



COVID-19 Pandemic Influence on Global Business Environment



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Abstract

The aim of the study lies in assessing the transformations of the global business environment due to the spread of the pandemic. The academic paper has determined that COVID-19 has affected all countries of the world and has caused significant economic reductions, increasing inequality, awareness of the importance of technology to support business. Support and development of business in new conditions will depend on the ability to adapt to a new market with new consumer needs. A new market environment has been shaped by the movement restrictions imposed by almost all countries to provide restrain the disease from spreading. The new environment has stimulated businesses to find efficient working conditions and motivate employees, realizing the potential of new ways of working. Due to the growing uncertainty of the global business environment, companies should be more flexible and plan their activities, consumer needs, expand activities within domestic markets. Reorientation and redirection of production will become new ways of adapting under the conditions of limited financial resources. Along with this, the issue arises concerning the social consequences of the pandemic and the global change in habits and needs of the population.

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1 Introduction

It is difficult to accurately quantify the impact of the pandemic due to the spread of the coronavirus, due to the different specifics of industries and the business environment depending on the country and social-economic system. According to the viewpoint of [Baker et al. \(2020\)](#), the difficulty of assessing the effects of the crisis lies in the dynamics of the virus spreading. For instance, in Malaysia, the spread of the virus has shaken almost all businesses, including mass e-commerce ([Hasanat et al., 2020](#)). Nevertheless, some similarities and distinctive features in the consequences of the crisis can be traced. The technology and information and communication sectors continued to produce and supply products and services, while producers of physical products, aviation, tourism, and hospitality had to minimize work processes and operations due to government restrictions.

Generally, when studying markets, they are assumed to be static, which is a logical conclusion as they tend to change slowly. However, if the COVID-19 outbreak has shown us anything, it is that markets are dynamic ([Jaworski et al., 2000](#)) and can move fast. In addition, the market is not just a firm; it is a network of subjects (that is, firms, clients, public organizations) acting according to a set of norms. These systems are sometimes called dynamic ecosystems that exist to create values ([Vargo & Lusch, 2011](#)). The COVID-19 outbreak provides a unique opportunity to explore how markets are created and how they disappear in a very limited period ([Haleem et al., 2020](#); [Novoa, 2021](#)).

The purpose of the academic paper lies in assessing the transformations of the global business environment due to the spread of the pandemic. The present research focuses on the transformations of the global business environment in the aspects as follows:

- Awareness of the importance of business digitalization and flexibility as benefits for rapid adaptation to new conditions, flexibility to accelerate the introduction of digital technologies;
- Using the potential of domestic markets due to the disruption of global supply chains, especially in developing countries with the commodity-based economy model.

Literature review

[Bartik et al. \(2020\)](#), based on a survey of 5 800 US small businesses, examines the financial resilience and influence of the pandemic on businesses during the first weeks of the spread of COVID-19. The following tendencies have been identified, namely: mass layoffs, business closures due to the expected duration of the crisis. The main problems of closure are as follows: the significant monthly costs of small businesses for 10 thousand dollars, which would allow operating for two weeks; bureaucracy and compliance issues in receiving state aid. [Fairlie \(2020\)](#), has revealed that the number of active small business owners in the United States has decreased by 3,3 million or 22% in the period from February till April 2020. [Hasanat et al. \(2020\)](#), have found that in Malaysia the maximum number of economic sectors was closed due to significant volumes of exports of products from China, which were canceled due to border closures. [Fabeil et al. \(2020\)](#), have assessed the influence of the pandemic on Malaysian micro-enterprises, which were forced to close due to reduced income, the closure of ancillary sectors, including retail and transport ones. [Flynn et al. \(2020\)](#), have also revealed the profound negative impact of the pandemic on the UK economy: business sectors such as arts, entertainment and recreation, accommodation, and food services were most seriously affected.

[Meyer et al. \(2021\)](#), conducted an assessment of enterprises' response to the crisis from the beginning of the spread of the COVID-19 virus to August 2020. The authors have found disruptions in the supply chain, due to which short-term reductions in product selling prices, wage cuts were expected.

[Baker et al. \(2020\)](#), forecast significant growth in economic uncertainty over the past few weeks, based on indicators of stock market volatility, economic uncertainty based on newspaper analysis, and subjective uncertainty estimated following on from company surveys. Quantitative assessment of scientists predicts a reduction in real US GDP by almost 11% as of the 4th quarter of 2020 with a 90% confidence interval to a reduction of almost by 20%.

