

💿 ЕКОНОМІЧНА ПРАВДА



# НАСЛІДКИ ЕПІДЕМІЇ *COVID-19* ТА КАРАНТИННИХ ЗАХОДІВ ДЛЯ ПРОВІДНИХ СЕКТОРІВ ЕКОНОМІКИ УКРАЇНИ



CONSEQUENCES OF THE COVID-19 EPIDEMIC AND QUARANTINE MEASURES FOR LEADING SECTORS OF THE UKRAINIAN ECONOMY CONSEQUENCES OF THE COVID-19 EPIDEMIC AND QUARANTINE MEASURES FOR LEADING SECTORS OF THE UKRAINIAN ECONOMY

> Study based on the results of in-depth interviews with owners and top managers of Ukrainian companies

> > *CNepatta* Publisher *Kyiv–Kharkiv* 2020

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The publication presents the results of a survey using the method of structured in-depth interviews with owners and top management of leading Ukrainian companies, as well as representatives of central and local authorities and health care on the consequences of the COVID-19 epidemic and quarantine measures for leading sectors of the Ukrainian economy. Overall, in the period from August to October 2020, 63 individual in-depth interviews were conducted according to the prepared scenarios for each individual sector of the Ukrainian economy. The obtained data can be considered as cases on the situation in each individual industry, however the information can provide an opportunity to assess the overall impact of the COVID-19 epidemic and quarantine restrictions for Ukrainian business in 2020.

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## PREFACE

his publication is the result of a survey of owners and top management of companies in key sectors of the Ukrainian economy, as well as representatives of central and local authorities and health care. The research was conducted using qualitative methods of sociology: by holding in-depth interviews.

Overall, during the period from August to October 2020, 63 in-depth interviews were conducted according to the prepared scenarios (guided interview) for each individual sector of the Ukrainian economy. The obtained data can be considered as cases on the situation in each individual industry, however the information can provide an opportunity to assess the overall impact of the COVID-19 epidemic and quarantine restrictions for Ukrainian business in 2020.

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### INTRODUCTION

Use to the crisis caused by the COVID-19 pandemic, Ukrainian business realm in 2020 has appeared to be on the verge of survival. The economic downturn, declining purchasing power and changing behavior patterns of citizens, lack of support (or inefficiency) from the state have led to a reduction in production, or even to the shutdown of entire sectors of the economy.

During the crisis, the state introduced a strict regulatory policy that imposed barriers to work, reducing the profitability of business. First of all, small and medium enterprises have appeared at risk. Likewise, large corporations are forced to cut staff by dispatching labor force to an unpaid leave.

It is impossible to overcome the consequences of the coronavirus pandemic and quarantine restrictions for the Ukrainian economy without taking into account the vision and needs of the beneficiaries themselves — business representatives. To this end, the Center for Applied Research, in cooperation with Ekonomichna Pravda, with the support of the Konrad Adenauer Foundation in Ukraine, conducted a comprehensive study of key sectors of the economy that have faced difficulties in their work in 2020.

The main purpose of the study was to obtain information from the owners and top management of Ukrainian companies: how the COVID-19 pandemic and quarantine restrictions have affected revenue, number of contracts and customers, volume of services provided, etc.; what measures have been taken to reduce the impact of the crisis on business; how the transformation of operating activities has taken place; what risks are expected due to the re-introduction of a lockdown in Ukraine.

Structured in-depth interviews with the owners and top management of leading Ukrainian companies were chosen as the research method. For this purpose, 19 sectors of the Ukrainian economy were identified: banking, business services / consulting, food and beverage production, exporters facing falling demand and logistics problems, importers of cars and equipment, IT sector, shopping malls and cinemas, logistics (freight and mail), medical technology and drugs, media, real estate / development, private kindergartens / schools / higher education institutions, restaurants / cafes / bars, retail (chain stores), agriculture, telecommunications, transport, tourism and hotel industry. In each sector, according to the thematic sets of questions, 3 comprehensive interviews were conducted, which illustrated the cases to characterize the impact of COVID-19 and quarantine restrictions on certain sectors of the economy. In addition, the project team has conducted thorough interviews with representatives of the medical sector, central government and local government (2 interviews for each sector) to analyze the effectiveness of measures taken to combat the coronavirus epidemic.

The specificity of the approach to the interpretation of the obtained data lies in the description of specific cases faced by Ukrainian companies, along with a general outline of the situation in each specific industry.

This study can be useful for representatives of central executive bodies in shaping public policy to overcome the effects of the coronavirus epidemic in the economic sphere, as well as for scientists, journalists, public figures and representatives of international organizations.

## HOW DOES COVID-19 AFFECT UKRAINE'S ECONOMY?

he COVID-19 pandemic has changed the world, and Ukraine is not the exception. The following internally oriented industries: transport (primarily aviation), tourism (external and internal), other services (including catering, sports, entertainment, art and leisure) were affected to the greater extent given the movement restrictions, self-isolation, and introduction of a quarantine regime in the country.

Owing to the slowdown in the world economy due to the pandemic, as well as the corresponding fall in prices and demand on world markets, a number of export-oriented sectors of the economy, including metallurgy and mechanical engineering, have experienced adverse effects as well.

Secondary effects from a significant decrease in consumer activity and, accordingly, a slower growth in the dynamics of economic development in general are witnessed in such areas as financial activities and real estate transactions, retail trade in non-food products and, accordingly, non-food industrial producers.

The decline in demand from world leaders, namely the change in foreign market conditions under the influence of the pandemic, has directly affected the activities of extractive industries around the world, not just in Ukraine. Therefore, namely this, and not some special internal problems, caused a significant decline in mining, as well as part of the processing industry (primarily metallurgy — a decline of 11.7% in January-October 2020).

Other problems of the processing industries caused by the global pause during quarantine also include disruptions and logistical issues with the supply of intermediate products needed for the manufacture.

According to the State Statistics Service, Ukraine's GDP in the third quarter of 2020 decreased by 3.5% compared to the third quarter of 2019. The largest decline in GDP was observed in the second quarter of 2020 — by 11.4%, respectively, and in the first half of 2020, according to the calculations of the Ministry of Economy on the basis of the State Statistics Service, the drop was 6.7%.

However, overall, the fall in GDP is smaller than the decrease in major sectors figures (industry, transport, construction, agriculture). This is due to the compensation for the decline in some economic activities, which have traditionally

determined the dynamics of GDP, growth or insignificant drop in others — those were less vulnerable, more flexible and better adapted to today's realities or, in general, have managed to succeed due to growing demand for their products (in particular, pharmaceutical and chemical production, food industry, IT sector, financial sector and healthcare).

Among the conditionally internal problems caused by the pandemic, it is important to mention the worsening of business expectations and the emergence of an investment pause in terms of significant uncertainty about the prospects for development in the coming year, which have affected the development of a number of processing sectors within an investment cycle (mechanical engineering («minus» 20.4% in January-October 2020), production of construction materials («minus» 8.4%, respectively).

Meanwhile, the easing of quarantine restrictions in May-July in the world, as well as in Ukraine, contributed to the less rapid slowdown in industrial production in January-October 2020 to 6.8% (compared to 8.3% in January-June 2020). Including the extractive industry — up to 4.4% («minus» 6.3%, respectively), in the supply of electricity, gas, steam and air conditioning — up to 4.5% («minus» 6.5%, respectively) and in the processing industry — up to 8.3% («minus» 9.6%, respectively).

Along with this, there are processing industries in Ukraine that have maintained high positive growth rates. Their growth is likewise triggered by the pandemic. Thus, the rise in production was observed in chemical production («plus» 6.7% in January-October 2020) and pharmaceutical production («plus» 1.0%, respectively) against the background of the resumption of individual chemical plants, high demand for disinfectants and medications.

At the same time, this year there is a downward trend in agriculture (down 14.2% in January-October 2020), in particular crop production, due mainly to adverse weather conditions.

The dynamics of domestic prices in 2020, despite a period of uncertainty in the mood of business entities related to quarantine, appear generally lower than in recent years. Thus, as of October 2020, the annual consumer inflation rate compared to 2019 constitutes 2.7%.

The temporary decline in demand due to quarantine restrictions on economic activity (especially trade) while maintaining the supply potential of goods and services that need to be sold relatively quickly, has mainly limited the growth of consumer prices, except for food items.

#### Impact of COVID-19 on the labor market of Ukraine

The labor market of Ukraine, as in many countries around the world, is facing serious challenges caused by the spread of COVID-19, including socio-economic.

