

## Postmodern Openings

ISSN: 2068-0236 | e-ISSN: 2069-9387

Covered in: Web of Science (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2022, Volume 13, Issue 4, pages: 127-141 | <https://doi.org/10.18662/po/13.4/510>

Submitted: May 18<sup>th</sup>, 2022 | Accepted for publication: June 21<sup>st</sup>, 2022

# Digitization of the Economy Under the Influence of the COVID-19 Pandemic

Iryna STOIANENKO<sup>1</sup>,  
Oksana KONDRATIUK<sup>2</sup>,  
Anastasiia MOSTOVA<sup>3</sup>,  
Ruslana PIKUS<sup>4</sup>,  
Hanna KACHAN<sup>5</sup>,  
Viktoriia ILCHENKO<sup>6</sup>

<sup>1</sup> Candidate of Science in Economics, Associate Professor, Associate Professor of the Business Economics and Finance Department State, University of Trade and Economics, Kyiv, Ukraine, [i.stoyanenko@knute.edu.ua](mailto:i.stoyanenko@knute.edu.ua), <http://orcid.org/0000-0002-1775-9473>

<sup>2</sup> Candidate of Science in Economics, Associate professor, Associate professor of the Business Economics and Finance Department State, University of Trade and Economic, Kyiv, Ukraine, [o.kondratyuk@knute.edu.ua](mailto:o.kondratyuk@knute.edu.ua), <http://orcid.org/0000-0002-2750-6867>

<sup>3</sup> Doctor of Science in Economics, Associate Professor, Economics and Management Department, Varna University of Management, Varna, Bulgaria, [nastya25061987@gmail.com](mailto:nastya25061987@gmail.com), <http://orcid.org/0000-0002-3998-3441>

<sup>4</sup> Candidate of Science in Economics, Professor, Professor of the Department of Insurance, Banking and Risk Management, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine, [pikusruslana3@gmail.com](mailto:pikusruslana3@gmail.com), <http://orcid.org/0000-0002-1951-148x>

<sup>5</sup> Candidate of Science in Economics, Associate Professor, Department of Management, Information and Analytical Activity and European Integration, National Pedagogical Dragomanov University, Kyiv,

**Abstract:** This article examines the issues of digital transformation of the contemporary economy.

The digital transformation of the contemporary economic system determines the general contours of development of all sectors of the economy. New digital technologies, platforms and infrastructures have significantly transformed economic life and contemporary entrepreneurship.

The article examines the digital transformation of the contemporary economy at the micro and macroeconomic level. Significant positive impact of contemporary technological means on the activities of enterprises is noted. At the state level, digitalization provides an opportunity to increase the efficiency of public administration, ensure the convenience of public institutions, implement government functions online, users to cooperate and implement civic responsibilities in a convenient way. At the macroeconomic level, the economy has undergone significant digital transformations under the influence of the COVID-19 pandemic.

**Keywords:** *Information technology; innovation; COVID-19 pandemic; Industry 4.0; big data, blockchain; digital transformation of the government agencies.*

**How to cite:** Stoianenko, I., Kondratiuk, O., Mostova, A., Pikus, R., Kachan, H., & Ilchenko, V. (2022). Digitization of the Economy Under the Influence of the COVID-19 Pandemic. *Postmodern Openings*, 13(4), 127-141.

<https://doi.org/10.18662/po/13.4/510>

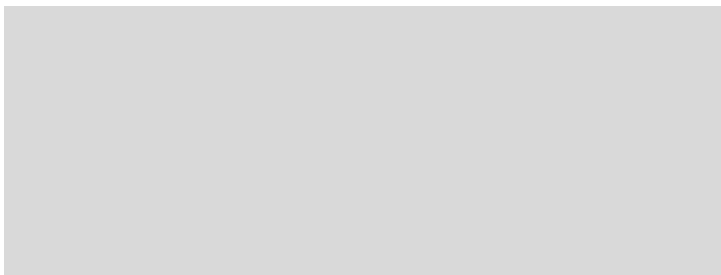
Ukraine, [anitasmileanya@gmail.com](mailto:anitasmileanya@gmail.com),  
<https://orcid.org/0000-0001-6378-2298>