[Seetharaman \(2020\)](#), has identified the following main consequences of the crisis due to the pandemic, namely: the potential for digitalization of companies, the combination of information intensity with products, services of companies; firms' flexibility is a key advantage in adapting to new business environments. [Rakshit & Paul \(2020\)](#), have highlighted the change of the global business environment on the example of India, including the use of the potential of developing economies. The spread of the pandemic has undermined China's credibility as a key producer of products, changing the direction of investment flows to other countries, including India.

The review of the pandemic's consequences by [Craven et al. \(2020\)](#), estimates the size of the losses in 40% of the world economy of the most affected countries. The most probable scenarios of economic influence assume as follows: 1) reduction of world GDP growth by 0,3-0,7% by 2020; 2) slowdown in world economic growth by 1,8% - 2,2% instead of 2,5% projected at the beginning of 2020.

Based on an analysis of 13 articles, [Donthu & Gustafsson \(2020\)](#), have identified the effects of the pandemic on various industrial sectors (for instance, tourism, retail, higher education), features of changing consumer and business behavior, ethical issues, aspects related to employees and leadership. Consumer behavior during COVID-19 has been characterized by the following main features, namely: moving to the countryside, bulk grocery shopping, hoarding of essential goods, increased internet use, increased violence, obtaining new skills, etc. Markets during the pandemic have been characterized by the closure of companies, financial burden, especially on tourism, hospitality, aviation, the closure of companies in the automotive, freight, and electronic industries. At the same time, during the crisis, companies, operating on the Internet, providing food delivery services, online stores, online education, as well as companies, solving the problems of remote employment, continued to develop.

2 Materials and Methods

The database of the Eurostat database and the European Centre for Disease Prevention and Control has been used to conduct the research. In particular, the COVID-19 situation update database for the EU / EEA, as well as data on the daily number of new reported COVID-19 cases and deaths by EU / EEA country have been used for analyzing disease incidence in 2021 in different European countries. The data on country response measures to COVID-19 have been used to analyze the response measures and their impact on the economies of EU countries.

3 Results and Discussions

3.1 Results

Awareness of the importance of business digitalization. Accelerating the introduction of digital technologies

The intensity of digital readiness of enterprises in the EU differs significantly depending on the level of economic development. The estimated correlation between the digital intensity indicator and the GDP growth rate in 2019-2020 (Figure 1) is -0,02687081, indicating that there is no connection between the digital readiness of companies and economic development during the crisis. According to the data reflected in Figure 1, it is impossible to accurately track the dependence of a high level of digitalization and the absence of a fall in GDP in the country during the spread of the pandemic. For instance, in Romania, Bulgaria, Hungary, Greece, Latvia, Poland, Serbia, Slovakia, France, Montenegro, the digital intensity was more than 50%, indicating a low level of digitalization of enterprises in these countries during the pandemic ([Whitelaw et al., 2020](#)). At the same time, the rate of decline in GDP in these countries during 2020 was different: 1) the highest rates of

decline were observed in Montenegro (15%), France (6%), Greece (10%), Hungary (6%); 2) the lowest rates of GDP decline were in Bulgaria (0,37%), Romania (2%), Poland (2%), Slovakia (2%). In Serbia, GDP grew by 2% in 2020.