Under quarantine conditions, employers resort to full or partial cessation of production, reduction of staff, switch to part-time work or dispatching employees to an unpaid leave.

This leads to a reduction in demand for labor and a decrease in the number of employed people, an increase in unemployment, respectively.

As of December 1, 2020, the number of registered unemployed dropped to 410 thousand people (the highest average number of unemployed was in June — 518 thousand people), of which 353 thousand people receive unemployment benefits. During the quarantine from March 12 to December 1, more than 525 thousand people acquired the status of unemployed.

#### Risks for the Ukrainian economy in 2021–2023

Among the main risks that may occur on the way to economic growth of Ukraine for 2021–2023, it is of a great importance to mention, in particular, the following:

- the second and third wave of the pandemic, which will lead to further quarantine restrictions both in Ukraine and in the world;
- strengthening of hybrid threats to the national economy by the Russian Federation;
- maintaining low credit activity amidst the exacerbation of problems in the banking system;
- significant reduction in the natural gas transit volumes from the Russian Federation through the territory of Ukraine;
- deficit of external financing and narrowing of access to international capital markets;
- formation of a significant imbalance in the labor market, reduction of employment;
- obtaining a low yield of cereals, etc.

In addition, according to an expert survey "The impact of COVID-19 on the economy and society — post-pandemic development. Consensus Forecast" conducted by the Ministry of Economy in July 2020, the most significant internal risk / phenomenon for the domestic economy, among those proposed by experts for 107

consideration, was "Significant growth of the state budget deficit and cash gaps in Pension Fund of Ukraine and other State Social Insurance Funds".

The following risks were also highly rated:

- growth of negative expectations from economic agents;
- strengthening the insolvency of the real sector of the economy;
- a significant drop in effective demand of the population;
- maintaining a high level of corruption;
- significant unemployment due to the return of workers, mass layoffs;
- mass bankruptcy of medium and small businesses, etc.

#### Forecasts of economic recovery to pre-crisis levels

The economic situation in the country experienced a restrained recovery in June-September 2020, however due to the growing incidence rate of coronavirus infection in October-November 2020 and the introduction of new restrictions, including weekend quarantine, annual GDP decline could be about 5%.

The continuation of quarantine restrictions, or the third wave of the pandemic both in Ukraine and in the world, remain threatening to the economic recovery, i.e. against the background of new possible losses, the restoration of demand situation for domestic products in both domestic and world markets will be prolonged until later.

However, amid positive news about successful trials of COVID-19 vaccines starting in 2021, the economy is expected to recover gradually as it grows. The baseline scenario by the Ministry of Economy envisages the recovery of economic development following significant losses caused by the COVID-19 pandemic in the world in 2020, and forecasts:

- GDP growth at the level of 4.6% in 2021, 4.3% in 2022;
- the consumer price index (from December to December of the previous year) is expected at 107.3% in 2021, 106.2% in 2022;
- increase in the real average monthly salary of employees at the level of 12.1% in 2021, 6.0% in 2022;
- the unemployment rate in 2021 9.2%, in 2022 8.5%;
- growth of exports of goods and services at 2.9% in 2021 with a further increase in gain to 6.4% in 2022.

Among the driving forces of development, it is important to include: IT, advertising and consulting services, development of non-cash payments and a number of other digital elements of the new economy; high-tech production and manufacture with medium-high level technologies (in particular, chemical and pharmaceutical production, machine building), as well as light industry enterprises, which currently have the potential to replace imported raw materials with domestic products, investments in joint projects to modernize and expand production within new and existing clusters, industrial and technology parks with a view to expanding its own production and its own intersectoral links, establishing them on the principle of domestic production of the full cycle.

Therefore, the COVID-19 epidemic has exacerbated the existing structural problems of the Ukrainian economy, in particular, the narrow domestic market for domestic producers, low share of value added in products, significant import dependence, especially on raw materials, and others.

Due to its openness, the Ukrainian economy will continue to grow largely under the influence of external conditions, which will be characterized by a gradual recovery starting in 2021 and further growth of the world economy, including Ukraine's main trading partners amidst active vaccination and coping with the consequences of the COVID-19 pandemic.

# CASES

#### **Medical sphere**

#### Characteristics/Impact of the pandemic

The medical system in Ukraine has undergone extremely significant changes due to the spread of coronavirus infection. The first weeks following the massive spread of the pandemic in March 2020 were characterized by a lack of complete understanding in government agencies on how to develop approaches to responding to the crisis as well as the functioning of the management system in the new circumstances. There were problems with monitoring, collecting and evaluating information on the number of patients, the use of personal protective equipment, the availability of beds in infectious diseases departments of hospitals, etc.

The high incidence rate in the first months of the pandemic in Ukraine was related to the absence of explicit protocols for working with patients with coronavirus infection. Subsequently, with the advent of appropriate protocols, it was not possible to fully reduce the incidence rate owing to non-compliance with the necessary conditions of work with sick patients due to inadequate provision of protective equipment, which led to the infection of a significant number of health workers.

In March, April and early May 2020, there was a significant shortage of personal protective equipment in Ukraine because of the rapid increase in demand. This situation affected the pricing policy for the relevant goods, which made it difficult to purchase them. From May to June 2020, access to certain medical products has expanded; at present, almost all positions in the domestic market are available. At the same time, the government's decision to ban the export of personal protective equipment, which was approved in March 2020, also facilitated the improvement of the situation with the proposals for medical products on the Ukrainian market.

Procedures for purchasing vital products under pandemic conditions are currently specific: for some items (ventilators), it is planned to increase the estimated cost per unit of goods in order to expand the range of producers during procurement; with regard to personal protective equipment (medical suits, glasses), the issues of regulating the procedure for confirming the quality of these goods remain relevant. In addition, the problems in particular relate to the absence of an appropriate level of interdepartmental communications and adequate coordination by the state of those organizations and institutions involved in the procedures of centralized procurement of medical products. In order to improve the situation in this context, it is necessary to conduct additional analysis of the market of medical products; regulate work with manufacturers, suppliers and distributors of relevant products.

The spread of the coronavirus pandemic has significantly affected the implementation of health care reform in Ukraine, inter alia the need to change approaches to funding models and restructuring of infectious diseases facilities or departments. In this case, the necessity to distinguish between infectious and non-infectious diseases has become obvious. In addition, in conjunction with the pandemic, the issue of centralized subordination of public health centers and coordination of relevant institutions is being reconsidered.

The quarantine restrictions imposed by the authorities in March-May 2020 were largely justified by the high degree of uncertainty about the damage from the spread of the pandemic at the time of their introduction (primarily the impact of the disease on quality of life, mortality, etc.). The establishment of strict quarantine measures has enabled the state to prepare the health care system for the new operating conditions, avoiding a rapid outbreak of diseases with a high number of fatalities.

Further development of algorithms of actions in the conditions of a pandemic allowed to facilitate quarantine restrictions; nevertheless, problems related to the lack of qualified personnel in medical institutions, full payment of salaries and allowances to medical staff, provision of hospitals with beds, inadequate level of communication between government agencies and the public in the context of informing about quarantine restrictions, etc. remain of current concern.

#### Measures taken

As to the first measures taken by the state to combat the effects of the pandemic, it is important to highlight the facilitation of the procurement procedures of medical goods and services (medicines and personal protective equipment) by a package of amendments to the legislation adopted in March 2020. This decision has greatly facilitated the response to the crisis by local customers, local hospitals, health departments in local administrations and councils. Another important event was the allocation of funds from the state budget in the amount of almost 60 billion hryvnias, which were directed to the Ministry of Health, the Ministry of Foreign Affairs, Ukravtodor, etc. In addition, at the beginning of the pandemic in the spring of 2020, the Ministry of Health relied on the existing bed stock in the country and the allocation of a reserve of beds in medical facilities to treat patients with coronavirus. At the beginning of the pandemic, coronavirus testing was conducted in only a few laboratories in large cities; later the number of such laboratories expanded significantly; indeed, the number of PCR tests increased (from 200 per week at the beginning of the pandemic to almost 50 thousand per day in November 2020). At the same time, 66% of tests are conducted in state medical institutions; 8% — in utilities; 26% — in private laboratories. Rapid testing for coronavirus infection is currently being developed (rapid tests for COVID-19 antigen, which are almost similar in sensitivity to PCR tests, are now being registered and put into series production, which is scheduled to be established by the end of this year). If the appropriate development procedure becomes successful, the testing procedure and obtaining results for patients will take up to 30 minutes.

