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# DIGITAL TRANSFORMATION OF PUBLIC MANAGEMENT OF UKRAINE'S REGIONAL ECONOMY IN THE CONTEXT OF THE COVID-19 PANDEMIC: FOREIGN EXPERIENCE, UKRAINIAN REALITIES

## ABSTRACT

For Ukraine, the digital economy is of great importance and will allow it to take a worthy place among the developed economies of world countries. The authors of the article analyzed the issues of public management of the regional economy of Ukraine in the context of the COVID-19 pandemic and digitalization of the economy, and also studied the experience of foreign countries in resolving this issue. The aim of the study was to investigate the negative processes that accompany Ukraine's economy at the regional level in the context of the coronavirus pandemic and the global economy in this situation, as well as the potential of regional digital instruments to overcome and eliminate the harmful economic consequences of the COVID pandemic. The authors of the article paid special attention to the study of the negative impact of the coronavirus pandemic on the banking system, investment activities, and small business. Based on the study, the main mechanisms of economic development at the regional level with the introduction of digital economy technologies in the context of the COVID-19 pandemic, taking into account its negative consequences and preventing them in the future. The result of the study was the generalization of foreign experience in regulating public governance of the regional economy in the COVID-19 pandemic, taking into account Ukrainian realities, and providing proposals for developing mechanisms for digital economy development at the regional level, taking into account the world by finding practical solutions to overcome and eliminate the negative consequences of the COVID-19 pandemic.

**Keywords:** digital technologies, COVID-19 pandemic, regional economy, public administration, the world economy

**JEL Classification:** H10

## INTRODUCTION

Human civilization has entered the era of digitalization, and a new type of society is being formed. Obviously, the new information and communication technologies being introduced at the present stage have both their advantages and disadvantages. However, it is an undeniable fact that they are changing the life of every person, every state, and the world as a whole. New methods of digitalization penetrate into every area of society and help the entire civilizational development. The economy of any state is the basis of its functioning and the basis for the livelihood and well-being of its citizens. New opportunities in the digital economy contribute to the formation of an innovative economic system with different interconnections and the ratio of various factors. The economy of states is, on the one hand, a stable system, but, on the other hand, it is susceptible to external and internal influences of force majeure circumstances, such as natural disasters, pandemics, and armed conflicts. In the conditions of the shock for the economy of Ukraine and the world economy caused by the COVID-19 pandemic, exceptionally new approaches to the formation of strategies and justification of management decisions to transform the new threat into new economic opportunities and competitive advantages are effective. The role of the state in the development of digital technologies

and their application is one of the key issues in counteracting global risks such as the COVID-19 pandemic. It is also necessary to take into account the requirements for Ukraine under the conditions of the Eastern Partnership with the EU, namely the EU4Digital program: supporting the digital economy and society in the Eastern Partnership, which aims at expanding the EU single market and business assistance, development of the digital economy and society for the economic growth of our country, increase in jobs and improve people's lives (EU4DIGITAL initiative, 2020). It is this program that can become one of the key mechanisms that will help Ukraine in the shortest possible time to overcome the negative economic consequences caused by the COVID-19 pandemic. No less important role in this process should be played by the means of self-organization of society and its interaction with public authorities at the regional level, which is impossible to imagine without digital technology in the conditions of quarantine restrictions.

Given these circumstances, Ukraine should make every effort to develop the latest technologies in the field of digitalization of the economy at the regional level. One of the criteria of efficiency and stability of the state economy is its economic security, according to the above, it is advisable for large-scale application of digital technologies in public administration, which will adjust the actual projected development of safety measures in the field of economy in the event of negative consequences for it, such as the pandemic COVID-19.

## LITERATURE REVIEW

State security has several constituent elements, each of which has both its own function and ways of ensuring its fulfillment. Each of these elements, which either fully or not at all performs its function, entails an imbalance in the functioning of the entire state. It is for this reason that the full viability of all elements of security is necessary. "The basis of the national security of the country is to ensure its economic security as an independent state administrative function, requiring centralized public administration, the formation of which occurs in the context of economic globalization, which affects the national interests and trends of socio-economic development of the country" (Katkova *et al.*, 2022).