<sup>6</sup> Candidate of Science in Economics (PhD),

Associate Professor, Department of  
Entrepreneurship and Economics of  
Enterprises, University of Customs and  
Finance, Dnipro, Ukraine,

[vikusijzajac@gmail.com](mailto:vikusijzajac@gmail.com),

<https://orcid.org/0000-0002-5414-1429>



## Introduction

The digital transformation of the contemporary economy is taking place at a record pace, and the events of recent years have accelerated this pace. Since the first news of the COVID-19 pandemic in Wuhan, China, the world has faced unprecedented challenges, not only in the health crisis but also in the economic crisis. Globalization, inherent in contemporary reality, on the one hand, has exacerbated these problems, on the other - has provided new opportunities to overcome these problems through mutual assistance, exchange of experiences, dissemination of technology and widespread digitalization.

Belozertsev, Kharakoz, Karminov, Sokolova, Sulima & Khudyakova (2021) note that in the current reality without information systems and technologies in any way not to be outdone, they affect absolutely all spheres of life of postcontemporary man and powerfully improve the world economy. Information technologies in difficult times of the COVID-19 pandemic grant to revive the expansion of Internet trade. As a result, this served as an impetus for the evolution of the market for information and information services.

Technology changes and evolving the economies, at the same time, technologies are extending under the influence of many factors. Among these factors was the COVID-19 pandemic that led to enlargement of technology use in everyday and work life. Khan, Khalid, Abbas, and Khalid (2022) show that COVID-19 caused job uncertainty and emotional exhaustion. As Evans (2020) notes, during the pandemic, when people were locked in their homes for fear of infection, the IT sector provided the online freedom to communicate, work, order food and find any necessary goods.

Singh, Sharma & Dhir (2021) explore the benefits of digital transformation as an opportunity to improve the company's performance. A large amount of research has been devoted to digital transformation in education and training under the influence of COVID-19 and lockdown, Iivari, Sharma, & Ventä-Olkkonen (2020), Fletcher & Griffiths (2020), Pham, Tran, La, Doan, & Wu (2021), Jackson (2019), Sharma, Singh & Rai (2022) analyze the impact of COVID-19 on supply efficiency and business problems due to transportation breaks and disruptions to global supply chains.

Matthess & Kunkel (2020) note that developing countries have high hopes for digital technologies that will help transform the economy to prosperity. Zafary (2020) examines the use of business applications that give the possibility to integrate systems of information intelligence with planning which involves company's resources. Babenko, Fedorova & Pokhodenko

(2021) investigate the consumer value of goods as a basis for product quality in the digitalization of the economy.

Thus, the issue of digitalization of the economy is depicted in numerous studies by economists. Digital transformation is spreading to an increasing number of processes and phenomena, which requires appropriate research and determines their relevance. Particular attention needs to be paid to the synthesized view of the digital transformation of the contemporary economy in terms of micro- and macroeconomic approach, which determined the research topic.

Thus, the aim of the article is to study the digital conversion of the contemporary economy under the influence of the COVID-19 pandemic.

### **Digital conversion of the contemporary enterprises**

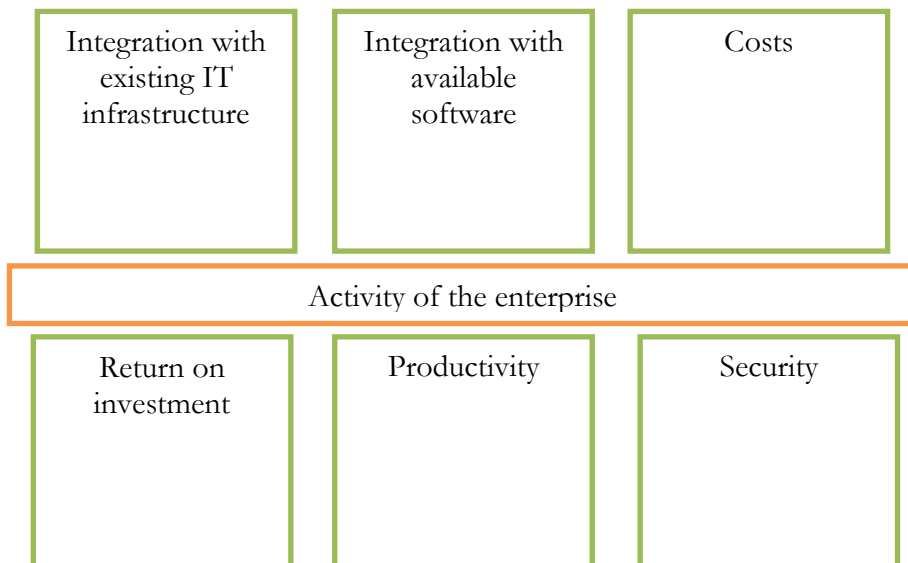
To characterize the competitive advantages of enterprises, digitalization is becoming increasingly important, and information technology and systems, in turn, are becoming more diverse and multifaceted. The enormous scale and high quality of the global information infrastructure and information and communication technologies have become the technological basis for the ever-increasing dissemination and application of information in business.

