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THE INFLUENCE OF THE COVID-19 PANDEMIC ON CHANGING THE BEHAVIOR OF ECONOMIC ENTITIES*

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Abstract. The relevance of the research topic is due to the widespread impact of the pandemic on human life and the socio-economic development of the territories. The main factor in changing the behavioral patterns of economic entities in a pandemic was quarantine and the need for social distancing as the main preventive measure to combat the spread of the disease. As a result of distancing, there has been a decline in economic activity, disruption of value chains, rising unemployment, mass bankruptcy of enterprises, as well as changes in the way business structures and the behavior of economic entities. The article aims to identify changes in the behavior of economic entities in the context of the COVID-19 pandemic and their impact on the economy. In the process of research, the set of general methods of scientific cognition (system analysis, logical generalization, analogy, comparative analysis) was used, which provided the possibility of realization of the integrity of scientific research. As a result of the study, the main trends in the behavior of economic entities were identified and analyzed. The following tendencies are revealed: digitalization (transition from social to digital interaction in work and educational processes, circles of close people for the preservation of social distance); changing the model of mobility (reducing the use of public transport, reducing attendance at hotels and restaurants, the transition to distance employment and education, reducing tourism and business travel); changing consumer buying habits (development of e-commerce, "conscious" consumption, support for local producers); infodemic (dissemination of misinformation, the anti-vaccination movement, increase in the number of information messages on conspiracy theories); increased attention to one's health, hygiene and healthy lifestyle (wearing masks, using sanitizers, healthy eating); changes in interpersonal behavior (increase in the number of divorces, increase in cases of domestic violence, restriction of personal contacts, increase in gender inequality). The research conducted in the article allows us to state that the tendencies of changing the behavior of economic entities are potential catalysts for changes in the economy as a whole. Therefore, the question of the exit of the majority of economic entities from the crisis lies in the plane of adaptation and reorientation of their life to the new "post-COVID" conditions.

Key words: COVID-19 pandemic, behavioral economics, digitalization, mobility, consumer buying habits, infodemic.

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1. Introduction

The COVID-19 pandemic was characterized by the widespread impact on all aspects of human life. Today, more than a year after its beginning, it can be stated that there is no hope for a speedy end to the coronavirus crisis and a return to a “proven” way of life. Among the main reasons is the change in the behavior of economic entities due to the influence of several factors (epidemiological, social, economic, psychological). At the same time, in the context of overcoming the consequences of the coronavirus crisis and adapting to new conditions, important questions arise, the answers to which will contribute to a better understanding of the situation. What are the main changes in the behavior of economic entities caused by the pandemic? Will these changes continue after overcoming it? Which of the acquired habits will develop in the short term, and which will move into the category of norms of behavior? What impact will a change in behavioral patterns have on the economy?

The article aims to identify changes in the behavior of economic entities in the context of the COVID-19 pandemic and their impact on the economy.

Analyzing the change in the behavior of economic entities, first of all it is necessary to highlight the scientifically sound patterns of its formation and transformation, in particular, to pay attention to the fact that:

- firstly, the behavior of economic entities in different areas differs significantly, due to the influence of geographical, historical factors, culture, and features of society;
- secondly, changes in the behavior and habits of individuals are associated with the impact of changes in their living environment. Scientific studies show that it takes 18 to 254 days (average 66 days) to form a new habit in different circumstances (Lally, Jaarsveld, Potts, Wardle, 2010);
- thirdly, people are more likely to adopt habits that do not significantly change their way of life or help to maintain it in certain conditions (Puttaiah, Raverkar, Avramakis, 2020).

The main factors in changing the behavioral patterns of economic entities in a pandemic were quarantine and the need for social distancing as the main preventive measure to combat the spread of the disease. Although the direct consequences of distancing were a decline in economic activity, disruption of value chains, rising unemployment, and mass bankruptcy of enterprises, it also led to

a change in the way businesses operate and the behavior of economic entities. In particular, we can highlight the following trends:

- digitalization;
- change in the model of mobility (reduction of the use of public transport, reduction of attendance of hotel and restaurant establishments, transition to distance employment and education, reduction of tourist and business trips);
- change of consumer buying habits (development of e-commerce, “conscious” consumption, support of local producers);
- infodemic (dissemination of misinformation, anti-vaccination movement, increase in the number of information messages on conspiracy theories);
- increased attention to one's health, hygiene, and healthy lifestyle (wearing masks, using sanitizers, healthy eating);
- changes in interpersonal behavior (increase in the number of divorces, increase in cases of domestic violence, restriction of personal contacts, gender inequality).

