from a national point of view, it is necessary to build the basis for an efficient digital economy to influence the reduction of digital differences at the regional level and improve the country‘s competitive position.

Previous research on the connections between the level of digitalization and its results mainly refers to the impact of digitalization on economic performance, environmental performance, sustainability and social consequences (Li et al., 2020; Popkova et al., 2022). In light of the significant deepening of economic differences, the dilemma remains whether countries with a lower level of economic development and the ability to invest in ICT can actually initiate digital transformation and achieve benefits. There appears to be a lack of studies contributing to understanding and explaining the impact of a country‘s economic strength on digitalization. There is still space in the literature for answering questions: 1) What are the key variables defining the structure of digital development in European countries? 2) Does a spatial pattern of economic development affect specific aspects of digital development levels?

The novelty of this research lies in asking questions that are rarely found in the literature. Specifically, it focuses on questioning the relationship between economic and digital levels, opposing the main body of literature, which presupposes the influence of digital on the economic level. Therefore, the main research question in this paper is whether the achieved level of economic development conditions the level of digitization. It also examines which elements in the digital transformation can be most influenced to reduce the digital divide. Data on the digital society and economy and the level of economic development are used to define the research model, and structural equation modeling is applied to answer the research question. The importance of the results is reflected in the fact that by confirming the connections between the digital level and economic parameters, the direction of influence on the reduction of digital divides and the fulfillment of globally set goals related to social equality can be defined.

2 THEORETICAL FRAMEWORK

It is believed that the digitalization of society and the economy can significantly help in overcoming the crises that have arisen in recent years by removing physical borders, unhindered communication, and acquiring certain rights, as well as creating numerous opportunities for innovation and new markets. However, attempts to respond to crises have also shown the weaknesses of the digital space and created strong divides.

When analyzing research dealing with the level of digital development and the digital divide, the availability of certain information and communication technologies is first of all examined. In fact, the digital development of a country is measured by the connectivity of households and individuals. ICTs then imply the existence of an infrastructure consisting of electronic equipment, networks and software that can collect, exchange, process and store data (Lucendo-Monedero et al., 2019). When considering the impact of telecommunication infrastructure on economic growth, the conclusion is that basic telecommunication technologies (broadband technology) have a more significant impact in less developed countries, while in developed countries, the impact of mobile technology is more noticeable (Habibi and Zabardast, 2020; Myovella et al., 2020). The explanation of the results lies in the fact that underdeveloped countries still base their ICT level on broadband technology, while the mobile infrastructure is less developed.

The increased digitization and the inclusion of information and communication technologies in all spheres of life bring numerous business and social challenges. With the inclusion of Industry 4.0 technologies in business, traditional chains of value creation and the dynamics of the modern business environment are changing. The integration of digital technologies into business facilitates the collection and analysis of large amounts of data that are generated in modern operations, as well as speeding up the production process and responding to market demands, producing higher quality products with increased savings and achieving circular and sustainable goals (Traşcă et al., 2019). The main barrier to introducing digitalization in business processes is high costs and lack of funds, as well as the possibility of specific processes being optimized following new technological requirements (Pech and Vaněček, 2022). Economics is particularly highlighted as a critical obstacle in developing countries where companies do not have sufficient funds for investments in new technologies and the means to ensure returns from those investments (Kyobe, 2011).

Integrating ICT in the entire value chain can be complex, especially for small and medium-sized enterprises (SMEs). This is because it requires the use of networks and various IT systems. As a result, many SMEs find it challenging to achieve the necessary technological level required to use Industry 4.0 solutions and adapt their organizational structure to the new way of doing business (Sevinç et al., 2018).