The economic consequences of the COVID-19 pandemic for Ukraine and other countries around the world depend on a set of factors, the interaction of which is difficult to predict. We are talking about the further development of the pandemic, the intensity and effectiveness of its containment measures, the scale of supply disruption, the effects of tighter conditions in financial markets, changes in cost structures, and changes in human behavior (for example, people's reluctance to visit malls or use public transportation). impact on the volatility of commodity prices (World Economic Outlook, 2020).

Just as theory uses practice in its work, so the solution of practical problems in this or that sphere of public life begins with the search for a theoretical basis for their solution. The search for practical solutions to overcome the harmful economic consequences of the COVID-19 pandemic, defining the role of public administration at the regional level in this process, and determining the effectiveness of the implementation of the digital economy in such conditions, have been reflected in the scientific works of domestic and foreign scientists. Yes, M.V. Fedyk studied the issues of identification and classification of macroeconomic effects of the coronavirus pandemic on the global economy. In particular, the scientist notes the need to use balanced decisions of state and local governments, which in close cooperation with leading experts in the relevant industry, the corporate sector, and the public should conduct an effective socio-economic policy, both during the implementation of quarantine restrictions and upon their termination (Fedyk, 2021). According to the scholar, the focus should be on identifying a list of macroeconomic effects of the pandemic on the global economy: inflation that depreciates human savings; falling oil prices; falling production; rising global unemployment rates; slowing global trade; disruption of the global transportation system; increased government spending on health financing and medical device manufacturing worldwide; recession in the EU and the US, which gives China the chance to more quickly reduce the disparate We agree with this point of view because the COVID-19 pandemic, with its unprecedented consequences for global and national transformations, has forced the countries of the world to reassess the new economic and financial challenges and their interconnectedness. The rapid spread of coronavirus disease around the world has both intensified international humanitarian cooperation and become a new factor in increased economic rivalry between states. As the risk of social development, national mechanisms of their implementation, directions, and formats of international cooperation in the world are being rethought, we can observe an increase in the national egoism of some states, exemplified by the U.S.

A wide range of issues of public management of the Ukrainian economy regarding the financial stability of its banking system, favorable targeting regime of internal and external stability of the national monetary unit, as well as assessment of the COVID-19 crisis aspects in the context of economic security, devoted to the scientific works of A. Kuznietsova. Thus, she explores accounting and auditing according to international standards as a function of management (Müller *et al.*, 2020). The role of these tools is to overcome the negative consequences of the coronavirus pandemic, as well as the development of preventive measures to prevent similar situations in the future is significant. It is necessary for stakeholders

to pay timely attention to the presence/absence of crisis action plans in enterprises, and the results of stress tests, to carry out ongoing analysis of the ability of enterprises to withstand dramatic external changes. This should also include an assessment of the measures contained in the plan, check the basic assumptions used in the financial model, correlate the proposed measures with practice, identify problems that may arise during their implementation, and conduct an ongoing audit of the proposed measures. Attention should also be paid to the readiness of the IT infrastructure, taking into account the transition to a remote mode of operation, as well as additional loads arising therefrom. A. Kuznietsova in her research also draws attention to the fact that the priority measures in Ukraine to protect the real economy and its development in the context of the pandemic is to focus primarily on counteracting the aspects of declining demand for steel products in the world due to the shutdown of rolling states and credit rating downgrades, as well as restoring opportunities for Ukrainian transport companies. to attract investment (Kuznyetsova *et al.*, 2021). It is obvious that the COVID-19 pandemic has a more negative impact on capital flows than previous financial crises caused by other causes. This can be explained by the fact that this crisis is more widespread, it covers, developing countries and advanced economies. It can also be attributed to a demand shock accompanied by a forced suspension of investment projects or an indefinite postponement of their implementation. And even though the pandemic has not caused a complete crisis in the financial sector, it may cause this phenomenon in the future if the companies affected by the COVID-19 pandemic are economically unable to meet their financial obligations.

Not only the changes and implementation of the latest digital technologies in the investment sphere but also in the banking and tax spheres are important in the COVID-19 pandemic. Thus, in her own scientific works, N.M. Pantelieieva substantiates the necessity and importance of digital transformation of tax administration in response to the challenges of deepening digitalization processes in all sectors of the economy and responding to epidemiological threats (Pantelieieva, 2020).