Despite the increase in the number of testings in Ukraine, the issue of the accuracy of the dynamics of coronavirus infection remains relevant. Currently, it is quite difficult to draw conclusions about the number of cases of diseases that are not included in official statistics. Some World Health Organization studies reveal 30-40% of diagnosed cases among the total number of possible diseases in the world (because the lion's share of cases may be of an asymptomatic nature or with indeterminate symptoms). In Ukraine, a research design is currently undergoing development in order to form a map with the number of patients, who have recovered from the coronavirus, although the sample remains mostly unrepresentative, so there is no necessity to talk about the exact picture of statistics of all diseases.

The issue of payments to medical workers in Ukraine remains of highest importance. The first funds allocated by the state for the Ministry of Health for salaries of doctors, laboratory technicians, epidemiologists (about UAH 220 million) were distributed during six months instead of the planned three, but the corresponding amount was not enough. Subsequently, doctors received additional payments of 300% from the budget of the Ministry of Health in all the regions of Ukraine. Currently, the state budget for Ukrainian hospitals under the COVID-19 package provides UAH 15 billion (of which UAH 5.95 billion goes to surcharges for medical workers). In addition, the appropriate package of funds goes to emergency medical care, mobile teams, inpatient care (this includes funds to cover drugs for the treatment of coronavirus disease).

#### Forecasts and risks

It is quite difficult to predict the spread of coronavirus infection in Ukraine and the world in the long-term due to the novelty and atypical nature of the disease. In today's conditions, typical epidemiological predictions about the course of events are not made, and no mathematical model has yet proven its effectiveness.

Referring to the short term perspective, given the dynamics of morbidity in Ukraine, a further rise in the number of cases and hospitalization of patients is expected. In this case, the scenario of 100% occupancy of beds in hospitals targeted to the treatment of coronavirus infection is quite realistic. In view of this, it is plausible that there will be a return to the introduction of further strict restrictive measures and the strengthening of the quarantine regime.

Meanwhile, the preparation of the medical system in Ukraine for a possible rise in the incidence of coronavirus in the fall of 2020 — winter of 2021 is carried out in accordance with the already developed algorithm. The foreseen expanded response to the spread will include the purchase of personal protective equipment, ventilators, and a coronavirus vaccine. The re-profiling of hospital beds for the treatment of people with complications due to infection is also continuing. Additional retraining is currently being carried out by the National Academy of Medical Sciences and departmental hospitals.

Under the conditions of a further rise of disease cases and hospitalizations, and, accordingly, a growing figure of teams in hospitals, the use of «COVID» budget is projected to increase. At the same time, the Ministry of Health predicts that the available financial resources should be sufficient by the end of this year. Hospitals must be prepared to respond to the further spread of the infection through stocks of antibacterial and antiviral drugs, as well as personal protective equipment, which must be constantly updated.

#### Banking

#### Characteristics/Impact of the pandemic

The Ukrainian banking system, like Ukraine as a whole, has entered this crisis in a better condition than at any time in the last 30 years since gaining independence. The economic imbalances caused by the pandemic did not lead to problems in the system that could be the reason for the withdrawal of banking institutions from the market. The banking system has been operating stably, there has not been any disruption in the work of the departments and ATMs. There was no significant outflow of funds from bank accounts.

Some financial institutions had some problems with the organization of remote work and with the adoption of offices to a new format of work. However, such trou-

bles were of a temporary nature and did not have a critical impact on the operation of banks and their customers.

In general, according to the National Bank, in the second quarter of 2020 the profits of Ukrainian banks fell more than twice in contrast to the first quarter — to reach UAH 7.7 billion. This is also 2.4 times less compared to the second quarter of 2019. If we take the results of the first half of the year, the profit of banks for the first half of 2020 was 23.4% less than the same period in 2019. The number of unprofitable banks increased from 6 in 2019 to 23 in the second quarter of 2020.

The economic crisis caused by the pandemic weakened the demand for banking services due to the expected decline in business activity, as well as the worsening of consumer sentiment.

In particular, for the first time in four years a commission income dropped. In the second quarter, operating income decreased and operating expenses increased in comparison to the previous quarter. The reduction in commission income is due to a decrease in the volume of transactions. In the second quarter, especially during the period of strict quarantine, owing to negative expectations and reduced incomes, the majority of Ukrainians reconsidered their expenses and limited the number of purchases. In the third quarter, the top managers of the banks surveyed noted a gradual resumption of payments, foreign exchange transactions, acquiring, and ATM transactions.

In contrast to the second quarter, during which lending restrained by the pandemic and related quarantine measures also decreased significantly, the positive expectations of banks for its recovery were justified in the third quarter. Demand for loans from both households and businesses grew. This, in particular, was facilitated by a further reduction in interest rates on loans.

Among other important trends, there has been a rise in online payments. Thus, Privatbank notes an increase in online payments by 30% during the quarantine period. Similarly, the number of users of banking applications has increased (Privat24, Raiffeisen Online). For certain categories of the population (mostly elderly), some banks have introduced services for paying for utilities by phone.

In general, the COVID crisis has changed the behavior of bank customers as they opt for doing their transactions online and utilizing digital channels actively. Such changes, as mentioned above in the banks, took place before the epidemic, but now this process has accelerated significantly.

#### Measures taken

Quarantine did not dramatically affect this sector of the economy due to the proactive approach of banks to restructuring for small business clients, which eventually prevented the growth of debt problems.

The main priorities for the banking sector during this period were the protection of employees and customers and ensuring the continuous operation of banking institutions. During the introduced quarantine, banks with a wide network of branches and a significant number of departments were faced with the need to reformat the work of networks, contact centers of banks.

During the quarantine, the banks transferred a significant number of employees of the head offices and regional branches to remote operation. From 80% to 50% of employees of the central offices of large banking networks (Raiffeisen Bank Aval, Privatbank, Ukrgasbank) started working remotely, the concentration of people in other offices was generally reduced by 25–50%. Some banking networks (Raiffeisen Bank Aval) were forced to suspend the operation of their affiliations temporarily in the cities until May 2020 and switch to a three-day working mode in those branches located in rural areas.

Meetings and negotiations of bank employees took place remotely. Banks also set up remote corporate networks. The necessary security and functional settings for the organization of remote operational mode, the introduction of electronic document management systems, the increase in the number of remote channels for communication with customers (for instance, the operation of chatbots) were exercised expeditiously.

The bank staff was preserved as much as possible: pending the quarantine, the management did not send employees on leave at their own expense, did not dismiss or reduce their salaries. In some banking institutions, employees worked part-time, but staff salaries were maintained; besides, surcharges were also provided for certain employees in branches.

The struggle against the consequences of the pandemic has led to an increase in additional costs for banks: the purchase of personal protective equipment, disinfection of premises, special payments to employees and their transportation, and sometimes even the purchase of medical equipment for Ukrainian hospitals. For example, additional costs for the respective purposes of Privatbank, which has the largest branch network, reached UAH 300 million.

Banking institutions are considering options for launching pilot projects with a view to introducing remote work as a working standard for a certain category of employees following the end of the quarantine. Many banking networks already bear in mind plans to gradually return staff to offices, given the further dynamics of the virus.

#### Forecasts and risks

The pandemic has affected bankers' expectations as to the final outcomes for the current year. Top managers of banks, which have been recently interviewed, expect that profits in 2020 will be lower than in 2019 — due to the recession and quarantine measures.

According to the National Bank data, in the third quarter, banks considered currency as a key risk — almost 40% of banks emphasized its growth. Currency risk acquired such high values only at the time of the introduction of quarantine restrictions and in the crisis year of 2014. Only a third of banks indicated an increase in credit risk.

In the medium term, according to the surveyed top managers, the greatest threat to the further operation of banking institutions are operational risks due to changes in the model of work and the particular transition to remote mode. It is expected to have an impact primarily on those banks that focus their activities on consumer lending to individuals, since citizens' incomes will decline and affect the reduction of purchasing capacity.

In addition, the impact on banking institutions, which have a high level of the international letters of credit and a small margin of endurance in terms of capital, is projected. Deterioration of the loan portfolio in all segments is also envisaged; primarily it will be related to consumer lending.

Risks of a political nature related to changes in coordination policy in Ukraine (political influence on the National Bank and the government, increase in public debt, easing of the monetary policy of the National Bank, etc.) remain relevant. This can lead to the emergence of credit risks, higher interest rates, increased debt burden on business.

#### Recommendations

In general, most banks in Ukraine remain financially stable; quarantine restrictions do not significantly affect the strategy of the banking sector, for the most part, only the working conditions of employees.