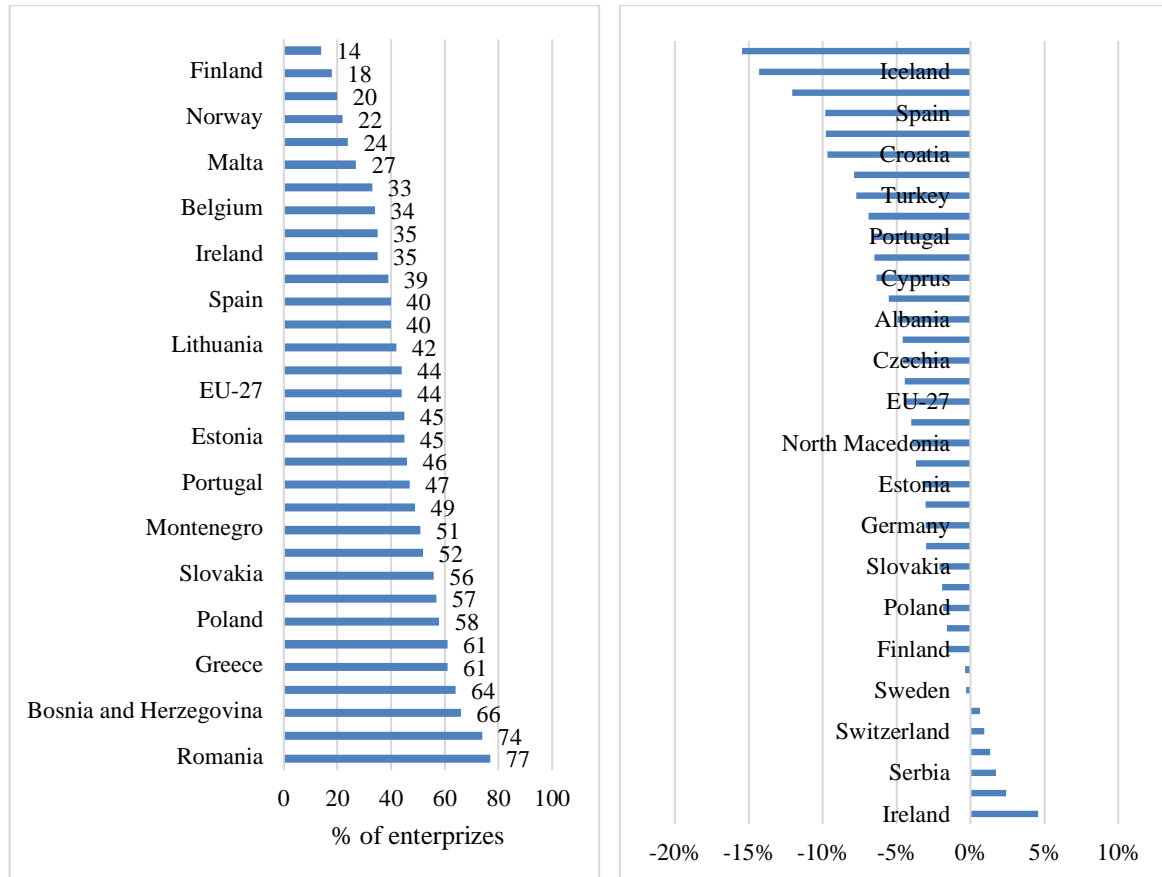


Figure 1. Digital Intensity and GDP Growth in 2021

a) Digital Intensity in EU-27 (share of enterprises with very low digital intensity index (DII version 3), 2021

b) GDP growth 2020-2019, %

Source: the Eurostat (2022a)

In countries where the digital intensity was within 30-50% (Croatia, Portugal, the Czech Republic, Estonia, Luxembourg, Slovenia, Lithuania, Germany, Spain, Italy, Austria, Ireland, Belgium, Cyprus), different rates of GDP decline were also observed. GDP fell sharply in Croatia (-10%), Portugal (-7%), Spain (-10%), Italy (-8%), the Czech Republic (-5%) and Austria (-5%). In Lithuania, GDP grew by 1%, and in Ireland - by as much as 5%. In Malta, the Netherlands, Norway, Denmark, Finland, Sweden, the digital intensity was 14-27%, and GDP growth rates during 2020 were also different: in Malta -7%, the Netherlands - -2%, Norway - -12%, Denmark - 1%, Finland - -2%, and Sweden - -0,3%.

By 2020, enterprises have increased the percentage of persons employed having remote access to their e-mail system (Figure 2). In addition, the share of enterprises in the EU, the employees of which use computers and the Internet, has increased significantly: from 56% in 2020 to 69% in 2021 (54% in 2012). In particular, the share increased most of all in Germany (from 59% in 2020 to 100% in 2021), Croatia (by 10% in 2020-2021), Estonia (by 8%), Latvia (by 8%), Lithuania (by 12%), Hungary (by 11%), Finland (by 11%), etc. (Eurostat, 2022d). The average growth rate of the share was 1,5% in 2012-2018, in general, growing by 9% on average in EU-27. The share of companies using websites has not changed: in 2019 the figure was 77% in EU-27, in 2020 - 77%, in 2021 - 78%. By the way, there are also practically no changes

in the use of social media by enterprises for Internet marketing: in 2019, the share of EU-27 companies using this method of marketing was 10%, while in 2021 - 11%. Only in some countries, this figure increase: in Greece (by 4%), Spain (by 7%), Malta (by 4%), Austria (by 3%), Slovenia (by 3%), and Sweden (by 2%).

