

# BUSINESS TRANSFORMATIONS TRENDS IN MODERN GLOBAL ECONOMY

Olesia Diugowanets, Oksana Kurei

## Abstract

The article is devoted to the analysis of business transformation trends and approaches to management in the period of global changes, which in modern conditions make huge demands on the management system improvement. The trends of transformational changes in the direction of doing business and the most popular means and tools of management are outlined, considering the processes of globalization, internationalization, digitization and informatization characteristics of the development of the global economy. Particular attention is paid to the study of modern stages of business development: the period before COVID-19, the transition phase, and the post-era COVID-19; the impact of transformational changes on the global economy and the actual adaptability and business opportunities due to the COVID-19 crisis is considered. It is proved that enterprises and organizations should rapidly adapt to current market requirements to ensure efficiency, profitability, and competitiveness of business. It is revealed that the implementation of modern management trends is a complex process in Ukraine and is possible due to the introduction of new modern information technologies that will be associated with effective business change under the influence of Industry 4.0, adaptation to changing conditions and new market opportunities, constant monitoring of business trends their assessment and adequate response through the management leadership. The study revealed main trends in business transformation including: (1) global digital transformation, (2) the evolution of traditional workplaces and remote teams, (3) changing the configuration of supply chains, (4) expanding the scope of the online education, training, and retraining, (5) the e-commerce growth, (6) the outspread of videoconferencing and virtual events and (7) security and flexibility of modern business.

*Keywords:* digitalization, business transformation, Covid-19 pandemic, global economy, management.

# TRENDY TRANSFORMACJI BIZNESOWYCH W NOWOCZESNEJ GOSPODARCE GLOBALNEJ

## Streszczenie

Artykuł poświęcony jest analizie trendów i podejść do transformacji w zarządzaniu biznesem w dobie globalnych zmian, które we współczesnych warunkach czynią olbrzymie wymagania dotyczące doskonalenia systemu zarządzania. Trendy zmian transformacyjnych w kierunku prowadzenia biznesu oraz najpopularniejszych środków i narzędzi zarządzania zarysowane z uwzględnieniem procesów globalizacji, internacjonalizacji, digitalizacji oraz informatyzacji charakteryzują rozwój gospodarki światowej. Szczególnie zwraca się uwagę na badanie współczesnych etapów rozwoju biznesu: okres przed COVID-19, faza przejściowa i po erze COVID-19, wpływ transformacji na zmiany w gospodarce światowej oraz faktyczne możliwości adaptacyjne i biznesowe ze względu na kryzys COVID-19. Udowodniono, że przedsiębiorstwa i organizacje powinny szybko dostosować się do aktualnych wymagań rynku, aby zapewnić wydajność, rentowność i konkurencyjność biznesu. Okazuje się, że wdrożenie nowoczesnego zarządzania to złożony proces na Ukrainie i jest możliwy dzięki wprowadzeniu nowoczesnych technologii informacyjnych, które będą kojarzyć się z efektywną zmianą biznesową pod wpływem Przemysłu 4.0, adaptacja do zmieniających się warunków i nowego rynku możliwości, stały monitoring trendów biznesowych, ich ocena i adekwatność odpowiedzi za pośrednictwem kierownictwa. Badanie ujawniło główne trendy w transformacji biznesu, obejmujące: (1) globalną transformację cyfrową, (2) ewolucję tradycyjnego stanowiska pracy i zdalne zespoły, (3) zmianę konfiguracji łańcuchów dostaw, (4) rozszerzenie zakresu edukacji, szkoleń i przekwalifikowań online, (5) wzrost e-commerce (6) rozpowszechnienie wideokonferencji i wydarzeń wirtualnych oraz (7) bezpieczeństwo i elastyczność nowoczesnego biznesu.

*Słowa kluczowe:* cyfryzacja, transformacja biznesu, pandemia Covid-19, gospodarka światowa, zarządzanie.

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# 1. Introduction.