The complexity of the organizational structure of companies and the readiness of management and employees to accept a new way of thinking and working have been identified as significant barriers to digitization and the application of Industry 4.0 technologies (Pech and Vaněček, 2022). Digitization brings disruptive changes in the working environment and working conditions, and new skills and specific knowledge are required, while, on the other hand, employees react much more slowly. Digital competencies include multiple disciplines related to using digital tools and applications, finding and understanding information, critical thinking and problem-solving, and the ability to communicate through ICT (Picatoste et al., 2018). Given that digitization reduces the need for low-income, low-skilled employees, digital competencies become crucial for securing a job and, consequently, higher employee productivity. The widespread adoption of Industry 4.0 has led to a deficit of competent professionals with the necessary technical skills and knowledge to facilitate the transition to the new methods of production, which involves a real-virtual working space. This shortage is particularly prevalent in specific technical occupations (Liboni et al., 2019). According to a study by Schröder in 2017, the shortage of human resources seen initially will be resolved in time with the increasing number of programs and students pursuing education in the MINT subjects, i.e., mathematics, informatics, natural sciences, and technology (Schröder, 2017).

Mubarak et al. (2020) test the impact of socioeconomic factors on ICT acceptance. The results indicate a strong positive association of income and education with levels of ICT dispersion worldwide. Research by Heinz (2016) speaks about the influence of socioeconomic background on the availability of ICT technologies as an essential factor for developing digital competencies, highlighting the occurrence of inequality conditioned by social inequality. Kwilinski et al (2020) considered that countries at a higher level of digitization have a lower percentage of the population at risk of poverty and social exclusion. However, the results showed that a high level of digitization does not reduce the risk of poverty and social exclusion, especially in poorer EU members, due to low digital competencies, and the economic impact should be directed not only at ICT infrastructure but also people.

The ability to adopt and use new technologies largely depends on the environment created by the government by enacting specific regulations that help digitization, but also by investing in infrastructure and developing its digital competencies. Therefore, with the digitization of the business and personal spheres of life, the expected and required changes also apply to government services. In accordance with all the changes, digital government is being introduced, the task of which is to create the conditions for certain social demands of the population to be met through digital government systems. This means, on the one hand, the construction of a central functional infrastructure internally, but also the promotion of these services and harmonization with the needs and digital competencies of the population so that the built system functions externally. Yifan and Bei (2022), when examining the factors that influence the creation of digital government concluded that better economic conditions and financial support for digital transformations provide a better basis for creating digital government and e-services.

Following the research question and analysis of digitalization aspects, the proposed hypotheses are:

- **Hypothesis 1.** The economic level has a positive influence on ICT accessibility
- **Hypothesis 2.** The economic level has a positive influence on the integration of ICT in business
- **Hypothesis 3.** The economic level has a positive influence on the level of ICT skills of the population
- **Hypothesis 4.** The economic level has a positive influence on the digitization of public services.

3 METHODOLOGY AND DATA

The mentioned literary sources point to strong digital divides at different levels, whether they are about more economically developed and less developed countries or at the level of certain population groups. It can also be concluded that the digital divide is not only a consequence of the availability of digital technologies but also of the level of ability to use these technologies. Therefore, the problem of digital development is multidimensional (Balcerzak & Pietrzak, 2017), and its solution requires a complex analysis.

The problem is approached using the Digital Economy and Society Index (DESI) indicator. Namely, since 2014, the European Commission has been monitoring the digital progress of EU member states. To this end, the Eurostat Database, which provides uniform and high-quality statistical data on various topics in Europe, is used. First, five domains were used to define DESI, while the DESI 2021 report contained four areas under consideration: human capital, broadband connectivity, the integration of digital technologies by businesses and digital public services. DESI was adapted in 2021 to reflect two important policy initiatives: the Recovery and Resilience Facility and the Digital Decade Compass (European Commission, 2021b). The Eurostat Database also contains data for other European countries, making it possible to assess digital performance at the European level. DESI is also used in other research as a valuable tool for the unique identification of the level of digital competencies of countries (Kwilinski, 2020). In this research, data from the Eurostat database was mostly used for the indicators of digital development factors, while some indicators used OECD data.