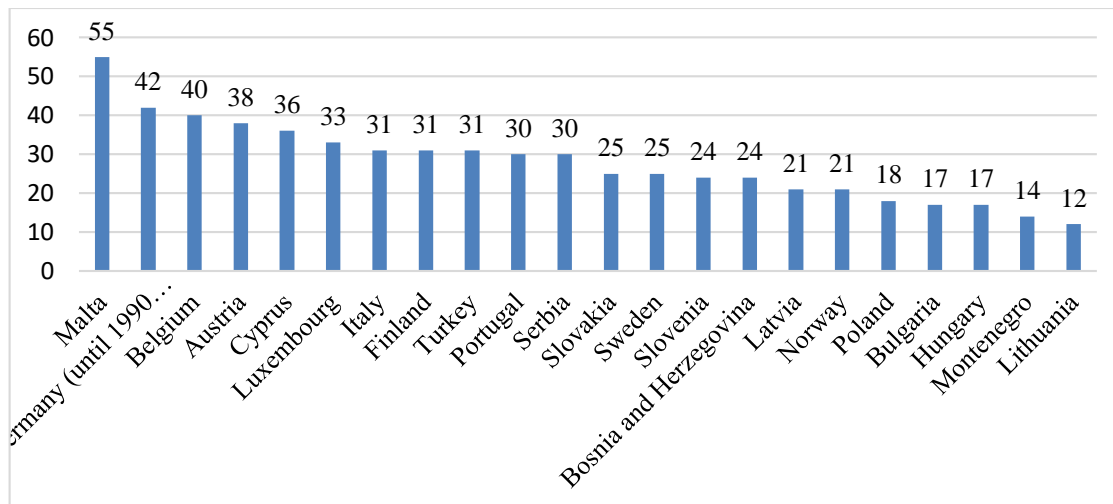


Figure 2. COVID-19 Impact on ICT usage: share of enterprises with the percentage of persons employed having remote access to its e-mail system in EU-27, %

Source: the Eurostat (2022b)

Integration with customers/suppliers, supply chain management is also important indicators of the dynamics of technology used by enterprises to maintain stable incomes. Thus, the share of EU-27 enterprises integrating technologies for customer/supplier relationship management was 25% in 2019 and 32% in 2020, respectively. The figure increased due to some slight growth in Belgium, Germany, Denmark, Cyprus, and Latvia within 2-3%. While in the UK, Norway, Sweden the figure increased by 9%. This means that not all companies in a crisis were ready to find a solution through the integration of technology and remote ways of communication with customers, suppliers.

Table 1
Enterprises with E-commerce sales in EU-27 in 2012-2021, share, %

GEO/TIME	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Average, 2021/2012
EU-27, all enterprises, without financial sector	16	16	17	19	20	20	19	20	21	22	19
Maximum	38	34	34	32	30	33	35	39	39	40	35
Minimum	5	6	7	4	7	8	8	11	6	12	7
Standard Deviation	9	7	7	7	7	7	7	8	8	8	8
Small	14	14	15	17	18	18	17	18	19	20	17
Medium	23	24	25	27	28	29	28	27	29	29	27

The conducted analysis of the digitalization of enterprises in EU-27 indicates that the awareness of the importance of business digitalization has occurred in the context of the importance of ensuring workplace automation. From among the analyzed indicators of ICT use by enterprises, only the share of enterprises in the EU, the employees of which used computers and the Internet, has increased. It is this component of

informatization and computerization that has provided the flexibility to quickly adaption to new conditions. However, the pandemic has not created the preconditions for enterprises for accelerating the adoption of digital technologies, possibly due to financial constraints.

Using the potential of domestic markets

According to the analysis of the growth and decline of GDP within the EU, only a few countries have experienced growth or a slight economic downturn (Ireland - 5%, Luxembourg - 2%, Serbia - 2%, Lithuania - 1%, Switzerland - 1%, Denmark - 1%, Sweden - 0,3%, Bulgaria - 0,37%, Finland - 2%, the Netherlands - 2%, Poland - 2%, Romania - 2%, Slovakia - 2%, Bosnia and Herzegovina - 3%, Germany - 3%, Slovenia - 3% Estonia - 3%). In other countries, the decline was more than 4%, and in some - more than 8% (Turkey - 8%, Italy - 8%, Croatia -10%, Greece - 10%, Spain - 10%, Norway - 12%, Iceland - 14%, Montenegro -15%). It can be assumed that the level of morbidity and the ability of the health care system to overcome the negative effects of the virus have determined policy decisions on restrictions in countries, which in turn have affected domestic markets and economic growth. Europe was the largest center for the spread of the virus after the USA with 71 503 614 cases (30% of cases were recorded in European countries in the period from March 21 till December 14, 2020). In 2021, 51 708 035 cases were recorded in Europe for the period from March 1 till December 23 (28% less than in 2020).