The current state of the global economy should be described as destabilized. The preconditions for this are a series of events such as the unprecedented Covid-19 pandemic, the impossibility of social interaction, strict quarantine restrictions, reduced activity in the areas of interstate cooperation, trade, production, and mobility of human, financial or economic resources (Kuzior et al. 2021). Thus, the basic characteristic of today's global market is permanent transformation. Although not only crisis phenomena should be considered decisive factors in the way of large-scale changes in the structure of the business environment. Modern alternative tools of business management, digital and information-and-communication technologies (hereinafter - ICT) in particular, which today have become the main means of management and implementation of management decisions, play an important role in conditions of remote connections (Kuzior and Lobanova, 2020).

Thus, modern business transformations at the stages of pandemic aggravation and postpandemic stabilization are associated with a change in management approaches, with the introduction of remote digital methods, models, tools to influence business, which through skillful practical application can restore growth as macroeconomic indicators in general, and the financial performance of individual businesses. Business transformations are quite dynamic. Therefore, a permanent analysis of their trends is important in the context of postcrisis economic recovery and the development of modern strategies and tactics for stabilizing the global economy.

The primary concern of this research is to analyze the global economy business transformations and trends with the emphasis on changes in approaches to managing economic processes in times of recent crises, which make huge demands on improving the management system. The specific objectives of the present study are: to characterize the essence and trends of business transformations of the global economic environment in the context of the ICT outspread and reduced social interaction; to analyze the dynamics

of economic and business development before the Covid-19 pandemic, at the stage of adaptation of business entities to quarantine restrictions and during the post-Covid-19 era; to identify the main barriers for the digital economic environment formation in terms of post-crisis stabilization.

## 2. Literature review.

The trends of modern business transformations, current concepts, approaches and tools of economic process management, the impact of digitalization and ICT on the structure and methods of business management, as well as the peculiarities of doing business in a pandemic are defined as main objects of research in many studies. Among them Appio, Frattini, Petruzzelli, & Neirotti, P. suggest an approach to the interplay between digital transformation and innovation management by providing a framework identifying three levels of analysis (i.e., macro, meso, and micro). This model is design to encourage further theoretical and empirical studies on how digital transformation affects ecosystems' structure and governance, how industries and firms compete and organize for innovation in a digitalized world, how the processes for developing new products and services change under the effect of digital technologies, and the implications of digital transformation on managing people and teams (Appio at al., 2021). Tripathi develops a conceptual framework to understand the determinants of digital transformation in the post-Covid-19 business world that are categorized based on human, organizational and technology-related factors (Tripathi, 2021). The object of the analysis in the work of Acs, Song, Szerb, Audretsch, & Komlosi is the emergence of digital technologies that has significantly reduced the economic costs of data - search, storage, computation, transmission - and enabled new economic activities. To further understanding of the Digital Platform Economy the researchers provide a conceptual framework consisting of digital technology infrastructure, multisided digital platforms, and platform-based ecosystems concepts (Acs at al., 2021). The use of digital technology, competencies, and robots influencing small business and entrepreneurs during and past Covid19 pandemic is discussed in the research of Belitski, Guenther, Kritikos, & Thurik (Belitski at al., 2021). The objective of the paper by Hai, Van, & Tuyet contributes to the interpretation and discovery of the perception of digital transformation, the positive aspects of the digital transformation process and achievements, the urgency of the digital transformation before the impact of the Covid-19 pandemic and challenges and limitations in the initiative of the contingent of civil servants and leaders in the digital transformation process (Hai at al., 2021). The work of Veretyuk & Pilinsky is devoted to the tendencies of managing the activity of economic entities in the conditions of active development of ICT

(Veretyuk, & Pilinskyy, 2016). Verhoef at al. identify three stages of digital transformation – digitization, digitalization, and digital transformation, positing that digital transformation requires specific organizational structures and bears consequences for the metrics used to calibrate performance (Verhoef at al., 2021). Almeida, Santos, & Monteiro analyse the impact of digital transformation processes in three business areas: labour and social relations, marketing and sales, and technology. In the study it is emphasized that cybersecurity and privacy will become two key elements that will support the integrated development of the Internet of Things technology solutions, artificial intelligence, big data, and robotics (Almeida at al., 2020). Amankwah-Amoah, Khan, Wood, & Gary Knight explain COVID-19 as an accelerator in fast-tracking the existing global trend towards embracing modern emerging technologies ushering in business strategies and a catalyst for the adoption and increasing use of digitalization in work organization and the office, alongside presenting foreseen and unforeseen opportunities, challenges, and costs – leading to negative and positive feedback loops (Amankwah-Amoah at al., 2021).