It is correct to note that the COVID-19 pandemic has played not only a negative but also a positive role on the economies of the states of the world. Thus, Xiaojuan Jiang in his work notes that in the post-pandemic world there are new products, new services, new forms of business, and new business models in different sectors, particularly in education and health care, they will be important factors that will affect economic growth and stimulate the circular economy (Jiang, 2021). According to the scientist, these positive changes are possible due to the implementation of digital technologies. N.V. Shyriaieva, who is scientifically interested in the issue of COVID-19 pandemic influence on the Ukrainian economy as one of the factors of the global financial crisis, is of the same opinion. The scientist sees new prospects for Ukraine after overcoming the consequences of the pandemic coronavirus disease, in particular, she notes, for the future, the successful completion of medical reform in Ukraine, the application of the latest approaches in higher educational institutions that train health workers, country leaders, multinational companies, small and medium businesses (Shyriaieva and Makarenko, 2020). V.V. Shcherba justifies the expediency of implementation and the importance of creating state institutions in Ukraine, the activities of which are aimed at the digital development of the state, because "digital technologies will stimulate the development of an open information society as one of the important factors in the development of democracy in the country, increasing productivity, economic growth and improving the quality of life of Ukrainian citizens" (Shcherba, 2020).

## AIMS AND OBJECTIVES

The purpose of the article is to analyze the prospects for transforming the sphere of public administration in Ukraine in conditions of digitalization of socio-economic relations, taking into account the risks and consequences of global pandemics and epidemics in the aspect of increasing the adaptive capacity of the economic system of our state.

According to the above goal, the task was to analyze the available works of Ukrainian and foreign scientists on the study of the digital economy, its effectiveness in the context of pandemic phenomena, ways to improve the public administration system when implementing digitalization technologies in the economy and to identify positive and negative effects on the economy of Ukraine. and countries around the world, caused by the pandemic coronavirus disease.

## METHODS

To achieve the goals and objectives of the study were used general scientific methods: analysis, synthesis, induction, deduction, abstraction, and concretization in the study of the impact of pandemic COVID-19 on the economy of Ukraine and other states of the world; positive and negative trends that they entail in the economies of the world and Ukraine; the concept and main directions of the digital economy in Ukraine with the reduction and offsetting the negative effects on it when emergencies occur; transformations occurring in the economy of Ukraine and other states of the world.

## RESULTS

The digital economy in a digital society, as well as in the context of pandemics and other emergencies that disrupt the coherent stable system of the state, including in the economic direction, plays an extremely important role at the present stage.

With the constant improvement of production processes and the development of digital technologies, economic entities (in particular, small businesses, the most affected by the negative impact on the economy of the COVID-19 pandemic) will not be able to solve the problems of the digital revolution on their own, because this phenomenon has a superpower, global scale.

Issues of economic security in the real sector of Ukraine's economy are becoming especially relevant, which is associated primarily with the negative economic impact on the economy of the consequences of the COVID-19 pandemic. The economic security of the country, region, industry, or individual enterprise involves the allocation of potential and real destructive factors of security, which have different forms of manifestation and can act as a possible threat to the state economy. And it is important to ensure complete economic security, as many factors that can affect its functionality and stability. In addition, thus, against the background of the growing intensity of digital technology use by businesses in particular, and in public administration in general, citizens are facing the problem of increasing risk in the field of digital security and protection of personal information. Many countries are responding to this challenge by developing appropriate national digital security strategies, but few have a national strategy to protect personal information.

Enterprises in Ukraine carry out business activities on the basis of maximum transparency and openness, which concerns their financial and tax reporting, in particular. The openness of economic entities creates vulnerability to the negative influence of malefactors on the national segment of the economy: the enterprises themselves, the regions, and the country as a whole. Given the overall digitalization, the individual becomes completely vulnerable to global platforms that gain full access to private information. This statement is also indisputable for those subjects who carry out the entrepreneurial activity in Ukraine.

Obviously, each emergency situation of force majeure nature: natural disasters, armed conflict, or the spread of a dangerous disease entails negative consequences for the economy of a particular state, as well as determines the areas for which additional costs of the state and its unscheduled funding to overcome and level out the harmful economic consequences of this phenomenon. We can generalize that the obvious general trend of the measures taken by the countries of the world to overcome the negative economic consequences caused by the COVID-19 pandemic is to take care of the population to provide for their vital needs, as well as of the enterprises in order to enable them to resume their work after the acute phase of the crisis is over.