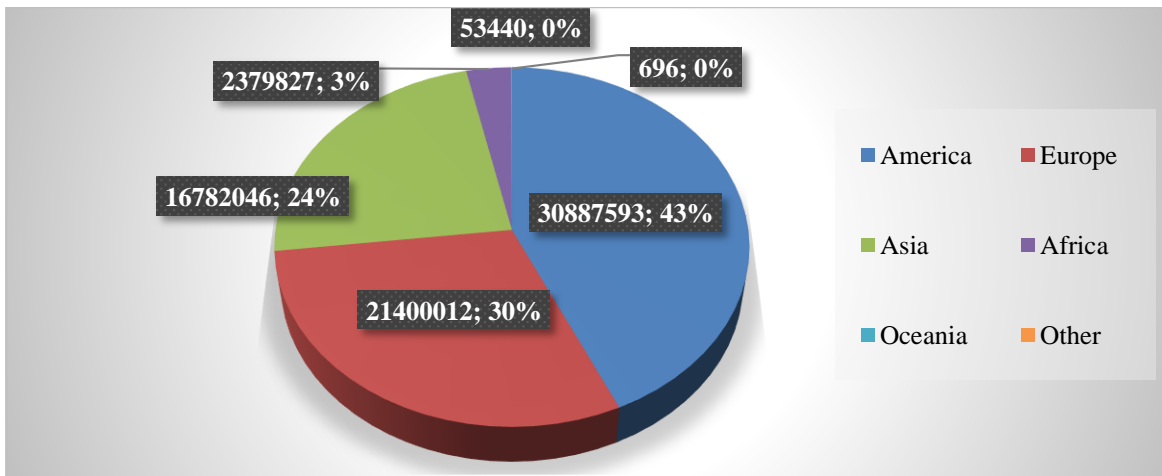


Figure 3. Global distributions of COVID-19 cases during 2020 (21.03 – 14.12)

Source: the [European Centre for Disease Prevention and Control \(2022\)](#)

Some European countries have suffered a lot due to the mass spread of the virus (Figure 4), as evidenced by the high level of GDP dependence on the number of cases. The largest number of cases was registered in Turkey – 995 471, Poland - 1 135 676, Germany - 1 337 078, Spain – 1 730 575, Italy – 1 843 712, the United Kingdom – 1 849 403, France – 2 376 852.

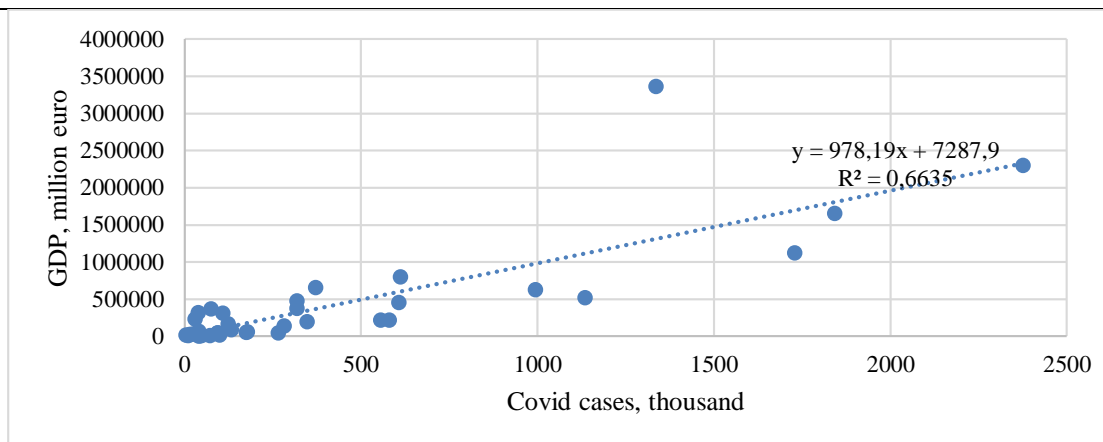


Figure 4. Dependence between COVID-19 cases and GDP in EU-27 countries in 2020

Source: Calculated by the author based on the European Centre for Disease Prevention and Control (2022), the Eurostat (2022e).