# 3. Methods.

The study of the issue was carried out using the method of comparison, which was used in the context of analyzing the entrepreneurship dynamics before the Covid-19 pandemic, during the crisis aggravation and in the post-crisis stabilization phase. The abstraction method, analysis and generalization were used to study key aspects and trends of digitalization as a factor contributing to business transformations. Tabular and graphical modeling were used to reflect the dynamics of business transformations in the EU and in Ukraine.

# 4. Results and Discussion.

The nowadays activity of economic entities is accompanied by a set of advantages and promising opportunities arising on a large scale with the spread of digital technologies and ICT. The digitalization of the global economy is a long process. After the Third (Digital) Industrial Revolution, the Fourth Industrial Revolution spread. However, not only the Digital Revolution became a basis for the transition to Industry 4.0, but the two previous revolutions have also contributed to the transition. Their benefits are summarized in Fig. 1.

The main trends characterizing the modern global economy in terms of Industry 4.0 are:

- global digitalization – the spread of ICT and digital technologies in the economy, i.e. balancing the real and virtual components of the economic space.

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- return of branches and companies previously moved by technology-leading countries to other countries out of a desire to attract cheap labor, back to highly developed countries. The main prerequisite for such events is the development of remote control of business processes and management automation, which reduces the need for additional staff and significantly reduces labor costs. The purpose of such transformations is not only cost optimization, but also reorientation of financial resources to new competencies.
- opportunity to create joint innovations, update forms and models of business process organization; ICTs change supply / demand, affect business opportunities and shape new demands (Veretyuk, & Pilinskyy, 2016).

| P  | The First<br>Industrial<br>Revolution  | Mechanization of business processes using water and steam in<br>production; application of machines and new technological processes<br>in some industries.   |  |  |  |
|--|--|--|--|--|--|
|  | The Second<br>Industrial<br>Revolution | Globalization due to the invention of electricity; globalization has led<br>to the intensification of business processes, as well as created a basis<br>for high mobility of people and business ideas through the spread of<br>utilities, railways, and telegraph networks. |  |  |  |
|  | The Third<br>Industrial<br>Revolution  | Provided the ability to computerize business processes, as well as the use of mobile phones and the Internet to optimize management.   |  |  |  |
|  |  |  |  |  |  |
| The Fourth Industrial Revolution – Industry 4.0<br>All relevant information availability in real time due to the combination of all components |  |  |  |  |  |

All relevant information availability in real time due to the combination of all components of the value chain. Industry 4.0 is formed based on cyberphysical production systems, a combination of real and virtual worlds.

**Figure 1.** Advantages and opportunities for modern business, obtained during the industrial revolutions

Source: Geissbauer at al., 2014; Industry 4.0. Challenges and solutions for the digital transformation and use of exponential technologies, 2014

New opportunities for business transformation are created by digital tools and particularly by artificial intelligence. On the one hand, their inevitable use in almost all spheres of life will mean rising unemployment (Kuzior, 2021), and on the other hand, it will encourage

businesses to invest in retraining (Tsymbal, 2019). Although until recently the widespread use of the artificial intelligence was considered a long-term affair, 2020-2021 proved certain events, unrelated to the economic sphere at first glance, can significantly accelerate the digital transformation of the business environment and move this trend towards the not-so-distant future (Tkachenko et al, 2019; Kuzior et al., 2019; Kwilinski and Kuzior, 2020).

Digitization of various areas of the economic activity is an Industry 4.0 defining feature, the formation of which is also marked by the development and spread of smart products, production optimization, automation, and new business models. As a result, the Internet of Things for the consumer begins to be actively supplemented by the Internet of Things at the industrial level – the Industrial Internet, which, in turn, helps to reduce and optimize supply chains, the rapid exchange of information and knowledge (Syhyda, 2018). However, the development of Industry 4.0 is also accompanied by new risks.

Further digital transformation of business will result in the emergence of new security challenges – cybersecurity. We have already had the opportunity to observe or suffer some manifestations of threats to business in this regard in the form of a so-called «Petya» virus («Nyetya»), which managed to significantly damage the digital infrastructure of businesses in 2017. Over time, after a detailed analysis, it became clear that the main task of Petya / Nyetya was the mass decommissioning of computer systems, ie – DoS attack (Denial of Service) (Sysoiev, & Zimarin, 2017).