Tortora, Chierici, Farina Briamonte, & Tiscini (2021) focus on the dynamic opportunities that influence digital innovation of enterprises in terms of creating new proposals, processes or solutions through the use of a wide range of digital technologies. According to Tavera Romero, Ortiz, Khalaf and Ríos Prado (2021), Industry 4.0 is a set of technologies that companies need to advance innovative strategies and respond quickly to dynamic markets. It focuses on digital technologies, economic forecasts, analytics and their interrelationships. Active use of machine learning is also a mechanism to change the way of work for the development of companies. The study of the current state and analysis of the current situation with business intelligence technology allowed the authors to note its positive impact on business and other organizations. The positive effects of Industry 4.0 are reflected in the high development of technologies in the implementation of the organization and harmonization between production and intelligent digital technologies.

According to Ordóñez de Pablos & Labra Gayo (2019) the proliferation of cost-effective systems, software applications and other tools that constantly generate data has led to the concept of "big data". The concept of big data is defined by the idea of a field that contains too large or too complex to process structured and unstructured data. Therefore, it

should be noted that big data provides an opportunity to solve problems, but belongs to the field that requires the development of new tools and algorithms. The use of big data enables companies to effectively manage knowledge and contemporary information generation systems that are constantly increasing and need to be accumulated. Assessing the capabilities of existing services and programs is of paramount importance for the activities of enterprises, in the implementation of which special attention should be paid to local characteristics, the impact of policies, external factors and strategic actions. The difficulty of deploying big data has led to the expansion of their characteristics from three Vs (namely Volume, Speed and Variety) to five Vs, adding Viability and Value. The introduction and application of big data helps to stimulate the digital transformation of enterprises, which increases the cost and efficiency of their investment activities.

Today's technological trend is associated with the rapid development of technology, the availability of high-quality Internet, methods of data processing and storage. Information resources are becoming more powerful and affordable, and their price is becoming more affordable and cheaper. Among contemporary innovations, cloud technologies play a significant role, in which resources are provided as common utilities that users can rent and transfer via the Internet. Businesses are taking advantage of the digital capabilities of cloud innovation and are beginning to transfer more core business functions and processes to cloud platforms. The complexity of cloud deployment in business is related to data management, system integration, and the need to work with multiple cloud vendors. Despite the growing interest in cloud computing, the disadvantages include the high cost of their implementation, which makes it necessary to take into account various factors regarding the feasibility of using cloud computing in terms of profitability. According to Avram (2014) some companies are moving to cloud computing just to keep up with the latest digital trends. At the same time other companies do not even consider the possibility of placing their confidential data in third-party databases outside their premises. The problem with these two cases is the inconsistency and lack of information of the company. In order to make an informed and rational decision on the adoption of cloud computing, an analysis must be conducted in advance, which will be based on various factors and reflect the positive and negative consequences of cloud computing in business.



**Fig. 1.** Factors of analysis of the feasibility of introducing cloud computing in business

Source: Authors' own conception

Authors Akter, Michael, Uddin, McCarthy & Rahman (2020) apply a multidisciplinary approach in their study and note that ABCD technologies are the foundation of digital business transformation. The processes of integration, hybridization, recombination and convergence of technologies characterize the digital transformation of enterprises, which in order to get the most out of their application strive for the optimal combination of blockchain, cloud computing and artificial intelligence. An important issue for enterprises is to achieve operational efficiency of the technologies used.