Most countries have adopted special fiscal, monetary, and fiscal measures to meet the challenges of maintaining economic ties between workers and enterprises, and between lenders and borrowers. Broad-based liquidity support mechanisms to reduce financial stress should halt further demand contraction. In this sense, the measures taken by most banks around the world prevented asset prices from falling even further. Measures to establish credit swap lines of credit among major central banks may also be positively assessed. There is no doubt that advanced economies have a greater capacity to manage and issue reserve currencies, being objectively in a better position to recover from the COVID-19 pandemic.

Each country has chosen its own methods and tools to reduce and eliminate the negative effects in its economy caused by the COVID-19 pandemic, depending on the state of its economic situation before the pandemic period, the ability to accumulate additional funds, and financial assistance to that country by other states and intergovernmental organizations. Whatever methodology was chosen by a country to combat the economic effects of coronavirus disease, the greatest positive impact was on the economic consequences of the disease.

Consequently, in the COVID-19 pandemic, society is not confronted with a cyclical, sectoral, structural, monetary, or debt crisis. As early as April 2020, it is clear that elements and signs of these types of crises are present simultaneously. The coronavirus pandemic, apart from the challenges directly related to health care, has not caused new, political and social problems. Against the background of the pandemic, there was an actualization of problems accumulated over decades and formed in the economic organization of society.

The COVID-19 pandemic has certainly become a complex emergency for people and economies around the world: the spread of coronavirus disease disrupts global supply chains, causes instability in financial markets, shocks consumer demand, and causes a wide range of negative consequences, particularly in important areas such as transportation and tourism. However, it is seen that by analyzing, planning, and organizing systematic preventive measures to eliminate and overcome the negative effects on the economy, the consequences and damage from the COVID-19 pandemic can be

turned into concrete achievements in the economy. This can be done through the introduction of digital technologies in public administration at the regional level.

As for the study of the economic consequences of the COVID-19 pandemic for Ukraine, two groups of economic sectors can be distinguished: those severely affected by the COVID-19 pandemic (service sector, tourist industry) and those benefiting from self-isolation and quarantine restrictions (Internet trade sector). Representatives of the first group objectively cannot count on a quick and full recovery after the pandemic, while businesses operating in the sphere of the second group can take a larger share of customer spending than before the pandemic.

It is clear that the main task implemented by the banking system of Ukraine and other countries of the world during the pandemic COVID-19 was its adaptation to the changed needs of customers, as well as the transformation of services in accordance with new realities. The coronavirus pandemic was a kind of catalyst for banking services and customer service, and maximum use of innovative technologies. A flexible approach to customer requests and improvement of digital capabilities were the main factors of banks' competitive growth.

In addition to the banking system, the Ukrainian tax system was also significantly affected by the COVID-19 pandemic. The imposition of restrictions and quarantine measures led to the suspension of production processes of many enterprises and a decrease in production in Ukraine, in addition, through the COVID-19 pandemic a spiral of economic decline began to form: personal income fell and created negative changes in aggregate demand, the volume of income tax, VAT and personal income tax also began to decline, creating a state budget deficit in Ukraine.

Digital technologies can create a synergistic effect on the economy, leading to its growth. Another challenge for the economy at the regional level under the COVID-19 pandemic, and at the same time one of the most significant threats accompanying the introduction of digitalization in public administration, is the prospect of mass unemployment among low- and middle-skill occupations. A radical shrinkage of the middle class is possible, as such jobs will be automated, and a significant part of the active working-age population with a high level of qualifications will receive a significant reduction in income.

In addition, an immediate solution is needed to the problem of economic character for small business under the COVID-19 pandemic, which is an integral element of the market economy with a regional direction. Accordingly, it is relevant to analyze the reasons affecting the provision of an appropriate level of economic security in this sector, found when eliminating and overcoming the negative economic consequences of the coronavirus pandemic. Taking into account the development of digital technologies, the above reasons should include shadow economic activity, the need to implement security measures of economic activity of the small enterprise itself, low competence of entrepreneurs and specialists in the digital economy and its benefits.

## DISCUSSION

As the experience of foreign countries shows, undoubtedly, the advantage of the digitalization of the economy is the possibility of its rapid development through the use of modern digital technologies, but at the same time, there are increased requirements to ensure economic security, both the economic activity of the enterprise and the economy of the region as a whole. "Digital transformation occurs differently in case of public and private organizations: in case of public organizations (enterprises, institutes, etc.) there is no competition, because of the natural monopoly of public organizations: there are no real profit expectations, therefore the motivation for digital transformation is different" (Fehér & Szabó, 2018).