The Deloitte study claims that there are several paradoxes in companies efforts to pursue the course of digital transformation that accompanies the existence of business in Industry 4.0 (Coteeler at al., 2019). Such paradoxes include: the paradox of strategy, the paradox of the supply chain, the paradox of talent and the paradox of innovation. According to researchers, the paradox of strategy is formed due to the discrepancy between the recognition of digital transformation as the most important strategic goal of the organization and awareness of the role of digital transformation in increasing profitability and overall business efficiency. The paradox of the supply chain is manifested in the opportunity lack of the decision-making regarding investment in the digital transformation of managers supervising real day-to-day business operations. While recognizing the search, training, and retention of relevant talents as the highest organizational and cultural challenge, leaders are confident in having the talent to support digital transformation, which is a talent paradox. Finally, the paradox of innovation arises because digital transformations are used primarily to increase productivity and to achieve operational goals of doing the same things better, rather than for real transformations.

The 2020 pandemic has made companies and managers realize that no matter how many opportunities for effective business organization modern digital models provide, people will always be at the center of each of them. That is, Industry 4.0 will need an urgent move towards the implementation of the principles of humanization of labor. At the same time, digital technologies will remain only a tool, not a central link in the process of business transformation and management. According to the Human Capital Advisory Services director at Deloitte Ukraine Boichenko O.: «We need rapid and profound change: moving away from the narrow perception of human capital challenges and understanding the true role of humans at work, redefining of traditional approaches to employee management, finding and consolidating new practices that take into account the needs of employees, their life circumstances, health, purpose, and capabilities» (Deloitte, 2020).

As a result, in the conditions of Industry 4.0 the dynamic digital transformations changing the traditional models of business process management are taking place. Digitalization can influence the efficiency of business entities, increase their level of investment attractiveness by performing such tasks as: (1) increasing the investment flow in technical and technological re-equipment, as well as the industry reconstruction, especially for those industries that are strategically important in the context of restoring economic growth, (2) change in the sectoral structure of capital investments – active financial support of industries the activities of which are associated with the intensification of scientific and technical work reducing the production resource intensity, (3) balancing the investment cycle (Shvydanenko at al., 2019).

Regarding digital transformations and updating of business process organization models, it is important to maintain permanence, which will help to achieve the company's priorities and future goals. That is, digitalization is not a temporary process aimed at short-term optimization of business processes. It is a modern concept of business environment that takes into account the variability of global market conditions and adapts to changes through rapid response using ICT.

It should be borne in mind that modern business transformations are not only the introduction of innovations in management, but also a radical restructuring of business processes, the formation of modern IT infrastructure, optimization of interaction between management and executive staff, which will encourage employee participation in generating new ideas and proposals needed for business development and optimization of global economic processes. Any transformations should be based on the creation of a stable business environment using modern methods and models for forecasting future changes. However, the 2019-2020 events turned out as unprecedented for the global economy, that was not ready for a total restriction of social interaction, a complete abandonment of traditional management tools and the transition to models of remote control of business processes.

showed that the existing digital potential of Industry 4.0 is difficult to apply in governance, and that the global economic crisis, which has significantly destructured the economic environment and shaken the macroeconomic stability of most countries, was inevitable. Undoubtedly, digitalization and modern ICT have an impact on the business environment of each country, but the drastic change of traditional models and tools of business management has become a today`s challenge.

The business activity decline can be considered one of the modern transformations, as the crisis has forced to change management tools and models radically, to move to remote management mechanisms, of accumulation and processing of information, analysis of virtual data in real time. However, losses were inevitable due to quarantine restrictions, and the impossibility of interstate trade led to deteriorating macroeconomic indicators, which exacerbated the crisis within the autonomous national economies and the rapid decline in financial performance of business entities, as evidenced by Table. 1.