Currently, banks need to pay close attention to further diversification of their assets. In the near future, an important aspect of the activities of banking institutions will be related to the adaptation to and negotiation with customers in the post-quarantine period. In the future, there is a need to review the approaches of bank management to office real estate management (redevelopment of office space, ensuring the distance between working places).

Another important point is the improvement of the remote banking system as a guarantee of financial stability of the banking sector and the continuation of ongoing communication processes with customers.

Another important recommendation is to ensure the full and efficient operation of the banking sector addresses relating to the actions of the state, namely the improvement of the system of control over compliance with quarantine restrictions. Successful observance of quarantine norms will contribute to curbing the spread of the disease, which, in turn, will accelerate the return of the population to intensive economic activities. According to the top bank executives, the state should pay attention to improving the health care system and the small business support system, which is the most vulnerable in this situation.

#### Business services, B2B, consulting

#### Characteristics/Impact of the pandemic

The introduction of quarantine measures has had a significant impact on the work of consulting companies in Ukraine. The negative consequences for the industry vary depending on the direction of the consulting agency.

In the first months of quarantine (March-April 2020) there was a significant decrease in orders. In some companies, the corresponding reductions reached up to 40% («Pro-Consulting»). Other companies (agro-marketing agency «SAPIENZA») during March-May 2020 could not enter into any new agreements at all and witnessed a loss in a number of customers due to their inability to continue to fulfill the terms of contracts.

During the quarantine, consulting agencies lost most of their profits due to the reduction in the number of clients and the freezing of their operating costs. According to the calculations of some companies, the loss of profits throughout the mentioned quarantine ranged from 20% to 50% of the planned for this period. This was particularly the case for those companies that were involved in politics (for example, «Perspective»); the relevant sector actually lost 100% of its revenues at the beginning of the introduction of quarantine measures, when there was a decrease in demand for orders, given the absence of active political processes in the country. The increase in the number of orders took place only in the summer and autumn of 2020 during the political campaign in the local elections.

In general, during the introduction of strict quarantine restrictions the sphere of consulting faced a significant decline in economic efficiency (profitability) of its services. Companies were forced to revise and cut various budget items that were planned to be quarantined for marketing, consulting and research.

In May, following the easing of the quarantine restrictions, the issue with orders began to level off, and sometime in June, the companies almost reached the targets set in the strategy at the beginning of this year. Nevertheless, according to preliminary results, consulting agencies can not expect to receive the planned profits for the current year: for example, losses on profits of the company «Pro-Consulting» are projected at 20% — 30% in 2020.

One of the most difficult challenges for the consulting business during the pandemic period was the search for new approaches to working with clients that could successfully compensate for the lack of face-to-face communication and the rendering of personal services and advice.

During the quarantine, consulting companies in Ukraine did not receive effective assistance from the state that would meet the current needs of the business realm, in particular to reduce the tax burden on business (for example, the introduction of so-called «tax holidays» for this period) or provide indefinite loan.

#### Measures taken

During the quarantine, almost all the work of consulting companies was carried out remotely. Although reformatting to work online regime was not a completely new phenomenon for consulting companies, in some cases it did cause some inconvenience in organizing the workflow. All personal meetings with customers, consultations and negotiations with clients were canceled and translated into online formats. Another situation was observed with the conduct of sociological research: depending on the specifics of the activity, the relevant work has seemed to be difficult to fully carry out given limited contact between people.

Currently, sociological and consulting companies are ready to carry out up to 40% of their work online. Overall, remote work is regarded by consulting companies as a forced measure, which, on the one hand, allows not to interrupt work processes, and, on the other — reduces staff motivation and affects the quality of advice to customers.

To minimize the negative consequences of the pandemic, consulting companies have begun to enter new segments of service delivery (for example, analysis of the information environment in Ukraine). Some companies have been actively making additional sales; by virtue of introducing changes to the pricing policy of their institutions, in particular, additional bonuses and loyalty programs in order to support customers and not lose the flow of orders. With a view to reducing costs, the agency (SAPIENZA) has begun to use outsourcing more intensively, as well as minimizing the salaries of employees due to the increased use of computer programs recently.

Given the limited domestic long-distance traffic during the strict quarantine period, some consulting agencies (Perspective) were forced to create a separate item of expenditure for private carriers to transport their employees.

The issue of layoffs or redundancies of companies involved in consulting and business services depended on the number of contracts. In their absence, companies paid employees a minimum wage during quarantine, thus retaining their staff. In some companies, some staff members were sent on holiday at their own expense to save the maximum number of workplaces.

#### Forecasts and risks

Provided that quarantine measures are not intensified, consulting agencies in Ukraine foresee a gradual increase in their profits to the level of 20–25% (Pro-Consulting). In the event of a return to strict quarantine, the business services sector in Ukraine risks to face a deep financial crisis, due to which it will not be possible to cover the losses suffered in March-April. In this case, many companies will have to either stop their operations or transform them into another type of business that will provide more stable profits.

In addition, the current risks for the field of consulting and business services include the problems of doing business (especially the tax burden), as well as the subsequent loss of companies' customer base. The risks associated with the decline in business activity and the deterioration of the economic situation in the country also remain significant. In this context, one of the consequences of the impact of quarantine on the reduction of profits of consulting agencies may be the transition of most legally operating companies to the shadow economy sector.

#### Recommendations

To improve the working conditions of consulting companies in Ukraine, the state should develop a package of real tax benefits (reduce taxes for entrepreneurs at least twice); provide interest-free credits for businesses, primarily in order to pay salaries to employees of companies. In these terms, it should be important for state agencies to involve representatives of the consulting industry to hold consultations and exchange ideas on optimizing and facilitating the conditions of activity of the relevant industry in Ukraine.

The urgent issue for consulting agencies remains the retention of staff and personnel reserve, so they could continue performing their duties. As under the conditions of quarantine and remote work motivation decreases, additional factors (motivations) are necessary for the keeping of employees at their working places and the maintenance of high-quality performance of work. In this regard, it will be useful to create funds to help entrepreneurs in case of crisis, which would consist of contributions from companies outside the quarantine period.

#### Production of food and beverages

#### Characteristics/Impact of the pandemic

During the quarantine period, working mode in the food production sector was not canceled. Among the main problems faced by the surveyed companies was the difficulty for employees to reach access to their working places. Thus, almost 70% of Kyivkhlib employees (up to 3,000 people) live in the suburbs of the capital. The complete shutdown of public transport has become a major challenge for food businesses.

At the beginning of the quarantine, workers in some industries (Kyivkhlib) faced the problem of not receiving public transport passes in a timely way.

Another concern revealed in the need to adapt as soon as possible to the new working conditions in compliance with the sanitary norms of the Ministry of Health, minimizing contact with products, monitoring the health of workers and conducting ELISA and PCR tests. The total profits of enterprises such as Ky-ivkhlib have been adversely affected by additional costs for personal protective equipment and disinfection, as well as personnel logistics. In addition, the loss of producer income was due to fluctuations in consumer demand for consumer products, which increased significantly at the beginning of quarantine, and later fell sharply, resulting in a mass return of products. During the quarantine period, Kyivkhlib's investment projects have also suffered problems owing to a 6–9 month delay.

Officials from the corporation Roshen declared that there were no significant changes in business processes, since quarantine did not have much impact on production. This has happened due to the specifics of the business. Confectionery production consists of, first of all, planning, observance of technological regulations, discipline in their execution. Secondly, the intensity of the confectionery

production depends on seasonality: in summer production plans are always lower, given the heat conditions in which sweets are usually bought less often. Therefore, in the summer, preventive repairs are usually planned, some employees go on tariff leave. As the quarantine fell on spring and summer, there were almost no significant adjustments to the plans of the confectionery company. Nevertheless, the sales of the Roshen Group dropped in April-May and have not yet returned to the level of the pre-quarantine period.

Another scenario was observed regarding the impact of the pandemic on some beverage producers — the respective enterprises did not experience significant negative consequences from the introduction of quarantine measures. Thus, the group of companies Koblevo (includes two agricultural enterprises that grow grapes and two enterprises for the production of wine and cognac) were operating normally, in particular, due to their geographical location (Mykolaiv region had long been in the «green» zone). Minor negative changes in the company's financial indicators were motivated by an increase in the share of wine imports in Ukraine (up to 36%). Sales in this specific market have signs of seasonality, and nowadays imports tend to be displacing domestic products.