Three socioeconomic indicators were chosen and combined into one factor to determine economic growth. First is the Gross Domestic Product (GDP) per capita, whose values were obtained from World Development Indicators and represent gross domestic product divided by midyear population. Another important indicator is the Employment Rate, which is the percentage of employed persons in relation to the total population. The indicator is based on the European Labor Force Survey (EU-LFS) results. The third indicator of economic development is the Final Consumption Expenditure of the General Government. General government final consumption expenditure consists of expenditures for collective consumption (defense, justice, etc.), which benefit society as a whole and expenditures for individual consumption (health care, housing, education, etc.), which reflect spending incurred by the government on behalf of an individual household (OECD, 2014). Figure 1 displays a general model of the relationship between Economic level and Connectivity, Integration of digital technology, Human Capital and Digital public services. The list of indicators used for assessing the proposed constructs in the research model is presented in Table 1.

Construct	Item	Description	Source
Connectivity	a1	Overall fixed broadband take-up	Eurostat
	a2	At least 100 Mbps fixed broadband take-up	OECD
	a3	Fast broadband (NGA) coverage	OECD
	a4	Mobile broadband take-up	OECD
Integration of digital technology	b1	SMEs with at least a basic level of digital intensity	Eurostat
	b2	Social media	Eurostat
	b3	Cloud	Eurostat
	b4	SMEs selling online	Eurostat
	b5	e-Commerce turnover	Eurostat
Human capital	c1	Above basic digital skills	Eurostat
	c2	ICT specialists	Eurostat
	c3	Enterprises providing ICT training	Eurostat
Digital public services	d1	e-Government Index	UN
	d2	e-Participation Index	UN
Economic growth	GDP	GDP per capita	World Development Indicators
	Empl	Employment	Eurostat
	Fin_cons	Final consumption expenditure of general government	Eurostat