| Indicator   | 2018     | 2019     | ll quarter<br>2020 | 2020     | ll quarter<br>2021 |
|---|----------|----------|--------------------|----------|--------------------|
| Economy and finance   |          |          |                    |          |                    |
| GDP, billion euros  | 13 531,5 | 14 007,8 | 6 417,5            | 13 381,3 | 6 913,9            |
| Exports of goods and services, billion euros                | 6 667,2  | 6 915,4  | 2 995,0            | 6 251,8  | 3 437,7            |
| Imports of goods and services, billion euros                | 6 139,8  | 6 428,1  | 2 815,7            | 5 743,6  | 3 128,9            |
| Industry, construction, and trade                           |          |          |                    |          |                    |
| Production volume index in the industrial sector, %, incl.: | 106,5    | 105,7    | 85,6               | 97,3     | 104,9              |
| change compared to the same period last year, %             | 1,2      | -0,8     | -19,5              | -7,9     | 22,5               |
| Turnover index in the industrial sector, %, incl.:          | 110,8    | 111,4    | 87,4               | 100,6    | 115,4              |
| change compared to the same period last year, %             | 3,6      | 0,5      | -23,0              | -9,7     | 32,0               |
| Construction volume index, %, incl.:                        | 108,4    | 111,0    | 97,6               | 105,5    | 111,4              |
| change compared to the same period last year, %             | 2,6      | 2,4      | -12,7              | -5,0     | 14,1               |
| Sales volume index in wholesale and retail trade, %, incl.: | 107,3    | 110,1    | 103,1              | 109,5    | 115,3              |
| change compared to the same period last year, %             | 2,1      | 2,6      | -6,3               | -0,5     | 11,8               |
| Business registration index, %                              | 109,9    | 116,8    | 82,8               | 105,6    | 126,7              |
| Bankruptcy Index, %   | 89,6     | 91,0     | 60,6               | 70,1     | 73,2               |

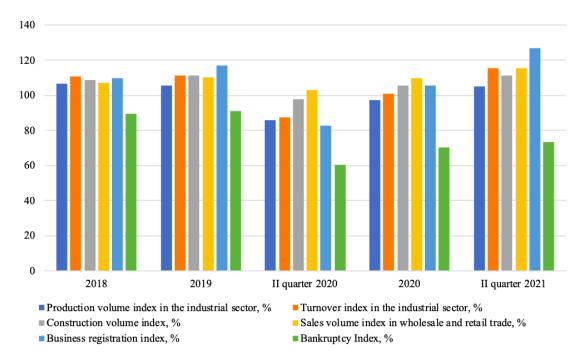
**Table 1.** Indicators of the EU economies and entrepreneurship before, during the Covid-19pandemic and at the stage of post-crisis stabilization

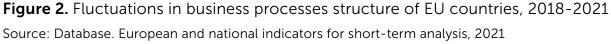
Source: Database. European and national indicators for short-term analysis, 2021

Table 1 shows a decrease in the effectiveness of every economic sector of the modern global space as a result of the Covid-19 pandemic. The analysis was conducted using averages calculated using macroeconomic indicators of each EU Member State. The trends are as follows:

- the GDP level in EU countries during the aggravation of the crisis (2020) decreased by 626.5 billion euros (by 4.5%) compared to the same period previous year,
- the exports of goods and services volume decreased by 663.6 billion euros (9.6%), and the imports volume by 684.5 billion euros (10.6%) compared to the same period previous year.

Undoubtedly, business conditions have deteriorated, access to production, economic and financial resources has declined, and quality and productivity have fallen sharply under the influence of the Covid-19 mass disease. The business sector was not able to respond quickly to such trends, and the achieved level of digitalization was not enough to curb the destructive trends and the immediate transition to the remote business doing without losses. This led to a decrease in sales and turnover, affected the level of businesses bankruptcy in 2020, especially in SME sector. The business transformation trends caused by the Covid-19 pandemic are shown in Fig. 2.





There has been a change in the global market conditions, as well as the destabilization of the EU member states economies, including those among the highly developed. Ukraine's economy, primarily the domestic business sector, has suffered significant losses too (see Table 2).

Listed in table. 2 data indicate:

- maintaining the upward dynamics of GDP in 2020 the indicator increased by 214.7 billion UAH (5.4%) compared to the corresponding period of the previous year,
- exports of goods and services reduction by 1.6 billion US dollars (3.5%) and imports of goods and services reduction by 7.1 billion US dollars (12.8%) in 2020 compared to the same period the previous year.