Restrictions imposed in various European countries last an average of 63 days in 2020. Database on country response measures to COVID-19 of the European Centre for Disease Prevention and Control, which contains the duration (start date and end date of restrictions), has been used to calculate the duration of various government measures for coronavirus control. Thus, the most common measures lasting more than 63 days in different countries were as follows:

- Teleworking recommendation or workplace closures – partially relaxed measure 141, 00 days;
- Adaptation of workplaces (e.g. to reduce risk of transmission) – partially relaxed measure 115, 00 days;
- Closure of educational institutions: higher education 101, 00 days;
- Protective mask use in closed public spaces/transport on the mandatory basis (enforced by law) – partially relaxed measure 97, 14 days;
- Interventions are in place to limit mass / public gatherings (any interventions on mass gatherings up to 1 000 participants included) 96, 97 days;
- Teleworking recommendation - 96, 92 days;
- Interventions are in place to limit mass / public gatherings (any interventions on mass gatherings up to 1 000 participants included) – partially relaxed measure 82, 64 days;
- Quarantine For International Travellers 81, 69 days.
- Partial and complete closure of restaurants and cafes taking place in Europe on average was as follows: 1) partial closure of restaurants and cafes – 73, 40 days, places of worship – 73, 23 days; 2) complete closure of restaurants, cafes – 64, 43 days (The European Centre for Disease Prevention and Control).

At the same time, there is no relationship between the average duration of various restrictive measures in countries and GDP growth rates (Figure 5), which makes it possible to assume the impact of the severity of measures on business and individual sectors of the economy. For instance, in the countries with the highest rates of GDP decline in 2020, the average duration of restrictive measures was as follows: Italy - 72 days, Croatia - 82 days, Greece - 82 days, Spain - 69 days, Norway - 70 days, Iceland - 45 days. In Sweden, with the GDP growth rate of 0,3% in 2020, the duration of measures averaged 94 days; consequently, it was the highest among all countries. In countries with a slight drop, different durations of measures were observed (Bulgaria – 0, 37% fall and 64 days, Finland - 2% fall and 81 days, the Netherlands -2% fall and 57 days, Poland - 2% fall and 51 days, Romania - 2% fall and 72 days, Slovakia -2% fall and 54 days).

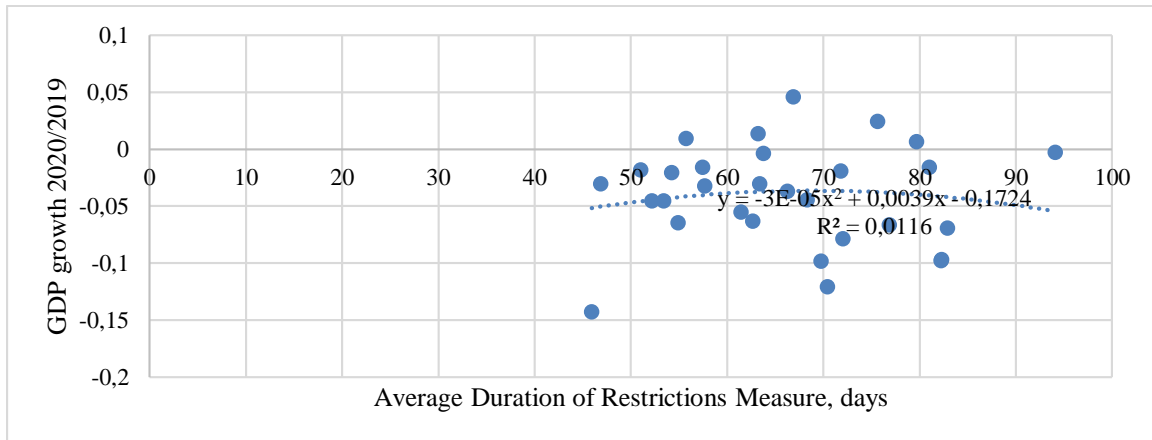


Figure 5. Dependence between country response measures to COVID-19 (average days in 2020) and GDP growth in 2020 in EU-27 countries

Source: Calculated by the author based on the [Eurostat \(2022e\)](#)

By the way, countries also differentiated depending on the number of measures to respond to the virus spreading: from 60 measures (the Czech Republic) of various types to 9 measures (Sweden). As a result of restrictive measures and reduced consumer demand, the volume of export-import transactions has significantly decreased (Figure 6).