However, the spread of the COVID-19 pandemic around the world led to global changes in the social, political, and economic life of nations. The World Economic Forum at the beginning of 2020 placed infectious diseases in 10th place after the failure of climate negotiations, weapons of mass destruction, loss of biodiversity, the collapse of information infrastructure, extreme weather conditions, water crisis, natural disasters, and cyber-attacks. development and global citizenship, 2020). "A health security and capacity assessment study of 195 countries found that no country is fully prepared to deal with an epidemic or a pandemic. Humanity's global vulnerability to the social and economic consequences of infectious diseases is clearly growing" (Inaugural global health security index finds no country is prepared for epidemics or pandemics, 2020).

In such circumstances, the benefits of implementing digitalization technologies in the economy are undeniable. Digital technology has played a significant role in addressing and overcoming the negative effects of the coronavirus pandemic, "digital technology has been significant in the containment of COVID-19 and social life under the pandemic" (Jiang, 2021). The effectiveness of the digital economy in the face of pandemic phenomena is evidenced by the experience of foreign

countries. Thus, the nations of the world, faced with social and economic problems resulting from the COVID-19 pandemic, tried to overcome the problem in different ways. However, the only one for all the states of the world was a change in the economic landscape during the said crisis, namely state governments and central banks of the countries began to intervene more actively in the sphere of economy and life of citizens. For example, Italy applied restrictive measures, "these measures to prevent and control the spread of COVID-19 disease affected not only the global economic system, causing a drop in the Italian GDP (World Economic Outlook, 2020), but they also had a profound psychological impact on people, resulting in an increase of stress, depression, anxiety, and frustration" (Duan, & Zhu, 2020).

Spain has allocated additional funds from the state budget to overcome and eliminate the negative effects in the economy caused by the COVID-19 pandemic, "the update of the 2020 Stability Program that the Spanish Government sent to the European Commission at the end of April foresaw an increase in expenditure of almost €55.000m and a decrease in revenues of over 25.000 million during the current year. This scenario would bring our budget deficit to over 10% of GDP and put our stock of public debt above 115% – figures, which have subsequently been revised upward to 113% and 119%, respectively, in the recent budget plan for next year" (de la Fuente, 2021). Germany was not spared the negative economic consequences of the coronavirus pandemic, "for example, the government's order to temporarily close businesses, ban on trade fairs and cultural events, or closure of schools decreases the economy's productivity. According to the German Federal Statistical Office, the gross domestic product (GDP) in Germany fell by 4.8% in 2020 which is similar to the GDP decline of 4.9% in the Organization for Economic Co-operation and Development (OECD) area being the largest fall ever recorded since 1962" (König *et al.*, 2021).

Some countries, in particular the United States, Canada, and Australia found a solution to the problem of overcoming the negative effects of the COVID-19 pandemic through the provision of rent relief through regional governments. Similar was the management decision taken by the government of Ukraine, which concerned the dismissal of certain types of mandatory payments and the provision of additional benefits to business entities for the payment of local taxes and fees (land fees, single tax), which significantly affected the revenues of local budgets.

Also for many foreign countries and Ukraine, it should also be noted that in the conditions of the COVID-19 pandemic, such a method of preventive measures on negative phenomena in the economy for enterprises as planning has found its efficiency. It is obvious that planning is effective in most cases of business destabilization. "Planning generally consists of four complex complexes, i.e., in view of the fact that there are significant differences concerning the causes of business destabilization, which may be natural, man-made, or technological, and those resulting from the spread of a pandemic, businesses must take one or the other factor into account in planning their activities" (Müller *et al.*, 2021). This applies primarily to resilience planning, which involves the application of all of the above elements of it and is necessary to ensure that their activities of production, service delivery, and work performance in a COVID-19 pandemic are maintained.

As the practice of dealing with the economic consequences caused by the COVID-19 pandemic has shown, its speed and effectiveness depend on the economic condition of a particular state. While many countries, including Ukraine, which have a market at the stage of its formation, and do not have similar assets, face simultaneously the problem of finance and economy and therefore need the help of both bilateral creditors and international financial organizations. Therefore, "today, the monetary policy should adapt in accordance with changes in the macroeconomic environment in order to reduce the level of negative expectations of economic subjects and maintain price stability in the economy" (Kuznietsova and Klishchuk, 2017).