**Table 2.** Indicators of the Ukrainian economy and entrepreneurship before, during the Covid-19 pandemic and at the stage of post-crisis stabilization

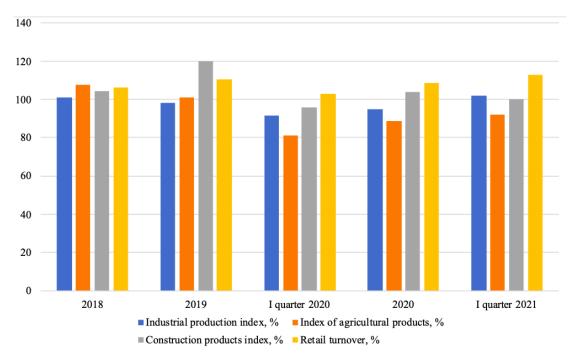
| Indicator                                 | 2018    | 2019    | l quarter<br>2020 | 2020    | l quarter<br>2021 |
|---|---------|---------|-------------------|---------|-------------------|
| Economy and finance                       |         |         |                   |         |                   |
| GDP, billion UAH                          | 3 560,3 | 3 977,2 | 854,1             | 4 191,9 | 1 008,6           |
| Exports of goods and services, US dollars | 43,2    | 45,9    | 19,5              | 44,3    | 19,6              |
| Imports of goods and services, US dollars | 52,1    | 55,3    | 20,1              | 48,2    | 20,1              |
| Industry, construction, and trade         |         |         |                   |         |                   |
| Industrial production index, %            | 101,1   | 98,2    | 91,7              | 94,8    | 102,1             |
| Index of agricultural products, %         | 107,8   | 101,1   | 81,3              | 88,5    | 91,8              |
| Industrial producer price index, %        | 117,4   | 104,1   | 95,1              | 98,4    | 128,4             |
| Construction products index, %            | 104,4   | 120,0   | 95,7              | 104,0   | 100,2             |
| Retail trade turnover, fact, billion UAH  | 928,6   | 1 096,7 | 528,8             | 1 210,8 | 655,4             |
| Retail turnover, %                        | 106,1   | 110,5   | 103,0             | 108,4   | 113,0             |

Source: Osnovni pokaznyky sotsialno-ekonomichnoho rozvytku Ukrainy, 2021

Business transformation trends in Ukraine caused by the Covid 19 pandemic are shown in Fig. 3.

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**Figure 3.** Fluctuations in business processes structure of Ukraine, 2018-2021 Source: Osnovni pokaznyky sotsialno-ekonomichnoho rozvytku Ukrainy, 2021

Thereby, it was proposed switching to remote methods of business process management to curb the negative dynamics and stabilize the financial condition of economic entities. In the context of Industry 4.0, the change of the traditional business model seemed quite real, as there is already a strong theoretical and methodological basis, significant digital potential, and the necessary infrastructure, especially in highly developed economies. An important task for business entities has become a development of a radically new strategy and tactics that would take into account the use of digital and ICT tools for managing future business processes and approaches to determining markets, appropriate to carry out further activities, priority industries in terms of quarantine, and problems needing to be solved firstly for the clients, partners, investors in the conditions of social interaction restrictions. Thus, there was a serious digitalization of businesses in various directions during 2020 (see Table 3).

**Table 3.** Directions of entrepreneurship digitalization in the context of business process

 management stabilization

| Direction                                 | Characteristics and support tools  |  |  |
|---|--|--|--|
| Personnel interaction                     | Creating a system of communication and interaction of personnel<br>through digital communication systems using Viber, FB Messenger,<br>Telegram, WhatsApp, Zoom, Skype, Trello etc.  |  |  |
| Interaction with customers                | Creating a multi-channel communication system with customers using call centers, messengers, social network, and Internet site   |  |  |
| Partnership and collaboration             | Development of communication infrastructure with partners, using an API-system or an integrated interaction of partner companies.  |  |  |
| Work with information and analytical data | Collection, accumulation, sorting, analysis, and evaluation of indicators for management decisions using 1C, CRM-system and ERP-system   |  |  |
| HR strategy and culture                   | Employees preparation for the introduction of digital technologies<br>by conducting internal and external training, forming an appropriate<br>corporate culture for rapid adaptation to permanent change and<br>dynamic digitalization of business processes |  |  |
| Business value management                 | Creating value added by disseminating virtual customer service and<br>maintaining continuous communication and support. Support tools are<br>call centers, messengers (Viber, FB Messenger, Telegram, WhatsApp),<br>social network, and Internet site        |  |  |