Authors Bunduchi, Crişan-Mitra, Salanţă, & Crişan (2021) explore the characteristics of digital products and the organization of innovation. The feature of digital products and innovations is their constant improvement, they are in the process of constant formation. This unique feature plays an important role for entrepreneurs in the development, management and commercialization of digital products. Combining combinations of product change (minor versus major) and process change (stable or dynamic processes), it is necessary to highlight the management of strategic innovations, experimental innovations, content innovations and

learning experiments that enable companies to achieve effective digitalization results.

For many SMEs, due to the scarcity of financial or other resources, the introduction of technology is a difficult task, while the introduction of Industry 4.0 helps to stabilize the activities of these enterprises.

According to Haseeb, Hussain, Ślusarczyk, & Jermsttiparsert (2019) the goal of Industry 4.0 is to obtain a high capability and business automation. 4IR is the key to increasing the sustainable efficiency of small and medium-sized businesses due to use of different elements that stabilize business operations.

Liu, Li, and Qi (2019) examine the impact of blockchain technology on the exchange of information between supply chain participants and risk issues. With a small number of retail orders, the degree of application of blockchain technology by the manufacturer is a declining risk avoidance function. With a large number of retail orders, the use of blockchain technology by the manufacturer does not depend on risk aversion. The profit of the supply chain depends on the level at which decisions are made. In the case of management from the center, the coordination of decisions is more efficient and profitable. Blockchain technology helps to curtail costs of deals between supply chain participants, facilitates the flow of information, and improves supply chain benefits.

### **Digital conversion at the state level**

The digital conversion of the contemporary economic system drives and forms the framework the progress in all spheres of the economy. New digital technologies and infrastructures have significantly transformed activity of present households and entrepreneurship. Thanks to the empowerment of contemporary enterprises and their employees, there is an improvement in traditional markets, and in addition, a market associated only with innovation and technology is emerging. Thus, there is a numerous multiplier effect that results in economic growth, which is also reflected in the growth of real gross domestic product.

Krasota, Bazhenov, Lisienko, Bedrina, & Firsova (2020) determine the application and implementation of digital technologies, which are increasingly determining the path of market economy. To encourage economic advancement and create institutions of contemporary society the state should actively engage in the digitalization process. Heyets, Voynarenko, Kholodenko, & Stepanok (2019) note that it is the state that should direct the actions of opposing economic forces to the best point of optimum.

Any economic processes in the state, including public administration, are transformed into an economy based on ICT (Pavlyshyn, 2016). The state and other market agents are forced to act in contemporary conditions, adapting to the processes of globalization, intensification of competition and digitalization. To increase the efficiency of public administration allows the active use of various digital tools and technologies that help expand the ability to search, collect and store data. Technological change, the use of innovation and the digitalization of public administration are a contemporary alternative way to increase its efficiency and convenience.

Digital transformation at the state level is expressed in the growing number of public institutions that are moving to automate their processes and functions. Contemporary government agencies present their services on the Internet and provide users with the opportunity to cooperate and carry out civic duties online through convenient online services, Web-sites and mobile applications. Intensive deepening of digitalization at the state level meets the needs of consumers, contributes to the expansion of services provided by government agencies. Adaptation of the functions of information systems of public institutions allows to increase the efficiency of their activities due to the speed of response to requests and ensuring the integration of processes at all levels.

Yanovska, Levchenko, Tvoronovych, & Bozhok (2019) study the transformation processes associated with digitalization in the Ukrainian economy. The authors note the annual progress in the field of digitalization of the Ukrainian economy, which changes the way of doing business and technological processes in national companies. The aggregate competitiveness of the economy is also positively affected by the digitalization of the public sector. The general idea of digital transformation projects is to create a single digital communication system, which is joined by government agencies, which indicates their concern about balance with contemporary technology and customer focus.