In addition, there is no doubt that in the COVID-19 pandemic "to ensure the financial stability of the banking system requires a clear organizational and economic mechanism, which should include: regulation; external and internal actors; objects (parameters of the influence of the National Bank on the financial stability of the banking system, the parameters of the functioning of state banks, the parameters of functioning of banks with foreign capital, the parameters of functioning of banks with domestic private capital, the flow of financial flows within the framework of the National Bank)". Also, "in modern conditions, the post-crisis period of the COVID-19 pandemic, the functioning of commercial banks deposit policy is effectively formed and plays an important component of successful banking, because deposit operations are the main group of bank liabilities, being the main source of active operations" (Melnychuk *et al.*, 2022).

Not only the Ukrainian banking system but also the tax system has been significantly affected by the economic consequences of the COVID-19 pandemic. Therefore, it is necessary "to conduct a flexible fiscal policy and promptly respond to the impact of crisis phenomena, including the latest epidemiological challenges, improve the system of tax supervision and compliance control to ensure fiscal stability and tax security" (Pantelieieva, 2020). In our opinion, this will contribute to the promotion of productive activity of Ukrainian enterprises, it will help to solve the key problem - to avoid the economic downturn in Ukraine. At the present stage, most of the budgets of the regions of Ukraine are unbalanced and deficit-ridden.

The economic impact of the COVID-19 pandemic has directly affected the lives of citizens of every nation in the world. Meanwhile, privacy risks of personal data complicate problems that already exist in the economic sphere, such as consumer concerns about online fraud, the mechanisms of redress resulting from it, and the quality of online products, which limits trust and may slow the growth of e-commerce in the “enterprise to consumer” mode. It is also necessary to consider the fact, що “by securing greater participation of citizens it is easier for a public sector organization to achieve long term goals and have a substantial impact, for example, value creation” (Mergel *et al.*, 2019), “public value creation as the ultimate aim of digital government initiatives” (Panagiotopoulos *et al.*, 2019). It is the introduction of new technologies that will positively contribute to the development of business, and public administration.

Special attention should be paid to the economic security of small and medium-sized enterprises operating in Ukraine in the context of the COVID-19 pandemic. The low level of economic security of small business entities jeopardizes both the implementation of the policy of modernization, the introduction of innovations, the attraction of investments into the Ukrainian economy, and the economic security of the state as a whole. Particularly dangerous, in our opinion, of these factors is the shadow economy, because “participants in the shadow sector of the economy are deprived of the right to social guarantees and benefits, protection of their rights” (Tiutiunyk *et al.*, 2021).

“The real sector in the conditions of COVID-19 requires the continuation of the initiated reforms and the acceleration of modernization shifts towards the full implementation of its investment, innovation, production, resource potential and strengthening on this basis the competitiveness of the economy, ensuring the socio-economic living conditions of the population that meet European standards” (Kuznyetsova *et al.*, 2021). The implementation of the proposed mechanisms will allow the creation in the regions of Ukraine of a model of intensive economic growth, which will create a sustainable, territorially balanced dynamically developing digital regional economy. The application of foreign experience will also be effective, “the state bodies of Ukraine in order to improve the mechanisms of public administration of the economy of Ukraine should use the experience of the UK in their activities, namely the active use of «big data» to determine the effectiveness of public spending by applying the practice of online surveys, in particular, based on the use of social networks” (Likarchuk *et al.*, 2022).

In addition, the modern set of digital technology solutions used to combat the effects of the COVID-19 pandemic in the economy will improve the level of all productive and economic activities, while the implementation of the latest digitalization technologies in public administration in the field of “helps to increase the efficiency of providing administrative services to citizens and reduce their cost and generally leads to savings in the state budget” (Shcherba, 2020). Obviously “digital transformation will certainly have the same prominent impact in terms of technological contribution, whether in the public or private sector, but highlighted in different ways in both sectors” (Ouajdouni *et al.*, 2020). Thus, it is worth recognizing that the need to develop a unified system of indicators similar to the European Scoreboard to measure imbalances on both macro and regional levels is long overdue in Ukraine (Vozniak *et al.*, 2022). A set of the proposed measures will allow in the short term in the regions, together with the enterprises carrying out their activities, to ensure a sufficiently high level and quality of life, reduce the problem of the shadow economy, increase the level of economic security and investment and innovation development throughout the territory of Ukraine.