Source: Lihonenko, & Domanskyi, 2020

There was a dynamic introduction of modern digital tools in business management processes, the main trends of which in the EU member states are reflected in Table 4.

| Table 4. Application o | of ICT in EU I | businesses, 2018-2020 |
|------------------------|----------------|-----------------------|
|------------------------|----------------|-----------------------|

| Indicator  |      | Year |      |  |
|--|------|------|------|--|
|  |      | 2019 | 2020 |  |
| Enterprises with an e-commerce turnover of not less than 1%                          | 17,0 | 17,0 | 18,0 |  |
| The total sales turnover in e-commerce, %  | 17,0 | 18,0 | 20,0 |  |
| Personnel working remotely through the use of the Internet                           | 53,0 | 54,0 | 56,0 |  |
| Businesses providing suitable for automated processing electronic invoices, %        | 25,0 | -    | 32,0 |  |
| Businesses that have purchased management software for interaction with customers, % | 7,0  | -    | 10,0 |  |
| Businesses that have purchased computers to run their own software, %                | 5,0  | -    | 9,0  |  |
| Businesses that have purchased financial and accounting software, %                  | 9,0  | -    | 16,0 |  |

Source: Database. European and national indicators for short-term analysis, 2021

The digital transformation of Ukrainian businesses is taking place in accordance with the financial capabilities of the state and the available digital potential. Indicators of digitalization of Ukrainian enterprises are given in Table 5.

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| Indicator   | Year      |           |  |
|---|-----------|-----------|--|
| Indicator   | 2018      | 2019      |  |
| Number of enterprises purchasing goods / services via the Internet, units                                       | 9 583,0   | 10 169,0  |  |
| Number of enterprises receiving orders for goods / services via the Internet, units                             | 2 476,0   | 2 440,0   |  |
| Volume of sold products (goods, services) received from the trade through websites or applications, UAH million | 228 035,6 | 292 731,9 |  |
| Number of enterprises that received invoices in electronic form suitable for automated processing, units        | 24 506,0  | 27 097,0  |  |
| Number of enterprises that provided invoices in electronic form suitable for automated processing, units        | 19 615,0  | 19 930,0  |  |

## **Table 5.** Application of ICT in Ukrainian businesses, 2018-2019

Source: Vykorystannia informatsiino-komunikatsiinykh tekhnolohii na pidpryiemstvakh u 2018-2019 rokakh, 2020

The number of companies using computers in the organization of business processes increased significantly during 2018-2019. Indicators of e-commerce, the use of ICT tools by enterprises to provide and receive invoices also have an upward dynamic. However, there exist certain barriers that hinder modern business transformations and the dynamics of digitalization of the economy. These include (Brechko, 2020):

- 1) state barriers, in particular economic uncertainty of the country or lack of standards for the use of digital technologies in business process management,
- 2) competitive barriers, in particular the need for additional resources for digitalization by suppliers and consumers who adhere to the "traditional model of business", or the commitment of the final consumer to the customary products/services,
- 3) technological barriers, in particular the shortage of digital solutions considering the specifics of the business,
- 4) resource barriers, in particular the high cost of digital technology projects, as well as significant operating costs on systems using digital technologies,
- 5) human capital barriers, in particular insufficient awareness of the ICT and digital technologies benefits, low digital literacy and competence of the employees, incorrect definition of the digital transformations' essence and their impact on the business model and strategy of management decisions making,
- 6) organizational barriers, in particular the complexity of integrating modern technologies into the existing IT landscape and the current infrastructure of the enterprise.

Modern managers, as well as public authorities, understand that digitalization is a dynamic and continuous process, although it is accompanied by a set of risks and barriers for both the managing system and the managed system. In such circumstances, it is advisable to

accept global digital transformations and continue to update traditional governance models to the requirements of the digital society. Without the use of digital tools and ICT, businesses will no longer be able to compete successfully, although some managers still take modern technology very pragmatically, choosing only those management tools which absence could make doing business impossible.