Prikhno, Kuksa & Mihaylov (2021) believe that in order to establish the effective functioning of information technology and achieve financial success, it is important for the state to work on harmonizing the rules of legislative regulation of information technology and management methods.

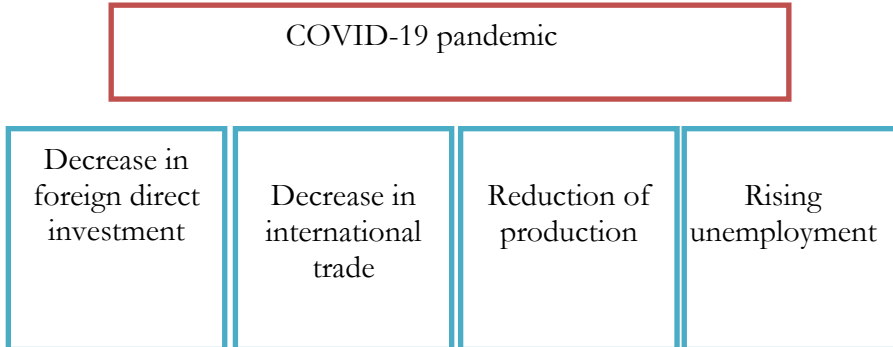
The digital transformation at the state level is reflected in the creation of national information systems and the deepening of their use among the population. To provide the success of all fields of contemporary life, the state needs to create favorable conditions for the spread of



information technology, encourage businesses to innovate and digitize, as well as expand Internet coverage.

### The COVID-19 pandemic effect on the digitization of the economy

The COVID-19 pandemic, which has spread around the world in recent years, has destabilized the socio-economic situation in all countries of the world. Intensive processes of digitalization of the economy and social spheres of life came to the rescue of society in the conditions of quarantine measures. As a result of the fight against the coronavirus, the structure of economic development has shifted, some industries have declined, some have adapted to new realities, and some have achieved growth. As noted by Nerubasska, Palshkov & Maksymchuk (2020), human cannot remain unchanged, because the social environment shapes human behavior and life rules change. Thanks to the spread of digitalization in the context of the COVID-19 pandemic, online business has been actively introduced, new forms of attracting labor have appeared, and consumer interest and demand have changed. The pandemic has created barriers to economic development, as shown in Fig. 2.



**Fig. 2.** Economic barriers created by the COVID-19 pandemic  
Source: Authors' own conception

Humenna, Tyutyunyk & Tverezovska (2021) in the article investigate the digitalization of the economy and the factors influencing the gross domestic product as the main indicator of socio-economic development in the pandemic COVID-19 on the example of European countries Union and non-EU countries. Empirical estimates, calculated on the basis of correlation analysis, showed close feedback between GDP, imports, inflation; a small

inverse relationship between GDP and FDI, unemployment, external debt, total government gross debt; weak direct link between GDP and population, World Digital Competitiveness Rating. The digitalization of the economy is the driver that has the greatest impact on the country's macroeconomic stability.

Nosova, Norkina, Makar & Fadeicheva (2021) analyze the digital implementation, study the flow of digitalization in business models and intercommunication and cooperation of economic entities in the reality of contemporary economic policy, and the economic consequences of the COVID-19 pandemic. The authors note that in the turbulent state of economies during the COVID-19 pandemic, the development of digital entrepreneurship and the digital sector of the national economy plays a special role. Coordinated digitalization strategies should be formed at the level of each enterprise and at the state level, the implementation of which will consistently lead to the creation of a "digital style" of their activities.

Under the influence of the COVID-19 pandemic, the labor market has undergone a significant transformation, thanks to digitalization there is a possibility of remote work, which is significantly different from the traditional form of employment with a fixed schedule in the specified place. Contemporary workers can work for international companies without leaving their home country, choose their own work schedule, combine work on several projects.

As noted by Nerubasska & Maksymchuk (2020) studying human characteristics should be noted creativity, talent and ingenuity. On the one hand, man is a biological being, on the other hand, man is a creative man. The digital transformations of the economy under the influence of the COVID-19 pandemic, reflected in the spread of telecommuting, have led to the possibility of more mobile exchange and dissemination of creativity, ingenuity and human knowledge. As noted by Gerasymova, Maksymchuk, Bilozeroва, Chernetska, Matviichuk, Solovyov & Maksymchuk (2019), the creation of theoretical and methodological support of the process in the formation of professional mobility of future professionals acquires special significance in postmodern conditions. Thus, the digitalisation of education and distance learning, which have spread as a result of the COVID-19 pandemic, meet the needs of effective human development.