Tab. 1 Items used to validate the hypothesis in the proposed model

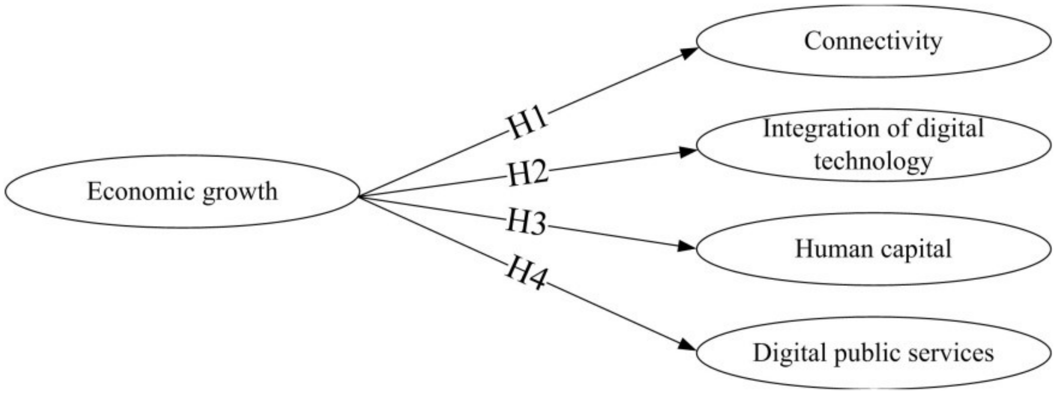

Fig. 1: Proposed research model

The analysis of the proposed research model, which assumes the impact of economic factors on digital economy factors, is based on Structural Equation Modelling (SEM). SEM is a widely used technique for testing theoretical hypotheses. It consists of two main components: a measurement model, which is essentially a confirmatory factor analysis (CFA), and a structural model that examines the hypothesized relationships between latent constructs. Confirmatory factor analysis (CFA) is a method for confirming assumptions based on theory. It involves defining the variables that represent the factors and creating a measurement model to show how the observed variables describe the latent variables in the proposed model. The key aspect of CFA is to assess the reliability and validity of the observed variables and their interconnections. The structural model examines the effects of independent variables on dependent variables. Once the measurement model is validated, the structural model is defined by establishing the relationships between the constructs. Through successive regression equations, the structural model determines the characteristics of the relationships between variables. Additionally, the assessment of the explained variability of the dependent variables (R^2) is significant during the evaluation of the structural model. The advantage of structural modelling compared to other statistical techniques is that it enables the simultaneous examination of mutual dependencies of a series of connections between variables (Hair et al., 2014), which is the need of this research.

4 RESULTS

Statistical data in the period 2015–2019 for 28[1] European countries were considered, resulting in a sample of 140 lines of data used in analysis.

Five variables that make up the research model were used to evaluate the impact of the economic level on the level of the digital economy. SmartPLS software (Ringle et al., 2015) was used to determine the validity of the measurement and structural levels. The convergent validity of the constructs was confirmed by Cronbach's Alpha coefficient with values higher than the recommended value of .70 (Cronbach, 1951) as well as Average Variance Extracted (AVE) values above the recommended value of .50. Construct reliability (CR) is also used to check convergent validity and high values (between 0.60 and 0.70 and above) mean that all

[1] The data were available for 28 countries, comprising the 26 EU member states (Malta's data were missing) plus the UK and Norway. Time spane depended on data availability.

	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Connectivity	0.871	0.911	0.718
Integration of digital technology	0.889	0.919	0.695
Human capital	0.839	0.903	0.757
Digital public services	0.907	0.953	0.909
Economic level	0.785	0.88	0.715

Tab. 2 Convergent validity of the constructs

	Connectivity	Digital public services	Economic level	Human capital	Integration of digital technology
Connectivity	0.848				
Digital public services	0.519	0.954			
Economic level	0.74	0.592	0.845		
Human capital	0.681	0.648	0.854	0.87	
Integration of digital technology	0.659	0.591	0.702	0.806	0.834

Tab. 3 Discriminant validity of the constructs

	Original sample	Sample mean	Standard deviation	T statistics	P values
Economic level -> Connectivity	0.74	0.741	0.032	23.26	0.000
Economic level -> Human capital	0.854	0.856	0.019	45.014	0.000
Economic level -> Integration of digital technology	0.702	0.707	0.05	14.084	0.000
Economic level -> Digital public services	0.592	0.596	0.039	15.344	0.000

Tab. 4 The results of hypothesis testing

indicators consistently represent the same latent constructs (Hair et al., 2014) (Table 2). Also, the discriminant validity of the measurement model is met, given that the correlations between any two constructs are lower than the average variance estimate (AVE) (Table 3). The statistics presented indicate the acceptability of the measurement model, given that unidimensionality, convergent, and discriminant validity are shown.

For testing the structural model, i.e., the hypothesis, a bootstrapping module with 5000 re-samples was used to test the significance of the proposed relationships. Analysing the *t*-test statistics, whose value for all proposed paths is greater than 1.96, it can be concluded that all proposed hypotheses are accepted. The connections between the variables were observed through the β coefficients (values presented on arrows in the model), which means a stronger predictive connection between the variables if the absolute value is higher. High values of β coefficients indicate a strong influence of economic factors on all tested variables, thus