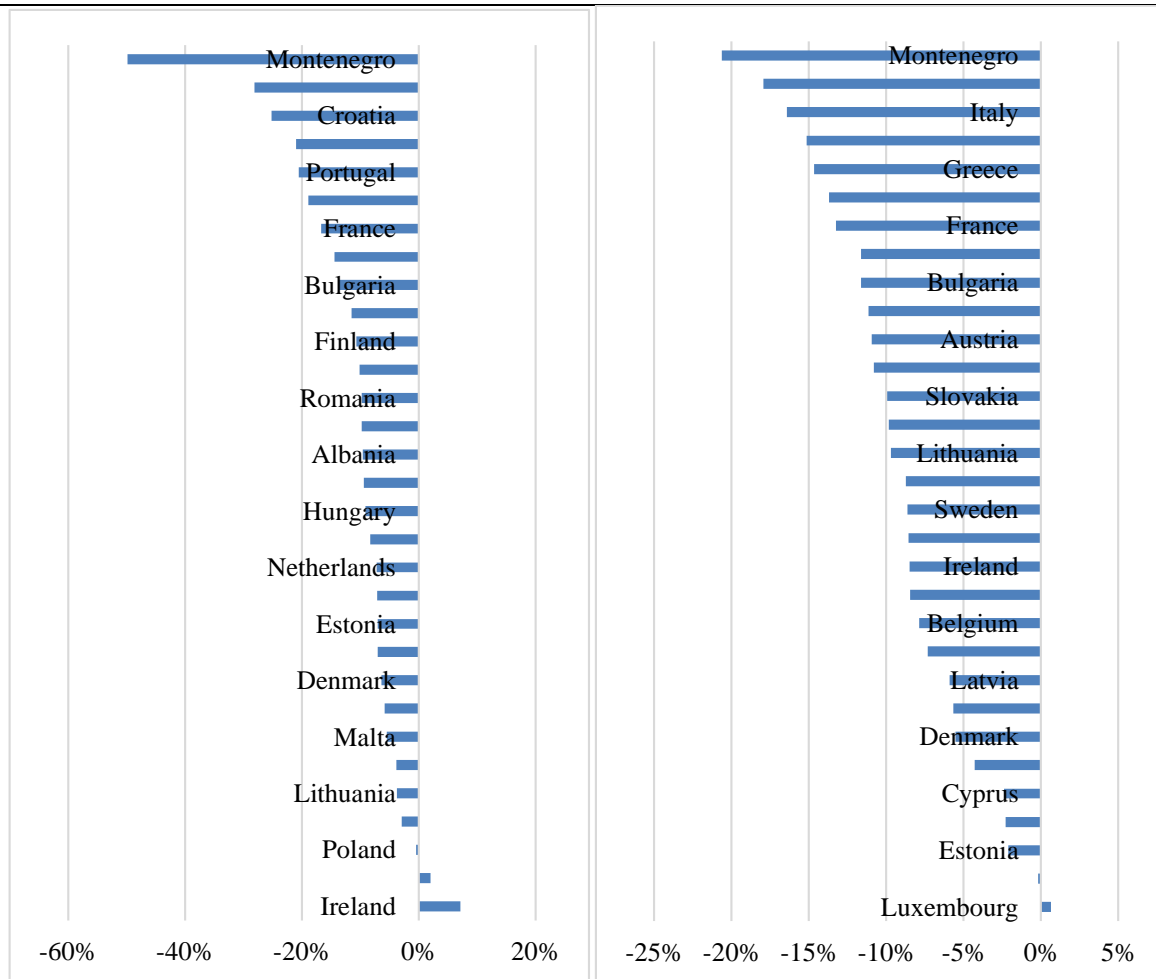


Figure 6. Export and import growth in EU-27 in 2020/2019, %
 a) Export b) Import

Source: the Eurostat (2022e)

The reduction in trade in goods on an international scale has led to the need for manufacturers to look for alternative channels to sell products, in particular, by searching for new customers in the domestic market. For instance, with the growth of Serbian GDP in 2020, exports have decreased by 4%, imports - by 6%. As a result, companies began to offer goods and services, the demand for which increased during the pandemic. Enterprises and start-ups have become more opportunistic, reshaping their own business and business model through technology, redirecting existing knowledge, skills, people, and networks to new needs that emerged during the spread of the virus (Tolmacheva et al., 2021; Attamimi et al., 2020).