## **Conclusions**

The digital transformation of the contemporary economy is at a record pace, and the events surrounding the COVID-19 pandemic have accelerated that pace. Information technologies in difficult times of the

COVID-19 pandemic grant to revive the expansion of Internet trade. As a result, this served as an impetus for the evolution of the market for information and information services.

The positive effects of digital transformation at the micro level are reflected in the high development of technologies in the implementation of the organization and harmonization between production and intelligent digital technologies. Businesses are able to process and efficiently use large and complex structured and unstructured data using conventional big data concepts. The digital capabilities of cloud platforms, to which enterprises are beginning to transfer more and more business functions and processes, allow to increase the efficiency of their activities and their competitiveness.

The problem of technology implementation for many SMEs is the scarcity of financial or other resources, while the digitalization and introduction of Industry 4.0 has a positive impact on the stabilization of these enterprises.

The state and other market agents are forced to act in contemporary conditions, adapting to the processes of globalization, intensification of competition and digitalization. To increase the efficiency of public administration allows the active use of various digital tools and technologies that help expand the ability to search, collect and store data. Technological change, the use of innovation and the digitalization of public administration are a contemporary alternative way to increase its efficiency and convenience.

The COVID-19 pandemic, which has spread around the world in recent years, has destabilized the socio-economic situation in all countries of the world. Intensive processes of digitalization of the economy and social spheres of life came to the rescue of society in the conditions of quarantine measures. Under the influence of the COVID-19 pandemic, the labor market has undergone a significant transformation, thanks to digitalization there is a possibility of remote work, which is significantly different from the traditional form of employment with a fixed schedule in the specified place.

Thus, the article examines the digital transformation of the contemporary economy at the micro and macroeconomic levels. Significant positive impact of contemporary technological means on the activities of enterprises is noted. At the state level, digitalization provides an opportunity to increase the efficiency of public administration, ensure the convenience of public institutions, implement government functions online, users to cooperate and implement civic responsibilities in a convenient way. At the macroeconomic level, the economy has undergone significant digital transformations under the influence of the COVID-19 pandemic.

## References

---

- Akter, S., Michael, K., Uddin, M., McCarthy, G., & Rahman, M. (2020). Transforming business using digital innovations: the application of AI, blockchain, cloud and data analytics. *Annals of Operations Research*, 308, 7-39. <https://doi.org/10.1007/s10479-020-03620-w>.
- Avram, M. G. (2014). Advantages and challenges of adopting cloud computing from an enterprise perspective. *Procedia Technology*, 12(0), 529-534. <https://doi.org/10.1016/j.protcy.2013.12.525>
- Babenko, V. O., Fedorova, G. Y., & Pokhodenko, B. O. (2021). *Spozhyvcha cinnist tovariv v umovab cyfrovizaciji ekonomiky* [Consumer value of goods in the context of digitalization of the economy]. *Bulletin of VN Karazhin Kharkiv National University, Series: International Relations. Economy. Local lore. Tourism*, 13, 38-49. <https://doi.org/10.26565/2310-9513-2021-13-04>
- Belozertsev, V. S., Kharakoz, L. V., Karminov, Y. S., Sokolova, O. I., Sulima, G. A., & Khudyakova, G. V. (2021). Rozvytok informacijnyh system ta tekhnologij v svitovij ekonomici pid chas COVID-19 [Development of information systems and technologies in the world economy during COVID-19]. *Bulletin of Khmelnytsky National University Series: "Economic Sciences"*, 105-109. <https://www.doi.org/10.31891/2307-5740-2021-296-4-17>
- Bunduchi, R., Crişan-Mitra, C., Salanță, I.-I., & Crişan, E. L. (2021). Digital product innovation approaches in entrepreneurial firms – the role of entrepreneurs' cognitive frames. *Technological Forecasting and Social Change*, 175, 121343. <https://doi.org/10.1016/j.techfore.2021.121343>
- Evans, C. (2020). The coronavirus crisis and the technology sector. *Business Economics*, 55, 253–266. <https://doi.org/10.1057/s11369-020-00191-3>
- Fletcher, G., & Griffiths, M. (2020). Digital transformation during a lockdown. *International Journal of Information Management*, 55, 102185. <https://doi.org/10.1016/j.ijinfomgt.2020.102185>.
- Gerasymova, I., Maksymchuk, B., Bilozerova, M., Chernetska, Yu., Matviichuk, T., Solovyov, V., & Maksymchuk, I. (2019). Forming professional mobility in future agricultural specialists: the sociohistorical context. *Revista Romaneasca pentru Educatie Multidimensionala*, 11(4), 345-361. <http://lumenpublishing.com/journals/index.php/rrem/article/view/1604/pdf>
- Haseeb, M., Hussain, H., Ślusarczyk, B., & Jermisittiparsert, K. (2019). Industry 4.0: A Solution towards Technology Challenges of Sustainable Business Performance. *Social Sciences*, 8, 154. <https://www.mdpi.com/2076-0760/8/5/154/pdf>