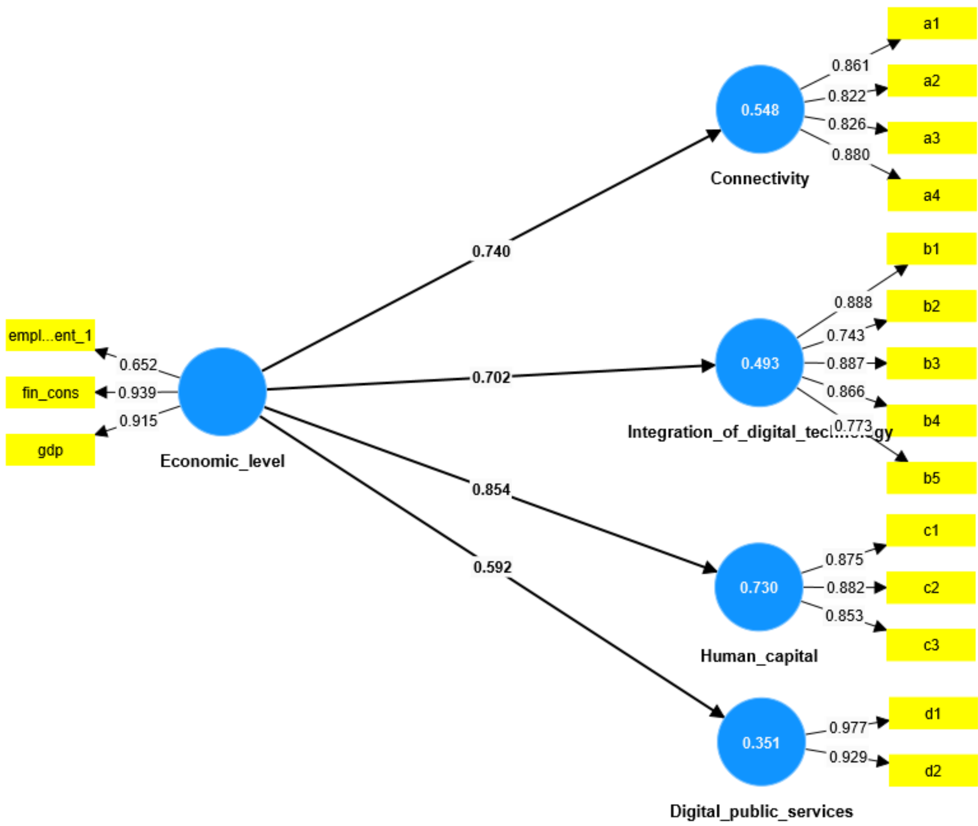

Fig. 2: Summary of the results for measurement and structural model

confirming all four proposed hypotheses. The statistical significance of the obtained results was confirmed with P-values at a significance level of 0.000 (Table 4). The value of the explained variations ranges from 35.1% for the Public services variable to 73% for the Human capital variable, which is considered a significant effect (Ringle et al., 2014) (Figure 2).

5 DISCUSSION AND CONCLUSIONS

By considering the four key points in the process of successful digital transformation, which have been set through the strategy of the European Commission called the 2030 Digital Compass, it is possible to determine the places where digital divides occur and the economic condition of their appearance. The model proposed in the research tests the assumption that the influence of economic factors on the level of digital development is positive and significant. The proposed indicators were selected based on a review of previous research and represent the most significant elements of the DESI index. The quality and validity of the model and the collected data are determined by the statistical criteria used to measure reliability and validity, which are above the recommended thresholds together with high coefficients of determination R^2 for the dependent variables.

Analyzing the results makes it possible to confirm strong positive links between the economic and digital levels. Cruz-Jesus et al. (2017) found that the relationship between digital and economic development is not linear. Thus, by looking at certain digital-level factors, it can be concluded that economic factors strongly influence human capital. Digital transformation must be based on the ability of the population to be digitally literate and on highly qualified experts, and this is possible through the economic impact on the development of the digital education system and effective programs for the development of digital competencies of the workforce.

Another factor describing the digital level, which is strongly influenced by economics, is the availability of digital infrastructure. The literature suggests a strong link between digitization acceptance patterns and GDP per capita (Mubarak et al., 2020). This research supports the idea that increased income and higher economic levels lead to greater adoption of ICT. In this segment, additional efforts should be made towards increasing investment to deliver the benefits for society by having an accessible and reliable ICT infrastructure.