#### Measures taken

Strict sanitary norms have been observed at industrial facilities, premises have been provided with a quartz treatment (Koblevo). In addition, borders and sanitary posts have been established (Kyivkhlib), staff members have been working remotely from the production area via protective screens (Roshen), and workers have been offered a transfer to their workplaces.

At the time of the introduction of quarantine measures, employees of food and beverage companies did not face stuff cuts. Personnel were mostly switched to remote work; following the easing of the quarantine restrictions, the employees of the companies use the shift method (work in turns) to avoid crowding on the premises. Due to the restriction of long-distance transport, the business trips of employees were suspended during the severe quarantine, and face-to-face communication between staff and customers was changed to a remote format via the use of social networks and online platforms (Zoom, Microsoft Teams). At the beginning of the quarantine, workers over the age of 60 were temporarily transferred to remote work at production enterprises.

Overall, food and beverage producers consider the measures implemented by the state during the quarantine period to be mostly effective in the context of responding to the spread of the pandemic. At the same time, while some companies (for example, Kyivkhlib) were able to receive state aid for doing business in the new conditions (referring to the introducing of the state permit for land tax), others, on the contrary, provided assistance to the state itself in combating the consequences of infection (Roshen allocated funds for the equipment of hospitals during quarantine).

#### Forecasts and risks

Each of the industries has faced its own challenges. Thus, Kyivkhlib's business profitability has decreased. First of all, this is due to the rising cost of raw materials: last year the price of flour was 20% lower. Given the devaluation of the hryvnia, modernization costs increased — annual losses due to the exchange rate difference of Kyivkhlib amounted to UAH 50 million. Among the risks, it is important to mention a lack of qualified staff, tax and regulatory risks, and the possibility of supply chain disruption (partners abroad are slower to make decisions).

The second half of 2020 will not be easy for the confectionery company ROSHEN. There is a low possibility that demand for confectionery will actually return to previous levels due to declining purchasing capacity of people.

Similar problems apply to Koblevo. The decrease in the spending power of citizens will inevitably affect the industry. The winemakers currently face fears of any local outbreaks of coronavirus in the areas of harvesting and processing of grapes. The risk is seasonal migration of workers to harvest: migrant workers can get sick. A balanced regulatory policy of the state is important, because it appears quite often that there is no understanding of the economic situation of the industry because of the statistics with data. State authorities simply do not always know what, where and how much there is, respectively, they can not fully regulate.

#### Recommendations

Producers of food and beverages facing falling incomes need comprehensive state support (the ability to obtain loans with more loyal interest rates, reducing the tax burden during a pandemic). First of all, this matter is related to the necessity of maintaining a stable work schedule and workplaces as well.

The issue of improving the general system of planning in the food security realm at the state level (in case of similar crises in the future) remains relevant for domestic producers of consumer products. This concern includes a comprehensive review of food industry development strategies in Ukraine, taking into account the need to inventory existing enterprises, prevent possible future crises, find ways to increase business profitability and support the national producer.

#### Exporters facing a drop in demand and logistical problems

#### Characteristics/Impact of the pandemic

The spread of the pandemic and the introduction of quarantine have mostly had a negative impact on the state of domestic exports, primarily due to a decline in international traffic. However, the level of such influence varies depending on the profile of certain domestic companies.

For Ukrainian producers, whose products are partially or completely exported, the costs of transporting goods abroad have increased significantly, in particular due to increased duties by some countries. Other negative consequences of the pandemic for domestic exporters include the withdrawal of customers from contracts, lower contract prices and increased receivables. In addition, for some of the surveyed companies (Dobrodiya) exhibitions of products abroad were canceled, which were an effective tool for the exporter to increase the number of consumers. Therefore, the company was forced to switch to an online sales system that has not yet demonstrated high efficiency.

Under the conditions of quarantine measures, the profitability indicators of Ukrainian exporting companies have decreased — both in physical terms and in terms of revenues per ton of products. According to preliminary forecasts, the general indicators for the current year will be lower than those of the last year.

For companies involved in the metallurgical industry (Interpipe, pipe production), the decline in services provided during the first month of quarantine is related not so much to the pandemic itself as to the general trends in the export market. In particular, this applies to changes in oil and gas pricing policies. Meanwhile, the further dynamics of the decline in the company's supply are directly related to the spread of the pandemic, which significantly reduced the overall level of production of machinery and equipment in Ukraine and demand for related products abroad. In the second and third quarters of 2020, Interpipe experienced a 15–20% decrease in profits compared to the first quarter. At the same time, due to the closure of similar productions abroad in Europe and the Middle East, the company was able to sell more of its products in the respective regions than planned.

The situation is somewhat different with domestic exporters involved in the agro-industrial sector. Some companies have not been significantly affected by the pandemic at all. Thus, during the quarantine the company Nibulon continued to produce products in a normal mode, only employees of offices were transferred to remote operation. Given many years of experience, a wide customer base and a well-established banking system, the company was able to achieve the planned targets.

Another category of Ukrainian exporters of agricultural products (Dobrodia) also did not experience substantial problems pertinent to the transportation of goods during the quarantine period, although the reduction in supplies was quite significant. The situation with orders began to improve gradually only following the easing of the quarantine restrictions.

During the quarantine, there was an increase in foreign demand for cheaper domestic products, including foodstuff, in particular, some types of Dobrodia products (flakes and mixtures) have become popular among customers in Africa and Asia.

#### Measures taken

In order to overcome the consequences of the introduction of quarantine, exporting companies were forced to quickly revise their budget plans and create projected budgets, taking into account the fall in supply and prices. The work schedule of the company's employees was twice as intense as in the pre-quarantine period, and the main areas of work of exporters became connected with, first of all, the establishment of relationships with customers and finding new customers.

In addition, companies have been tasked with responding to issues related to the health of employees in enterprises promptly. Such measures as transportation of personnel at the expense of companies, temperature screening of employees, provision of necessary means of protection were set up.

Due to changes in the volume of orders, Ukrainian companies during quarantine restrictions have optimized the work of their enterprises and reduced the number of employees to meet the needs of production. For some employees of the companies, in the offices, the transition to remote work mode was organized rather quickly, a significant part of the work processes was switched into electronic format, including remote communication between employees. At the same time, the staff members of the institutions did not face the drawdown during the quarantine period, and due to the increase in the intensity of work throughout the given term at some enterprises (Nibulon) there was even an enlargement of personnel.

Quarantine measures have accelerated the process of introducing the latest technologies in the enterprises of exporting companies, primarily in terms of increasing the volume of electronic document management (Nibulon). In addition, communication with customers on product export arrangements took place entirely online via web conferencing and sales platforms.

Under the process of organizing the work during the quarantine, the ties of Ukrainian exporting companies (Dobrodiya) with state institutions (the Chamber

of Commerce and Industry of Ukraine, the Office for Export Promotion in Ukraine, the Kyiv Chamber of Commerce and Industry) were strengthened.

Given the fact that Ukraine still faces an increased level of infection, the management of exporting companies has decided to alternate the work of their staff in the offices, along with continuing part-time work remotely to avoid crowds on the premises.

Overall, domestic exporters consider the measures taken by the state to overcome the consequences of the pandemic to be ineffective, especially with regard to providing medical facilities with personal protective equipment for workers and special equipment to combat coronavirus.

Moreover, there was also no significant practical assistance on behalf of the state for Ukrainian export business during the quarantine period. On the contrary, some large exporting companies (Interpipe) set up their own pandemic headquarters to counter the effects of coronavirus, which included the activities of their key enterprises; and also took an active part in the operation of local (city and regional) coronavirus headquarters, allocating funds for the purchase of medical equipment for local hospitals.

The activity of Nibulon reflected a similar approach, as in the conditions of a pandemic it equipped a laboratory center for conducting research on coronavirus; reconstructed the regional clinical hospital; financially assisted medical institutions in Ukraine.

#### Forecasts and risks

Due to the uncertainty of the further development of the pandemic situation, it is currently difficult to foresee the prospects of domestic exporting companies. Currently, companies continue to adjust their budget plans for the near future and actively search for new activities and markets.

In the event of the further strengthening of quarantine restrictions, large exporting companies in Ukraine aim to continue the ongoing operation of their productions by finding more flexible approaches to the organization of activities, such as the transition to a shift mode.

In the context of the spread of the pandemic, the main risk for Ukrainian exporters lies in the deterioration of relations with buyers, in particular in matters of non-compliance with the terms of the contract and non-payment for products. The risk associated with the so-called «trade wars» and high competition in the exporter market, especially the possibility of individual countries imposing various additional trade restrictions (embargoes, quotas, the emergence of problems with licenses, etc.) remains significant as well. In addition, there is a considerable problem with the domestic system of training qualified personnel who could work successfully in the export industry.