2. Digitalization

Although the pandemic has been a verdict for most countries and sectors of the economy, it has had a positive impact on the development of IT. Since 2020, the IT sector is one of the main export industries in Ukraine. In addition, the pandemic has encouraged the transition from social to digital interaction in work and study, as well as in family and close people to maintain social distance. The success and rapid development of digitalization in the context of the pandemic as a new norm of behavior can be explained by the fact that it helps to preserve the inherent way of life in conditions of uncertainty and limitations.

Although such a transition is a “lifeline” for the economy, it is also characterized by negative consequences – increasing social inequality, reduced psychological stability due to the erasure of barriers between personal and working hours, social autism.

The concept of “social autism” was introduced into scientific circulation by D. Goleman, defining it as one of the unforeseen consequences of the invasion of technology into human life. The author notes that the development of social autism will have negative consequences for the economy and society because it is accompanied by certain changes in behavior. “Modern social and virtual disunity has created an anomaly in human life that

we perceive as the norm today. Such a division dampens the empathy without which altruism stumbles” (Goleman, 2020). In interpersonal interaction, a person develops cognitive empathy and there is an impulse to participate in solving the problems of the interlocutor. Instead, digitalization proposes the replacement of direct interaction by a variety of nominal communication in isolation, which, while stimulating empathy, does not necessitate participation.

It is quite difficult to trace the impact of the transition to digital communication on the development of our country's economy in the context of the crisis because it will manifest itself in the long run. However, given the significant lag of Ukraine from developed countries, in the introduction of technology, in these countries the consequences of social autism are already visible.

For example, in the United States in the 1990s there was a significant reduction in the membership of citizens in various types of organizations that held regular meetings; instead, there was an increase in clubs whose activities were based on basic digitalization (in particular, communication via e-mail). In addition, in 2003, the most popular housing in the real estate market in this country was a single apartment. Such trends, as noted by the famous American scientist R. Putnam (Putnam, 2000), indicate a significant reduction in social capital, which will have consequences for the economy, political and social development of local communities (because community development is based on participation), its members, regions and countries in general.

For Ukraine, social autism can result in a negative impact on the development of social capital as an integrating factor of social behavior of individuals (Bourdieu, 2002) and be accompanied by a decrease in social activity, low trust in institutions, increasing alienation in Ukrainian society. In the future, this phenomenon may become a factor hindering the development of TGs formed as a result of decentralization and administrative-territorial reform and negatively affect the system of local self-government.

Decreased psychological resilience in a pandemic is a fairly predictable trend (Keshky, Basyouni, Sabban, 2020). But the impact of digitalization on this process is indirect, which does not allow it to be identified. Although it was observed during the evidentiary period, during the crisis, and the transition to distance employment and training,

this impact was exacerbated by the removal of barriers between personal and working time.

Moreover, women were affected the most, as the transition to distance work was simultaneous with the online education of children in schools and, in some cases, the closure of preschools to quarantine, which required the activation of women in housework and care. This is a particularly pressing issue for our country, as almost 70% of families in Ukraine have a wife as their main homemaker (Cedos, 2020). Thus, digitalization has an indirect negative impact on the growth of gender inequality in a pandemic.

On the other hand, the productivity of distance employment and online learning is significantly complicated by the fact that 54% of the population of Ukraine (excluding dormitory residents) live in overcrowded housing. Moreover, 2/3 of the inhabitants of overcrowded housing are residents of large cities (Cedos, 2020).

The increase in social inequality as a consequence of digitalization is due to the influence of two factors.

1. The level of digital literacy of the population – the analysis of digital literacy of the population of Ukraine (Figure 1) allows us to state that 53.0% of Ukrainians have digital skills at the “below baseline” level. This indicates that in the context of the crisis, many of them have either experienced significant difficulties in transitioning to distance employment or training or have not been able to take advantage of this opportunity.

2. Internet access – analysis of network access (Figure 2) shows that the vast majority of the population (89.9%) can connect to the Internet. However, not everyone can take advantage of this opportunity due to the lack of appropriate technical means (computers, tablets, laptops). Moreover, there is significant inequality between residents of different areas: if in the cities-regional centers, such equipment is owned by the vast majority of the population – 84.8%, in rural and urban TCs – 56.3%, namely, every second cannot ensure proper organization of work and educational process remotely.