It has been evidenced that companies can benefit from digital technologies by increasing productivity directly and indirectly, as the effect extends throughout the supply chain and affects its position among competitors. This conditions constant investments in the digital transformation of business and the application of Industry 4.0 technologies, which represent the core of the development of new products, new production processes and the creation of networked chains of new value creation (Dalenogare et al., 2018). In order to realize the intention of creating a Single Market, businesses that lag in the digital transformation should be strongly economically and institutionally supported in achieving these goals.

Providing digital government services is a multi-layered process that requires the coordination of several elements (Twizeyimana and Andersson, 2019). First, an adequate digital infrastructure that enables the functioning of digital services aimed at people at the local and national levels is necessary. Services that are created must be developed in such a way as to enable their use despite certain individual limitations of the user. On the other hand, digital administration and direct channels of communication with the population enable governments to understand the population‘s needs more clearly and to direct additional efforts and funds to the development of programs and procedures to increase the efficiency of e-government and ensure further digital development.

The results of this study should be considered in the context of developing strategies to improve the digitization process in countries whose degree of digitization is at a lower level, as well as the increase of digitization in companies to survive in the global competitive race.

The limitation of the paper is that it does not compare individual countries or groups of countries in order to determine measures of disproportion in the level of digitization. For further research, it‘s crucial to consider how different countries or regions may have varying characteristics that could impact the model‘s results. Conducting subgroup analyses and exploring alternative model specifications should ensure the validity of the model‘s conclusions.

Acknowledgement

The research presented in this paper was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia, within the funding of scientific and research work at the University of Belgrade, Technical Faculty in Bor, according to contract with registration number 451-03-65/2024-03 /200131.

REFERENCES

BALCERZAK, P. A. and PIETRZAK, B. M. 2017. Digital Economy in Visegrad Countries. Multiple-criteria Decision Analysis at Regional Level in The Years 2012 and 2015. *Journal of Competitiveness*, 9(2), 5-18.

CRONBACH, L. J. 1951. Coefficient alpha and the internal structure of test. *Psychometrica*, 16: 297-334.

CRUZ-JESUS, F., OLIVEIRA, T., BACAO, F. and IRANI, Z. 2017. Assessing the pattern between economic and digital development of countries. *Information Systems Frontiers*, 19: 835–854.

DALENOGARE, L. S., BENITEZ, G. B., AYALAN. F. and FRANK, A. G. 2018. The expected contribution of Industry 4.0 technologies for industrial performance. *International Journal of Production Economics*, 204: 383-394.

EUROPEAN COMMISSION. 2021a. Communication From the Commission to the European Parliament, the Council, the European Economic and Socialcommittee and the Committee of the Regions. *2030 Digital Compass: the European way for the Digital Decade*. Brussels: COM(2021).

EUROPEAN COMMISSION. 2021b. *Digital Economy and Society Index 2021: overall progress in digital transition but need for new EU-wide efforts*. Brussels.

HABIBI, F. and ZABARDAST, M. 2020. Digitalization, education and economic growth: A comparative analysis of Middle East and OECD countries (101370, Ed.). *Technology in Society*, 63.

HAIR, J. F., SARSTEDT, M., HOPKINS, L. and KUPPELWIESER, V. G. 2014. Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2).

HEINZ, J. 2016. Digital Skills and the Influence of Students' Socio-Economic Background. An Exploratory Study in German Elementary Schools. *Italian Journal of Sociology of Education*, 8(2), 186-212.

KWILINSKI, A., VYSHNEVSKYI, O. and DZWIGOL, H. 2020. Digitalization of the EU Economies and People at Risk of Poverty or Social Exclusion. *Journal of Risk and Financial Management*, 13: 142.

KYOBE, M. 2011. Investigating the key factors influencing ICT adoption in South Africa. *Journal of Systems and Information Technology*, 13(3), 255-267.