#### Recommendations

The issue of improving the existing mechanisms of legal protection of domestic companies remains crucial for Ukrainian exports; as well as monitoring the reliability of new counterparties in crisis conditions; providing support from Ukrainian embassies in countries that receive domestic products for the quarantine period.

Currently, it is of a great significance for domestic businesses involved in the export of goods to minimize unit costs, as well as retain customers and enlarge their customer base as much as possible.

On the agenda for Ukraine, the priority tasks include finding and implementing more effective means of combating the effects of the pandemic. An important recommendation for public authorities is to choose more cautious and balanced approaches while introducing similar restrictions on the work of domestic business in the future.

In order to achieve an effective operation of entrepreneurs in Ukraine, it will be important to launch large-scale national projects to support the domestic business sector and national producers, primarily — the focus should be on the development and implementation of government programs to save jobs by reducing the credit burden on business; revision of the mechanisms of protection of the national producer given the new socio-economic conditions caused by the pandemic.

#### Importers of cars and equipment

#### Characteristics/Impact of the pandemic

Quarantine restrictions negatively affected the activities of Ukrainian importers, due to the ban on international flights at the end of March 2020. Many domestic companies faced problems with the supply of goods and fulfillment of financial obligations to customers. Under such conditions, domestic importers had to develop unique logistics routes quickly to supply products to their customers. Another consequence of the introduction of quarantine was the tightening of prepayment

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requirements by all distributors given the possible risks of disruption of the supply of goods.

Taking into account the specifics of the work of domestic importers of goods with international customers, quarantine restrictions led to a decline in orders somewhat later than in other sectors. For example, the Ukr-China Communications company, which serves the import and export business with China of small and medium-sized firms, in the second quarter of 2020 generally experienced an increase in activity, a rise in the number of new customers and contracts. The decrease in the number of deliveries occurred only closer to June 2020 due to a drop in orders and reduced costs for the company's customers.

Mediatrade, a supplier of foreign products of professional engineering equipment to Ukraine, faced delays in the supply of engineering equipment during the quarantine period, which were in particular caused by shutdowns in Europe and China. Under quarantine, the company's number of customers decreased, which led to lower profits and forced Mediatrade's management to reduce the salaries of its employees. Preliminary estimates indicate that this year's Mediatrade's profits will be 50% of the ones planned.

During the period of strict quarantine, Porsche Center Kyiv Airport tackled a decrease in services by almost 15% compared to the same period last year, while in the second quarter of 2020 the volume of services dropped by 5% in comparison to the first quarter. The situation improved after the easing of quarantine restrictions: by the end of summer — early autumn 2020, supply volumes began to show an increase of 25% compared to those observed at the time of the lockdown.

Restrictions on international transport in the aftermath of the quarantine introduction caused a cancelation of plans for domestic companies to launch a large number of new projects and attract potential customers. Given the crisis, many customers have changed their business priorities, so currently the import activity is not a primary direction for many of them.

Quarantine has fostered the process of finding new models of communication with clients and their adaptation to new conditions. During this period, domestic private companies conducted twice as much marketing research for their customers, who managed to restore orders in the summer of 2020, or even increase them (especially in the supply of electronics, toys, auto parts, etc.). The processes of digital transformation during quarantine have allowed some companies to more actively conduct online sales and plan activities remotely with the engagement of digital experts, as well as to make video presentations of their products (Porsche Center Kyiv Airport).

#### Measures taken

Anti-epidemic measures applied by companies included the transition to remote mode; restrictions on the use of public transport by employees of companies; providing staff with personal protective equipment and disinfection. The management of Porsche Center Kyiv Airport was able to organize the work of the service department in a contactless format for customers alongside the closure of offices with sales departments. During the three months of strict quarantine measures, Mediatrade reduced the salaries of employees by 10-30%, and also agreed with landlords to lower the rents (now the relevant payments have returned to their pre-quarantine level).

During the quarantine, the Ukrainian importing companies did not practice reductions in the staff; on the contrary, the management of some institutions (Ukr-China Communications Company) began to expand the team of employees given the heavy workload by virtue of the independent organization of charter flights to deliver goods from China. The intensification of activities also contributed to the fact that in the respective companies some employees (in particular, managers) were sent on leave due to exhausting working conditions.

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#### Forecasts and risks

Compared to the international economic crisis of 2008, quarantine restrictions during the pandemic have caused less economic shocks to business. However, the situation is currently complicated by a high degree of uncertainty in the near future. The forecasts for aviation logistics, which have gradually resumed operations from June to August 2020, are somewhat more positive, but no significant changes are expected for further intensification of activities with logistics routes.

Some importing companies have significantly reduced their costs during the pandemic period and now plan to reach the level of profits that was planned before the quarantine. For example, the dealer center Porsche Center Kyiv Airport, according to the results of the current year, predicts a decrease in overall profits by 25%.

In case of the re-intensification of quarantine measures and further deterioration of the economic situation, there is a certain probability (15–20%) of closure of some importing companies. Nevertheless, given the existing experience, domestic importers are reflecting readiness to consider possible new quarantine restrictions, taking into account the development of flexible approaches to work in a crisis. First of all, the matter refers to the optimization of the expenditure side.

Among the risks that currently remain relevant for domestic importers, there is a necessity to emphasize the lack of available funds for circulation; administrative challenges (in particular, corruption schemes in the public procurement process); blocking tax invoices. The regulatory and operational risks associated with a further decrease in sales due to the deterioration of the financial capacity of customers, as well as the cessation of supply due to the possible suspension of production at enterprises abroad remain of significant importance as well.

In addition, a substantial risk for the import industry reveals in the lack of sufficient qualified personnel. Given this statement, some companies (Ukr-China Communications) are developing special programs and functional instructions, thus are ready to provide training for potential employees.

#### Recommendations

The main recommendation for Ukrainian importing companies is to develop and use a proactive approach to work. Such factors as presence of a strong team of specialists, reliable partners, models of adaptation to possible external changes are also important.

For those companies, which are operating in the field of import-export supply, there is a great risk connected with the correctness of the valuation of goods (for example, Chinese goods are often cheaper than European). In some places, importing companies have the opportunity to order goods at a discount (adjustment), but still face the problem of raising the cost of relevant products during its delivery to Ukraine. In this context, a positive outcome in the work of importing companies will be the development of more transparent approaches to the valuation of goods by customs.

In such a difficult economic situation and the lack of available and cheap credit funds, domestic importers have a demand for the development and implementation at the state level of interest-free credits in accordance with the number of employees of a company.

Recommendations for the business sector on quarantine activities include the search for optimization of activities (averting dumping) and communication with government agencies through relevant associations or non-governmental organizations to lobby their interests, including compensation for the number of employees.

#### IT sector

#### Characteristics/Impact of the pandemic

Quarantine restrictions have affected various aspects of IT companies in Ukraine: financial results, methods of work, means of communication with customers, etc. The customer base of IT companies was divided into three main categories: some customers experienced a significant deterioration following the introduction of quarantine restrictions, others felt almost no impact; as for remaining, the pandemic has opened up new opportunities for active development.

This situation affected the dynamics of orders in the IT sector, where the key factor was the direction of work of certain customers. Thus, the development during the quarantine period was observed in companies involved in the process of organizing distance learning or product supply; at the same time, volumes dropped in such segments as aviation, tourism, hotel and restaurant business.

The dynamics of revenues of IT companies for the first quarter of 2020 (April-June) in quarantine conditions decreased slightly compared to the same period in previous years. Some IT companies experienced a reduction in profits in the second quarter of 2020, compared to the first (by 4–5% in EPAM). Sigma's IT company's revenues dropped significantly during the quarantine period (by \$1 million a month), but are recovering now.

In general, the IT sector in Ukraine does not consider the prospect of a significant decline in overall revenue at the end of this year. GlobalLogic witnessed more dynamic revenue growth in the second quarter of 2020. If in previous years the company had growth rates of 20% to 30%, now forecasts indicate that growth will be up to 20%. Sigma estimates growth at 10–15%, but emphasizes that everything will depend on the situation in the fourth quarter of 2020.

Despite the fact that some customers of IT companies have experienced budget cuts, due to diversification, the representatives of the IT sector managed to cover the decline in orders in one segment with significant growth in another quickly.