These data allow us to conclude that, even though digitalization has helped solve some problems caused by the pandemic, it can not be a “panacea” for economic entities in Ukraine due to inaccessibility to much of society. Therefore, the use of digital tools should take into account the level of digital literacy and access to the Internet.

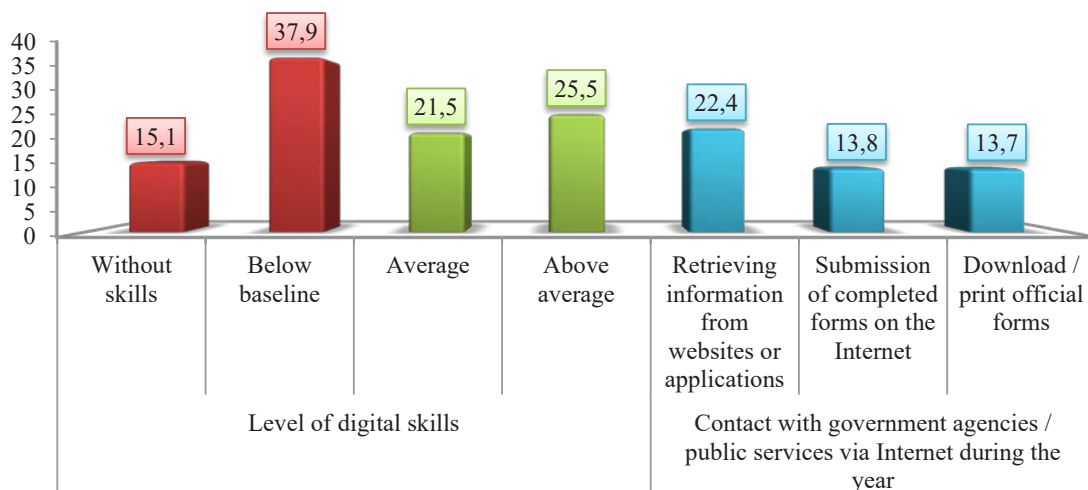


Figure 1. The level of digital literacy of the population of Ukraine, 2019, %

Source: (Ministry of Digital Transformation of Ukraine, 2019)¹

For example, a tool to support individual entrepreneurs and employees affected by the pandemic is the provision of one-time financial assistance by the state of 8 thousand UAH. It was planned that more than 1 million Ukrainians would receive these funds, but only 455 thousand people took advantage of this opportunity (45.5% of the planned number of people).

Considering some factors (*firstly*, the low level of digital literacy of the population; *secondly*, the low percentage of contact of citizens with government agencies/public services via the Internet (Figure 1); *thirdly*, the presence of a bank account in

only 63% of the population; *fourthly*, the download of the application “Diia” by about million users), it is the complexity of access and has become a major deterrent (“last mile”) when receiving funds.

3. Changing the mobility model

The change in the mobility model is a natural reaction to quarantine and social distancing, which manifested itself in the following trends: the transition to remote employment and education; reducing the use of public transport; reducing the attendance of hotel and restaurant