It is worth noting the sharp recovery of China after the pandemic and the growth of the US economic activity to the rate that was characteristic before the coronavirus spreading. However, at the global level, economic recovery after COVID-19 is not stable.

3.2 Discussions

In the scientific community, particular attention is paid to the economic consequences of coronavirus in various fields and social consequences, in particular, changes in people's behavior, needs, and habits (Huang et al., 2009; Brittain & Shaw, 2007). As a result of the spread of the disease, production networks have been

changed through various measures introduced by governments of different countries to restrain the disease from spreading.

In the course of the research, it has been found that during the pandemic, business, government, and society have become even more aware of the importance of digitalization of business and the formation of digital skills needed to quickly adapt to new conditions, reorient production if possible through the introduction of digital technologies. Along with this, the most obvious breakthrough occurred in the subsystem of job automation due to significant financial constraints of the business. The financial support of the governments of different countries was not sufficient to provide significant technological breakthrough innovative changes for companies in various fields. As a result, the share of enterprises using computers and the Internet to support work processes has increased significantly in the EU. Perhaps, due to this, the business in the future will change the classical understanding of the working conditions and environment, giving more authority in planning their work schedule to employees. As it has been noted by [Carracedo et al. \(2021\)](#), “having faced with this new situation, there are only two real alternatives: to try to return to the normal state that existed before the pandemic to avoid the negative social impact of high unemployment; or consider this new scenario as a turning point, marking the beginning of new ways of working”. Strategies, financial plans, working conditions, and business start-ups have been also changed during the pandemic. The business emphasizes technological innovation, effective management of limited resources. In developing countries, delivery services have increased significantly, and people have realized the importance of such services and the technologies ensuring their provision.

Using the potential of domestic markets due to the disruption of global supply chains will be a future trend, especially in developing countries with a commodity model of the economy ([Chakraborty & Maity, 2020](#)). From this perspective, the research assumes that business and the public sector will be aware of the untapped potential of domestic resources and the potential of their use within the country due to the restriction of export-import transactions.

Globalization and interconnectedness have been major triggers for the spread of COVID-19 worldwide. The closure of national borders and the limited mobility of the population, even on their territory, have led to an economic downturn. One can expect the unprecedented crisis that has paralyzed the manufacturing sector, leading to a shock in supply and demand chains. At the same time, a significant deferred demand for goods and services is observed in the expert environment, in particular, in the field of tourism and hospitality. The countries most affected due to tourism decrease, where the sector has been important for economic growth, will be able to ensure recovery in the future while reducing the level of restrictions on countries ([Nataliia et al., 2021](#); [Widana et al., 2021](#)).

International and national policymakers should focus their efforts on helping companies implement technological and social innovations to accelerate recovery. The pandemic has led to the recognition of the necessity to upgrade production systems: while earlier companies used to focus their production on countries with low labor costs, currently it is obvious that companies should understand the importance of considering other factors for the location of production facilities. Such factors will include as follows: demand for goods and services which are produced within the country of production location. It is this factor that will make it possible to diversify the risks of reduced production due to reduced exports.

4 Conclusion

COVID-19 has affected all countries of the world; it has led to significant economic reductions, increasing inequality, awareness of the importance of technology to support business. Support and development of the business under new conditions will depend on the ability to adapt to a new market with new consumer needs. A new market environment has been shaped by the movement restrictions imposed by almost all countries to provide containment of the disease spreading. The new environment has stimulated businesses to find efficient working conditions and motivate employees, being aware of the potential of new ways of working. Due to the growing uncertainty of the global business environment, companies should be more flexible and plan their activities, consumer needs, expand activities within domestic markets. Reorientation and redirection of production will become new ways of adapting to limited financial resources. The issue arises concerning the social consequences of the pandemic and the global change in the population's habits and

needs. Given the fact that discussions are held in the scientific literature about changing the behavior and needs of the population, it is expedient to understand how long such social transformations will last, whether the society will return to past habits, ways of life, decreasing morbidity and gradual economic recovery.

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