Quarantine has not had a significant impact on the digital transformation process in the IT industry: companies have long been building a remote infrastructure applying global remote resource management practices. Local services were digitized at the beginning of the introduction of quarantine measures. The transition to online communication between employees of IT companies and customers has contributed to the active testing of various formats of online conferences and negotiations. Many customers of IT companies have increased the need to implement digital transformation processes.

In some cases, the decision to ban foreigners from entering the country had a negative impact on the work of the IT sector in Ukraine, including the cases in which some customers of IT companies in Ukraine who planned to participate in negotiations with the management of institutions.

However, in general, the IT industry has not been significantly affected by the pandemic with reference to the development of relevant companies, but rather the

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quarantine exacerbates the trends in the development of this field, which existed before the quarantine and which also increased demand under the restrictions (transition of companies from simple services to more complex).

#### Measures taken

The main measure to reduce the impact of quarantine restrictions on the IT business has been the transition to teleworking in order to maintain business continuity and fulfill contractual obligations. Given the specifics of the field of activity, IT companies were able to transfer the vast majority of employees to remote work in a week.

Some companies (GlobalLogic) had experience with remote testing in the past, which allowed them to develop appropriate organizational rules in advance in case of any force majeure. EPAM also had a similar experience in elaborating a platform for remote work.

IT companies have developed detailed office visit plans for those professionals who, for technical reasons, have not been able to work remotely. Relevant measures also included the organization of transportation of employees (private carriers), catering for staff in offices, purchase of disinfectants and accommodation of employees in the premises in compliance with the norms of social distance, the launch of electronic document management; purchase of medical equipment (oxygen concentrators).

Under severe quarantine restrictions, IT companies made concessions to their customers, agreeing on deferred payments, temporary discounts, reduced orders, and more. Currently, some clients return the volumes of their contracts. Another measure was the redistribution of sales focus to customers who felt the need for additional IT services. With the spread of the coronavirus pandemic, IT companies have begun to place more emphasis on implementing innovative solutions for their customers, including focusing on investing in startups.

Challenges encountered in the process of organizing remote work for some IT companies were related to the strengthening of cybersecurity (encryption of certain internal services), as well as the convenience of working from home for some categories of staff. Some IT companies («EPAM») have partially closed almost half of their offices. Quarantine restrictions also affected the ways of communication with customers of IT companies — business trips for employees abroad have been canceled.

The issue of reductions for the IT sector for the quarantine period was not relevant; employees of some IT companies could take temporary scheduled vacations. The specifics of the companies 'work, which allows them to engage freelance specialists in case of an increase in orders, also contributed to the preservation of employees' jobs. Some employees of the companies remained to work in offices on a regular basis (IT support, managers), and there were a small number of specialists who due to technical conditions could not work remotely. At present, in different cities of Ukraine, where branch offices of certain IT companies are located, employees of institutions can visit them depending on the epidemiological situation on the ground. In some institutions (GlobalLogic), almost 90% of staff continue to work remotely.

Large IT companies have developed their own security assessment procedures in various branches and offices of the country considering the existing epidemiological risks. In addition, some institutions conduct surveys of staff on the wishes of further work. Approaches to assessing staff performance during quarantine restrictions changed, and regular salary reviews for employees were postponed at the end of the first quarter, allowing some companies (EPAM) to save money. Quarantine has also influenced the development of programs for remote team management, review of training programs, organization of project activities, etc.

The lack of assistance from the state did not significantly affect the activities of IT companies, which managed to cover their costs financially during the quarantine period. Moreover, IT companies provided assistance (through purchasing medical equipment and drugs) to hospitals in different regions of Ukraine.

## Forecasts and risks

According to the projections, the IT sector will not likely witness a growth in the short term, although large companies can expect higher profits. The further development of the industry will be influenced by the processes related to the trends of the world economy and the situation on the stock market, which may intensify the processes of transformation of IT companies and the search for new business models. At the same time, some IT companies, by the end of 2020, forecast to receive up to 10–20% growth compared to last year.

The main risks for the further operation of the IT company include both uncertainty and unpredictability of the processes taking place in the global financial environment. In addition, the situation with information technology reforms in Ukraine remains undefined, outlining the risks associated with regulatory and fiscal policies.

Among the significant risks in the short term is the lack of qualified personnel — specialists in the IT sector, who are able not only to obtain quality education, but also work in Ukraine.

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## Recommendations

The main recommendation for the state is to take into account the concerns of the IT sector regarding the conditions for work in Ukraine, namely: reducing the regulatory policy of the state and promoting the facilitation of business conditions (first of all, to ensure that IT companies do not change their activity terms regarding taxations constantly). Relevant changes can be implemented in Ukraine by emulating similar experience from other countries.

One of the priority issues in the context of the spread of the pandemic and the introduction of restrictive measures remains the strengthening of assistance to private entrepreneurs (reduction of office rents; minimization or abolition of VAT).

The assistance rendered by the state and international partners for the development of IT education in Ukraine is extremely important, because the numerous funds that private IT companies invest in the material and technical situation of educational institutions turn out to be insufficient today. The lack of fundamental reform to improve the quality of training of IT industry professionals makes Ukraine less competitive compared to those countries where the aquate number of relevant qualified personnel do exist.

## Shopping malls and cinemas

## Characteristics/Impact of the pandemic

Shopping and entertainment centers (malls) and cinemas, along with the restaurant business and tourism, have suffered the most adverse consequences from quarantine restrictions among all other sectors of the economy. Within four months of the introduction of strict quarantine in March 2020, all malls and cinemas in Ukraine were closed, which turned out to have a severe impact on the relevant institutions.

Given the annual budget, for example, Dream Town shopping mall has already lost 21% of its potential profits during the quarantine period and is projected to lose an additional 10% by the end of this year. This is due to the peculiarities of the businesses of the mall in quarantine conditions: for the period of easing of quarantine measures only 4,000 square metres out of 100,000 of the «Dream Town» area were opened.

The situation related to the work of cinemas is no less critical. Thus, after the introduction of quarantine, for instance, the amount of the network Planet Cinema profits in July 2020, compared to the same period in 2019, decreased by 4–5 times (up to UAH 5 million in losses per month), and by the end of the summer of 2020, this network earned only 20% of the profits of last year. According to the forecasts of the Multiplex cinema network, the losses from the planned profit indicators for 2020 will be about 30–40%.

Despite the opening of shopping malls and cinema networks in June-July 2020, the attendance rates remain very low. In the first weeks of July, the income for the network of Multiplex cinemas was only at the level of 5-10% of the indicators for the same period in 2019. Only up to 10% of visitors began visiting the cinemas again during the period.

The increase in cinema attendance in early autumn 2020 occurred mainly due to the release of premiere films. In the first two weeks of September 2020, Multiplex cinemas were visited by approximately 50% — 60% of the total number of visitors for the same period in 2019. However, this outcome does not significantly improve the working conditions of the entertainment sector: losses of some cinema networks reached the observed indicators in April-May 2020, due to the growth of staff salaries, which are now paid in full by cinemas.

During the strict quarantine, the entertainment industry virtually fell into technical default; debts to creditors grew and were not covered. All issues related to the settlement of the situation were resolved individually between the management of the mall, the cinema networks and creditors without the support on behalf of the state. The only measure to help entertainment establishments during the period of strict quarantine was realized in a decision on the possibility of reducing the rental rate to the level of landlord's expenses, but eventually it proved ineffective.

#### Measures taken

Measures taken by the management of the mall (for example, Dream Town) included the reduction of contracts with suppliers; putting employees on leave at their own expense and introducing their works on a rotational basis. Entertainment establishments tried to support all employees as much as possible, the latter received their salaries partially. The management of cinema networks formed a minimum wage fund, although employees worked at reduced rates.

Due to safety requirements, some mall offices remained open during the quarantine; individual departments of the centers worked remotely via different platforms for providing communication between staff. Despite the fact that the malls lost some tenants, the situation was balanced by virtue of agreements between management and tenants of the premises on the abolition of rent and marketing fees.

The cinema chains (Planet Cinema, Multiplex) have launched an initiative to sell certificates to visitors, which can now be exchanged for a ticket for any screening,

regardless of the cost of watching the film. The corresponding sale has become one of the few options for obtaining a minimum profit during quarantine, although it accounted for only about 1% of the total pre-quarantine revenues of cinemas.

In addition to the sale of certificates, cinemas have implemented measures aimed at maintaining an information field for visitors via advertising their establishments (introducing a format of car cinemas, water cinemas; work on social networks). The Multiplex network has elaborated an online store selling toys and popcorn; as well as developed cooperation with some restaurants, which began to produce special branded products in packaging from Multiplex.