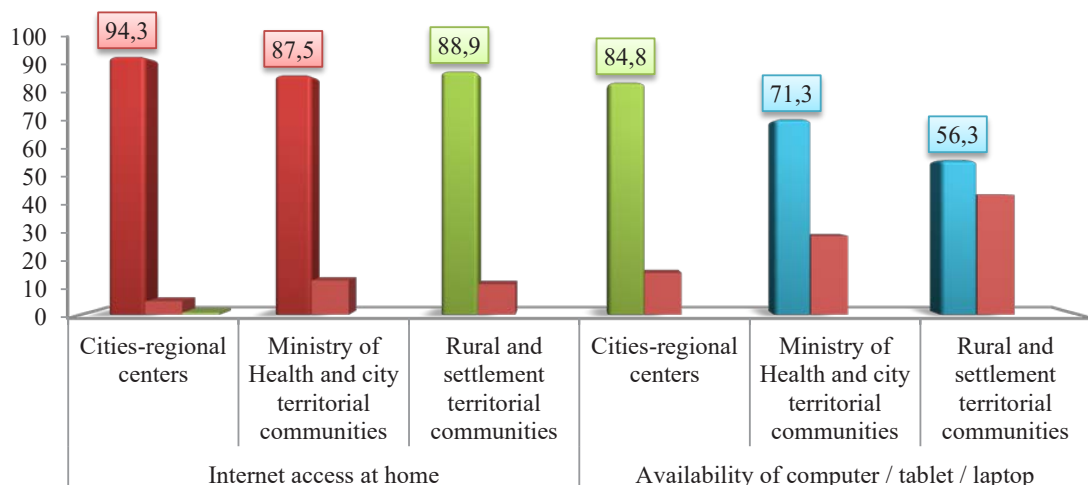


Figure 2. Access to the Internet at home and the availability of appropriate equipment among the population of Ukraine in terms of type of TC, 2018, 2019, %

Source: (State Statistics Service of Ukraine, 2018)

¹ Ministry of Digital Transformation of Ukraine (2019). *Tsyfrova hramotnist' naseleennyi Ukrainy* [Digital literacy of the population of Ukraine]. Available at: https://osvita.diia.gov.ua/uploads/0/585-cifrova_gramotnist_naseleenna_ukraini_2019_compressed.pdf

facilities; reduction of tourist and business trips, etc.

The main factor that led to the change in the model of mobility of economic entities in a pandemic is fear. As the risk of COVID-19 contamination increases, the use of “shared mobility” vehicles is expected to decrease and the use of private vehicles to be switched. In this case, the change in behavior is confirmed by changes in the fuel market in Ukraine – an increase in sales of fuel at gas stations in March-May 2020 by 10% or 90 thousand tons compared to the same period in 2019 (Ukrainian energy, Online map of the energy sector of Ukraine, 2020).

Traditionally, the behavior of the subject when choosing a mode of transport is determined by two factors – cost and convenience. Instead, in the context of a pandemic, priorities have changed, and the need to reduce the risk of infection (caused by fear of a pandemic) has come to the fore (McKinsey & Company, 2020). This has led to a significant advantage of mobility options that guarantee the possibility of distance – the use of private cars, bicycles, electric scooters, hiking, and even the possibility of joint “micro-mobility”.

However, it is not necessary to talk about the long-term change in population behavior when choosing a mobility model, as evidenced by international (McKinsey & Company, 2020) and domestic studies. In this regard, S. Taylor, author of the book “Psychology of Pandemics”, notes that long-term homophobic tendencies will remain only in a small number of people who have developed obsessions (obsessive-compulsive disorder), while most acquired habits will fade over time (Taylor S., 2019).

The key conclusion of the pandemic’s impact on mobility is that even a significant increase in the number of people working from home will not have a significant impact on the demand for mobility in the long run.

However, in our opinion, the pandemic, by causing a “shift” in priorities, allows local governments and public authorities to use behavioral tools and financial incentives to consolidate its benefits and translate certain acquired habits into the category of behavioral norms. Unfortunately, such tools are not used in Ukraine, but in developed countries, they are actively implemented at different levels and in different areas over the past year, in particular:

– *at the state level*: financial incentives for the

purchase of vehicles with low carbon emissions (China, Germany (tax benefits for the purchase of an electric car), Italy (the state pays 500 euros for the purchase of a bicycle));

– *at the TCs’ level*: changes in priorities in the design of lanes, footpaths, road infrastructure with an emphasis on footpaths and cycle paths (Milan, Paris, Brussels, Seattle, Montreal, Berlin) (McKinsey & Company, 2020).

4. Changing consumer buying habits

One of the consequences of the transformation of the model of mobility and social distancing is a change in consumer buying habits, which manifested itself in the following trends:

– development of e-commerce and the transition of monetary transactions to digital format – according to research, in 2020 the volume of e-shopping in Ukraine has increased by 41% compared to the previous year, and the number of online payments for goods and services has doubled;

– “conscious” consuming – the coronavirus crisis has significantly reduced the purchasing power of the population and exacerbated the need for people to get the maximum benefit for their money. This resulted in a decrease in the number of impulsive and costly purchases. Another behavioral effect is the growing support of local retailers, which is not surprising because, in crisis conditions, the individual feels more acutely belonging to a certain social group and community (Accenture, 2020; Puttaiah, Raverkar, Avramakis, 2020);

– shock to loyalty – in a pandemic that disrupted supply chains, consumers were forced to change their behavior when shopping – to try new brands in the absence of those they usually preferred. Thus, there was a decrease in the role of the brand in the choice of goods and services due to the weakening of cognitive loyalty to the brand.