- Heyets, V., Voynarenko, M., Kholodenko, A., & Stepanok, N. (2019). Modeling state regulation of the labour market. *CEUR-WS*, 2019, 2422, 308–319. <https://ceur-ws.org/Vol-2422/paper25.pdf>
- Humenna, Y. G., Tyutyunyk, I.V., & Tverezovska, O.I. (2021). Efekty vplyvu cyfrovizaciji na makroekonomichnu stabil'nist' v umovah pandemii COVID-19: praktyka ES [The effects of digitalization on macroeconomic stability in the context of the COVID-19 pandemic: EU practice.] *Bulletin of VN Karaz'in Kharkiv National University. Series: International Relations. Economy. Local lore. Tourism*, (13), 70-77. <https://doi.org/10.26565/2310-9513-2021-13-07>
- Iivari, N., Sharma, S., & Ventä-Olkkonen L. (2020). Digital transformation of everyday life – How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care? *International Journal of Information Management*, 55, 102183, <https://doi.org/10.1016/j.ijinfomgt.2020.102183>
- Jackson, N. C. (2019). Managing for competency with innovation change in higher education: Examining the pitfalls and pivots of digital transformation. *Business Horizons*, 62(6), 761-772. <https://doi.org/10.1016/j.bushor.2019.08.002>.
- Khan, A.K., Khalid, M., Abbas, N., & Khalid, S. (2022). COVID-19-related job insecurity and employees' behavioral outcomes: mediating role of emotional exhaustion and moderating role of symmetrical internal communication. *International Journal of Contemporary Hospitality Management*, 34(7), 2496-2515. <https://doi.org/10.1108/IJCHM-05-2021-0639>
- Krasota, T., Lisienko, S., Bedrina, S., Firsova, E., & Bazhenov, R. (2020). Technological Dynamism And Digital Transformation Of Modern Economics. In D. K. Bataev (Ed.), *Social and Cultural Transformations in the Context of Modern Globalism» Dedicated to the 80th Anniversary of Turkayev Hassan Vakhitovich*, vol 92. *European Proceedings of Social and Behavioural Sciences* (pp. 1443-1449). European Publisher. <https://doi.org/10.15405/epsbs.2020.10.05.190>
- Liu, L., Li, F., & Qi, E. (2019). Research on Risk Avoidance and Coordination of Supply Chain Subject Based on Blockchain Technology. *Sustainability*, 11(7), 2182. <https://doi.org/10.3390/su11072182>
- Matthess, M., & Kunkel, S. (2020). Structural change and digitalization in developing countries: Conceptually linking the two transformations. *Technology in Society*, 63, 101428. <https://doi.org/10.1016/j.techsoc.2020.101428>.
- Nerubasska, A., & Maksymchuk, B. (2020). The Demarkation of Creativity, Talent and Genius in Humans: a Systemic Aspect. *Postmodern Openings*, 11(2), 240-255.