## CONCLUSIONS

As with any phenomenon in the life of society, a pandemic cannot have exclusively negative consequences for states and their populations. Any progress of mankind, in one way or another, faces certain challenges, political, economic, and social in nature. The task of mankind at all times under such conditions has been to overcome the negative consequences of crisis phenomena, as well as to turn them into certain benefits for themselves. The specifics of the COVID-19 pandemic crisis suggest that some industries could benefit from it. E-commerce and food retailing provide small economic growth, which is enough to partially compensate for the losses.

Challenges of the pandemic to the economy of Ukraine should be perceived as mechanisms to encourage the government of our state to effectively reform it, including the use and implementation of information and communication technologies. Consequently, the shocks to the global economy and changes in the structure and volume of world trade caused by the COVID-19 pandemic introduced uncertainty into the development of the Ukrainian economy. However, on the other hand, the economic consequences of the COVID-19 pandemic showed the fact that the economic security of the state, in general terms, includes two elements: the ability to ensure a lower level of economic decline compared to the global economy and certain self-sufficiency, self-reproducibility of socio-economic processes at the regional level.

Formation and development of innovation systems and introduction of digital technologies in the sphere of public administration should be carried out at all levels, from the state to the level of regional economic development programs, it is

necessary to use the potential available in the regional subjects to overcome and prevent the negative economic consequences caused by the COVID-19 pandemic.

Regarding the choice of mechanisms and means of investment and innovation development and implementation of digital technologies in the sphere of public administration at the regional level, it is based on the allocation of key fundamental factors. According to them, given the conditions that affect the sphere of the economy of Ukraine in the pandemic COVID-19, the main mechanisms for the development of the regional sector of the digital economy can be offered: dissemination of information to the public about the culture of digital economy and its benefits through the media and the Internet; development of new research and development work on the commercialization of innovation in the economy to develop digital technologies; subsidizing the costs of development of regional innovation and technology support centres in the field of legal protection, economic security and use of the results of intellectual activity, human capital and patent research; attracting young professionals in scientific activities, as well as providing conditions for further activities in this area, implementation of a system of individual grants for young scientists, providing loans and venture financing of the implementation of own developments on digital technologies; formation of a regional system of information support (specialized means of interactive communication, development and support of innovative infrastructure for training specialists in the relevant area of activity, a multilevel system of staffing this activity) in order to develop digital technologies.

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## ЦИФРОВА ТРАНСФОРМАЦІЯ ПУБЛІЧНОГО УПРАВЛІННЯ РЕГІОНАЛЬНОЮ ЕКОНОМІКОЮ УКРАЇНИ В УМОВАХ ПАНДЕМІЇ COVID-19: ІНОЗЕМНИЙ ДОСВІД, УКРАЇНСЬКІ РЕАЛІЇ

Для України цифрова економіка має велике значення й дозволить їй зайняти гідне місце серед розвинутих економік світових держав. Авторами статті проаналізовано питання публічного управління регіональною економікою України в умовах пандемії COVID-19 і цифровізації економіки, а також досліджено досвід зарубіжних країн щодо врегулювання окресленого питання. Метою дослідження було дослідити ті негативні процеси, що супроводжують економіку України на регіональному рівні в умовах пандемії коронавірусної хвороби, і глобальну економіку при виході з цього становища, а також потенціал запровадження інструментів цифрової економіки на регіональному рівні з метою подолання й усунення шкідливих економічних наслідків пандемії COVID-19. Окрему увагу автори статті приділили дослідженню негативного впливу пандемії коронавірусної хвороби на банківську систему, інвестиційну діяльність і сферу малого підприємництва. На підставі проведеного дослідження запропоновано основні механізми розвитку

економіки на регіональному рівні із запровадженням технологій цифрової економіки в умовах пандемії COVID-19, з урахуванням її негативних наслідків і попередження їх на майбутнє. Результатом дослідження стали узагальнення іноземного досвіду щодо врегулювання публічного управління регіональною економікою в умовах пандемії COVID-19 з урахуванням українських реалій та надання пропозицій щодо розробки механізмів розвитку цифрової економіки на регіональному рівні з урахуванням тих надбань, які з'явилися в економічній системі України та світу завдяки пошуку практичних рішень щодо подолання й усунення негативних наслідків пандемії COVID-19.

**Ключові слова:** цифрові технології, пандемія COVID-19, регіональна економіка, публічне управління, світова економіка

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