The above are not all the trends of changing buying habits and the needs of economic entities in a pandemic. The change of priorities took place in almost all sectors of the economy and among representatives of various social groups.

One of the illustrative examples is the transformations in the office real estate market, which are observed during 2020–2021 in Ukraine and around the world and are associated with an increasing vacancy (in Ukraine the figure was 13% in 2020 compared to 4% in 2018), reducing

supply and demand for office space (Bench, 2020; Nastych, 2021).

Most experts (Nastych, 2021; Kenningstein, 2020) believe that the changes that have taken place in the office real estate market are irreversible, and highlight the following trends in market reformatting:

In Ukraine:

- popularization of the format of organization of office space flexible office space and hot desk (offices where there are no workplaces assigned to employees, which allows flexible organization of interior space) and a combination of formats of the fixed workplace (for employees who, for various reasons, work in the office regularly) and flexible office space (for employees who visit the office only when needed). In the context of the crisis, the combination of formats is especially relevant because it allows companies to optimize leased premises and minimize rental costs;
- growth in demand for office space, which does not require additional investments for the organization of space, and on flexible terms (transfer of the principle of “all-inclusive” from the hotel service to the real estate market);
- updating the issue of security in the process of finding office space for rent;

in European countries:

- tendencies to decentralization of offices and formation of coworking spaces in sleeping areas. This format of office space is relevant for large companies and provides for the location of headquarters in the city center and the formation of small coworking spaces in residential areas with the distribution of employees, depending on their place of residence;
- popularization of the office format as a multifaceted creative space with conditions created for employees for work, leisure, communication, and creativity.

5. Infodemic

Infodemic is a phenomenon that has been observed in the world many times during the spread of epidemics and the development of crises. The WHO interprets infodemic as “an excessive amount of information (sometimes accurate and sometimes not) that makes it difficult to find reliable sources and instructions” (World Health Organization, 2020). Its impact on the behavior of economic agents in a pandemic is associated with the spread of manipulative and false information,

the perception of which among the population has led to the development of the anti-vaccination movement and an increase in information about conspiracy theories.

According to UNDP and UNICEF, in March–November 2020, more than 30 million messages on COVID-19 were detected in Ukraine on social media (online media, blogs, forums, social networks, and messengers), of which 250 thousand were disinformation (Unicef Ukraine, 2021).

Infodemic as a phenomenon has become threatening with the development of social networks and other media, which is due to the behavioral patterns of people’s perception of information. Social psychologist J. Hyde emphasizes this aspect, noting that our beliefs are formed not from the obtained data and logical generalizations, but through intuitive thinking in the context of self-identification with a particular group. This idea is developed by cognitive neurologist T. Sharot, emphasizing that people mostly trust and accept information in the social group with which they associate, while being biased towards information from the outside (Jaggi, 2021). These scientific generalizations allow us to understand the role of social networks in the dissemination of information of various kinds: social networks are formed in such a way that a person receives information messages primarily from those he or she recognizes as members of his or her group, and thus it automatically defines dissemination of information messages among the population.

The following conclusions were drawn from a UNDP and UNICEF study: 1) the spread of misinformation about the wearing of masks and the effectiveness of testing and vaccination, as well as conspiracy theories about the origin of COVID-19; 2) the negative impact of misinformation on people’s willingness to comply with established rules in the field of public health (wearing masks, social distancing, restriction of mobility, etc.) has been proven, which can result in increased disease levels and is threatening to public health.

6. Conclusions

Thus, in the context of the study, the following conclusions can be drawn:

- firstly, due to the impact of pandemic, quarantine, and social distancing as its main consequences, there are changes in the behavior of economic

entities, which are manifested in the following processes: digitalization; changes in the mobility model; changing consumer buying habits; infodemic; increasing attention to one's health, hygiene and healthy lifestyle; changes in interpersonal behavior;
– secondly, trends in the behavior of economic entities are potential catalysts for change in the

economy as a whole. Therefore, the question of the exit of most economic entities from the crisis lies in the plane of adaptation and reorientation of life to new conditions. This raises an important question: are economic operators able to rationally assess and take advantage of the risks and opportunities that open up to them?

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