- <https://www.lumenpublishing.com/journals/index.php/po/article/view/2625>
- Nerubasska, A., Palshkov, K., & Maksymchuk, B. (2020). A Systemic Philosophical Analysis of the Contemporary Society and the Human: New Potential. *Postmodern Openings*, 11(4), 275-292. <https://doi.org/10.18662/po/11.4/235>
- Nosova, S., Norkina, A., Makar, S., & Fadeicheva, G. (2021). Digital transformation as a new paradigm of economic policy. *Procedia Computer Science*, 190, 657-665. <https://doi.org/10.1016/j.procs.2021.06.077>.
- Ordóñez de Pablos, P., & Labra Gayo, J. E. (2019). Rethinking key issues for understanding the new challenges of disruption and digital transformation in companies and economies. *Behaviour & Information Technology*, 38(9), 873-875. [10.1080/0144929X.2019.1641663](https://doi.org/10.1080/0144929X.2019.1641663)
- Pavlyshyn, Z. (2016). *Strukturno-funktsional'nyy analiz vykorystannya informatsiynykh tekhnolohiy i system u derzhavnomu upravlinni* (Structural and functional analysis of the use of information technologies and systems in public administration). *Efektivnist' Derzhavnogo Upravlinnya*. 3(48), 1, 162-166. [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjfx2P0tH0AhVHiIsKHWFwGiMQFnoECAIQAAQ&url=http%3A%2F%2Fwww.lvivacademy.com%2Fvidavniststvo\\_1%2Fedu\\_48%2Ffail%2F19.pdf&usq=AOvVaw2dvc3XKVI\\_k6-Uv-IPqR7M](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjfx2P0tH0AhVHiIsKHWFwGiMQFnoECAIQAAQ&url=http%3A%2F%2Fwww.lvivacademy.com%2Fvidavniststvo_1%2Fedu_48%2Ffail%2F19.pdf&usq=AOvVaw2dvc3XKVI_k6-Uv-IPqR7M)
- Pham H., Tran, Q., La, G., Doan, H., & Wu, T. (2021). Readiness for digital transformation of higher education in the Covid-19 context: The dataset of Vietnam's students. *Data in Brief*, 39, 107482. <https://doi.org/10.1016/j.dib.2021.107482>.
- Prikhno, I., Kuksa, V., & Mihaylov, I. (2021). The Use of Information Technology in Financial Management. *SHS Web of Conferences*, 100, 01007. <https://doi.org/10.1051/shsconf/202110001007>
- Singh, S., Sharma, M., & Dhir, S. (2021). Modeling the effects of digital transformation in Indian manufacturing industry. *Technology in Society*, 67, 101763. <https://doi.org/10.1016/j.techsoc.2021.101763>
- Sharma, V., Singh, A., & Rai, S.S. (2022). Disruptions in sourcing and distribution practices of supply chains due to COVID-19 pandemic: a sustainability paradigm. *Journal of Global Operations and Strategic Sourcing*, 15(2), 235-261. <https://doi.org/10.1108/JGOSS-02-2021-0020>
- Tavera Romero, C. A., Ortiz, J. H., Khalaf, O. I., & Ríos Prado, A. (2021). Business Intelligence: Business Evolution after Industry 4.0. *Sustainability*, 13(18), 10026. <https://doi.org/10.3390/su131810026>
- Tortora, D., Chierici, R., Farina Briamonte, M., & Tiscini R. (2021). 'I digitize so I exist'. Searching for critical capabilities affecting firms' digital innovation. *Journal of Business Research*, 129, 193-204. <https://doi.org/10.1016/j.jbusres.2021.02.048>.

- Yanovska, V., Levchenko, O., Tvoronovych, V., & Bozhok A. (2019). Digital Transformation of the Ukrainian Economy: Digitization and Transformation of Business Models. *SHS Web of Conferences*, 67, 05003, <https://doi.org/10.1051/shsconf/20196705003>
- Zafary, F. (2020). Implementation of Business Intelligence considering the role of information systems integration and enterprise resource planning. *Journal of Intelligence Studies in Business*, 10, 59–74. <https://ojs.hh.se/index.php/JISIB/article/download/563/234>