LI,Y., DAI, J. and CUI, L. 2020. The impact of digital technologies on economic and environmental performance in the context of industry 4.0: A moderated mediation model. *International Journal of Production Economics*, 229: 107777.

LIBONI, L. B., CEZARINO, L. O., JABBOUR, C. J. C., OLIVEIRA, B. G. and STEFANELLI, N. O. 2019. Smart industry and the pathways to HRM 4.0: implications for SCM. *Supply Chain Management*, 24 (1), 124-146.

LUCENDO-MONEDERO, A. L., RUIZ-RODRÍGUEZ, F. and GONZÁLEZ-RELAÑO, R. 2019. Measuring the digital divide at regional level. A spatial analysis of the inequalities in digital development of households and individuals in Europe. *Telematics and Informatics*, 41: 197–217.

MUBARAK, F., SUOMI, R. and KANTOLA, S.-P. 2020. Confirming the links between socio-economic variables and digitalization worldwide: the unsettled debate on digital divide. *Journal of Information, Communication and Ethics in Society*, 18(3), 415-430.

MYOVELLA, G., KARACUKA, M.,and HAUCAP, J. 2020. Digitalization and economic growth: A comparative analysis of Sub-Saharan Africa and OECD economies. *Telecommunications Policy*, 44, 101856.

OECD 2014. *"General government final consumption", in National Accounts at a Glance 2014*. OECD Publishing, Paris.

PECH, M. and VANĚČEK, D. 2022. Barriers of New Technology Introduction and Disadvantages of Industry 4.0 for Industrial Enterprises. *Serbian Journal of Management*, 17(1), 197–206.

PICATOSTE, J., PÉREZ-ORTIZ, L. and RUESGA-BENITO, S. M. 2018. A new educational pattern in response to new technologies and sustainable development. Enlightening ICT skills for youth employability in the European Union. *Telematics and Informatics*, 35(4), 1031-1038.

POPKOVA, E. G., DE BERNARDI, P., TYURINA, Y. G. and SERGI, B. S. 2022. A theory of digital technology advancement to address the grand challenges of sustainable development. *Technology in Society*, 68: 101831.

RINGLE, C. M., DA SILVA, D. and BIDO, D. 2014. Structural Equation Modeling with the SmartPLS. *Brazilian Journal of Marketing – BJM*, 13(2), 56-73.

RINGLE, C. M., WENDE, S. and BECKER, J.-M. 2015. *SmartPLS 3*. Boenningstedt: SmartPLS GmbH. http://www.smartpls.com

SCHRÖDER, C. 2017. *The Challenges of Industry 4.0 for Small and Medium-sized Enterprises*. FRIEDRICH-EBERT-STIFTUNG, Germany

SEVINÇ, A., GÜR, S. and EREN, T. 2018. Analysis of the Difficulties of SMEs inIndustry 4.0 Applications by Analytical Hierarchy Process and Analytical Network Process. *Processes*, 6(12), 264.

TRAŞCĂ, D.L., ŞTEFAN, G.M., SAHLIAN, D.N., HOINARU, R., and ŞERBAN-OPRESCU, G.-L. 2019. Digitalization and Business Activity. The Struggle to Catch Up in CEE Countries. Sustainability, 11: 2204.

TWIZEYIMANA, J. D. and ANDERSSON, A. 2019. The public value of E-Government – A literature review. *Government Information Quarterly*, 36(2), 167-178.

YIFAN, G. and BEI, L. 2022. Influencing Factors and Multiple Paths of Construction Ability of Digital Government: Qualitative Comparative Analysis Based on 31 Chinese Provinces. *Procedia Computer Science*, 199: 1213-1220.

Contact information

Anđelka Stojanović: e-mail: anstojanovic@tfbor.bg.ac.rs
Isidora Milošević: e-mail: imilosevic@tfbor.bg.ac.rs
Sanela Arsić: e-mail: saarsic@tfbor.bg.ac.rs