In today's world, business is driven not by capital but by new ideas. The role of a successful leader is the ability to change and adapt quickly, considering the trends of not only local but also global markets. The leader also creates conditions under which the company's employees are able and not afraid to generate new ideas, initiate and support changes (Tsymbal, 2019). Successful leaders do not resist change, but generate change based on market trends and the support of like-minded people. The ability to take risks as the main characteristic of an entrepreneur acquires special significance: foremost risk acquires positive connotations as a source of probable opportunities, and only then - as a probability of failure. This study demonstrates that resulting in the development of digital technologies and ICT, the transition to Industry 4.0 and the restriction of social interaction in the context of combating the effects of the Covid-19 pandemic, the main trends in business transformation have become:

- 1. Global digital transformation: 2020 has shown that today's businesses do not feel confident in the market due to the pressure of external threats. To diversify risks, it is necessary to use the tools of the latest digital technologies. Failure to do so can destroy the entire company's business model.
- 2. The evolution of traditional workplaces and remote teams: although quarantine restrictions are already sufficiently relaxed in most countries around the world, a significant proportion of companies prefer to work remotely. According to a survey by the Deloitte Business Association, 40.0% of American Chamber of Commerce companies in Ukraine plan to stay in this format. In turn, the global research company Gartner received the following data: 90.0% of respondents would like to work part-time, 65.0% to have a more flexible work schedule (8 svitovykh biznes-tendentsii pislia Covid-19, n.d.). Based on this data, it can be argued that the next step in the context of business transformations will be to upgrade the HR infrastructure needed for seamless personnel management, maintaining productivity, and improving the efficiency of the enterprise.
- 3. Changing the configuration of supply chains: supply chains have become more integrated with technology platforms, which has a positive effect not only in the context of maintaining business continuity, but also opens new methods of communication with customers, inventory management, logistics, capital, production, and distribution.

Systems allowing to quickly plan and develop the tactics of the business entity, to conduct end-to-end analysis and respond in real time could ensure the continuity of supply chains.

- 4. Expanding the scope of the online education, training and retraining in the context of managing the professional competences: a reduction in time and financial costs for team training was achieved by automating processes. The training management system could ensure remote training of specialists and following their deadlines, viewing, and receiving the detailed information on their achievements.
- 5. The e-commerce growth: according to the EVO group, the share of online orders was 9.0% of all purchases in Ukraine in 2020. At the same time, the total amount of money spent on online purchases at marketplaces reached 107.0 billion UAH. This figure is 41.0% higher comparing to the corresponding year 2019. It is projected that this trend will continue, and the rate of e-commerce will continue to grow.
- 6. The outspread of videoconferencing and virtual events: as social interaction has been severely limited since the beginning of the pandemic, all communication between personnel has been provided by digital communication tools. Employees were forced to work on the level of their digital literacy and competence, master digital tools, various online platforms, and services to timely perform functional duties and stay employed.
- 7. Security and flexibility of modern business: with any trends and transformations in the structure of the global economy, personal security stays a priority for each of the workers, as the whole world is in a phase of post-pandemic stabilization and exit from the crisis. Adaptation to the newly created realities of starting a business is a complex, multicomponent, and long process, and therefore to preserve human potential and productivity it is necessary to comply with the requirements of the renewed business environment.

# 5. Conclusions.

The study revealed that today's changes in the global economy are related to the development of digital technologies, ICT, the transition of the world community to Industry 4.0 and quarantine restrictions in the context of combating the effects of the Covid-19 pandemic. Trends in business transformations indicate the destabilization of business development in both EU member states and Ukraine. However, such variability is justified by the unprecedented limitations of social interaction, cooperation between countries, trade, and other business processes. These also led to the formulating main trends in business transformation including: (1) global digital transformation, (2) the evolution of traditional workplaces and remote teams, (3) changing the configuration of supply chains, (4) expanding

the scope of the online education, training, and retraining, (5) the e-commerce growth, (6) the outspread of videoconferencing and virtual events and (7) security and flexibility of modern business. Such trends could shape economic environment continuously influencing business-thinking and decision-making. Therefore, the post-pandemic stabilization, which is underway in 2021, makes extremely important to accept the new market requirements and opportunities that have emerged in the context of digital transformations on the way to adapt to modern economic conditions.

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