During the severe quarantine restrictions, all cinema staff were switched to remote work. Remote mode of operation was established on the basis of online platforms and social networks; documentation was also kept in electronic form. The absence of problems in the organization of remote work of the staff can be explained by the fact that at the time of the introduction of the remote format most malls and networks of cinemas have already applied it as an element of the digitization process — online ticket sales have long been launched, mobile applications have been elaborated as well.

Some establishments (Planet Cinema) initially paid 70% of wages, later — 50%, and, following the opening of cinemas in July, they immediately returned to 70% figure of payments. Meanwhile, those workers who are currently working in these entertainment facilities receive a full salary, in contrast to the staff of the central office and administrative staff. Reductions during quarantine in cinema networks concerned mainly seasonal workers (designers); other dismissals were isolated cases. In some cinema networks (Multiplex), employees took turns going on vacation at their own expense, returning to their workplaces following the easing of the quarantine measures.

## Forecasts and risks

Strategies for doing business in the entertainment industry this year have proved to be unviable, given the current crisis. In this context, forecasts for the future of the entertainment sector in Ukraine remain uncertain.

Planning further activities for cinema networks currently differs from the classic quarantine budgeting processes. For example, Multiplex plans and regularly reviews various scenarios for the future operation of the network for six months, given the dynamics of events with the spread of the pandemic. According to the positive scenario, the state of affairs with screenings in cinemas may improve from the winter of 2020–2021, when the release of expected films is expected. In the

future, malls and cinema networks plan to change the strategy of their activities in order to differentiate business and implement more innovative business models.

Currently, the biggest risks of the future operation of the mall are associated with the lack of interest of foreign businesses and tenants to conduct business on such sites, as well as low purchasing capacity of the population.

Risks related to the supply of films remain the most relevant for cinema networks; re-closure of institutions in case of intensification of quarantine measures; launch of online film studios bypassing presentations in cinemas, etc. Therefore, the activity of film studios is quite difficult to predict: some of them are not yet ready to launch large-scale projects; others are starting to partially show content via VoD platforms (Video on Demand).

Given that no cinema can currently fully carry out its lease obligations under the agreements, there is a risk of deteriorating leases and further closure of cinema networks.

#### Recommendations

In the event of further intensification of quarantine and re-closure of malls and cinema networks, the consequences for the operation of the relevant institutions can be catastrophic: dismissal of employees; further debt growth; aggravation of the situation with landlords. In this context, the main recommendation for the state is to create such conditions under which shopping and entertainment facilities will not be forced to close, but would continue to operate in compliance with all necessary sanitary and epidemiological measures.

Regarding the improvement of the situation in the entertainment industry, first of all, it is necessary to regulate the tax system and make it as attractive as possible for the inflow of funds into the country (simplification of conditions for attracting foreign investment). An equally important issue remains the need to reduce bureaucratic procedures (permits and other documentation) for entrepreneurs. Availability of capital, simple regulatory policy of the state, buying power of the population — these are crucial factors for conducting successful business in Ukraine. In addition, in today's reality, the state should actively implement programs aimed at preserving existing workplaces.

The film distribution market in Ukraine should emphasize the reviewing approaches to working with potential visitors in a pandemic. Primarily, the matter is related to the introduction of the regular communicative actions directed on informing the population about features of visiting cinemas during quarantine restrictions (highlighting possibilities of maintaining sanitary and epidemiological norms and rules of social distancing).

# Logistics (freight and mail)

## Characteristics/Impact of the pandemic

From the point of view of profit dynamics, quarantine restrictions have not caused much damage to delivery management systems (in particular, the port industry and postal operators).

In the first 9 months of 2020, Ukrainian seaports handled 118.78 million tons of cargo, 3.7% more than in the same period last year, due to external conditions in key export markets. Regarding large freight operators (TIS), the turnover exceeded the expected targets at some terminals. Besides, in the first half of the year, compared to the same period last year, TIS terminals increased cargo turnover by 22%.

Quarantine restrictions have also had a positive effect on the work of postal operators in terms of the introduction of several new services, among which a special attention is currently paid to the delivery of medicines and food, which has become a commercially successful project. For example, Ukrposhta has now more than 1,000 orders for medicines per day, with more than 50% of orders from rural areas. In addition, for the quarantine period postal operators proved to be quite successful in conducting a significant number of social actions (Ukrposhta delivered Easter cakes; Nova Poshta sent more than 50,000 food kits to vulnerable groups of people in 19 regions of Ukraine).

In the first half of 2020, Nova Poshta delivered more than 128 million parcels, which is a third more than in the same period last year. At the same time, there were fewer shipments of large loads (over 30 kg) due to the decline in business activity in the country during this period. In the second quarter of this year, courier delivery at Nova Poshta increased by 35%. In the meanwhile, the number of international shipments for 6 months of 2020 doubled in comparison to the same period last year. In general, domestic postal operators (Ukrposhta, Nova Poshta) in the first half of 2020 reached the target (+ 20% growth year-to-year). Thus, the negative aspects of the introduction of quarantine measures could be neutralized by the positive ones.

The greatest load on post offices fell on the period April-May 2019, which was characterized by the most severe quarantine restrictions. During this period, the largest increase was seen in the volumes of parcels and orders of goods on trading platforms (including international — AliExpress, iHerb, NP Shopping), as well as exports. At the same time, the number of utility payments and written correspondence decreased.

In the context of logistics, postal operators have suffered damage due to reduced passenger traffic for air logistics, which has become more expensive during quar-

antine. Despite an increase in international parcels by 50%, only half of the previous flights remained for logistics operators.

Throughout the period of quarantine, postal operators revised and redistributed cost items, but overall, the annual plans have remained unchanged due to revenue diversification. At the same time, the work of postal operators was somewhat negatively affected by the decisions to simplify the procurement procedure, which concerned the service activities of post offices; as well as transportation restrictions, due to which companies incurred additional costs to ensure their own transportation of employees.

#### Measures taken

The main measures that were introduced during the quarantine period to ensure the continuous operation of freight transport and mail, included a set of actions to maximize the protection of employees (remote format; PCR testing for employees; providing personal protective equipment; disinfection of premises, etc.); and review of business processes to provide uninterrupted operation in quarantine and destruction of logistics chains. Despite the scale and technological complexity of large port operators, companies have managed to switch a significant part of employees to a remote format as soon as practical. This was achieved through the early preparation of the relevant process pending the strengthening of quarantine.

Additional measures implemented by postal operators included the allocation of infrastructure (offices and sorting centers) that ensured ongoing operation; launch of a system for the receipt of pensions, medicines, food. In order to minimize contacts between people, the network of post offices provided marking to maintain distance between customers, introduced the position of «street administrator» to serve people on the street, imposed the rule «one operator — one customer». At the beginning of the quarantine, Nova Poshta started installing post offices all over Ukraine, namely near grocery stores, gas stations and residential complexes (currently their number reaches 1,400 units); and provided the possibility of self-service for customers via a mobile application and a business office. Some postal operators (Ukrposhta) have set up a special «hot line» as a service by virtue of which citizens can report the absence of personal protective equipment in a particular post office, especially in rural areas.

Most of the investments of postal operators were aimed at the construction and automation of terminals, improvement of service and expansion of the network and of its branches. Currently, the management offices of logistics operators have introduced a flexible work schedule for staff — employees work either remotely or alternately in the field offices. In case of illness, the company's employees test

workers en masse at their own expense and, if necessary, pay for sick leave and provide compensation. In some companies (Nova Poshta) an epidemiological service has been set up to monitor the operation of departments for compliance with sanitary and hygienic rules in the context of a pandemic.

For the period of quarantine, mass layoffs of employees of companies in the field of freight transportation were not observed. On the contrary, cases of additional employment in relevant positions of people who lost their jobs during the spread of coronavirus infection did happen. The situation with post office employees was similar — instead of layoffs, additional vacancies were announced due to the need to increase human resources (couriers, operators, loaders) in the workload.

The large-scale digital transformation of logistics services, in particular the port industry during the quarantine period did not take place given the specifics of seaports, where it is impossible to completely avoid human presence. Meanwhile, large operators began to ensure the maximum utilization of online services; in some cases, plans to digitize a number of processes have been accelerated. Where possible, the upgraded conversion of all activities to the online format took place. The same situation was observed at post offices, where paperwork was replaced by electronic format.

Private trucking companies received no aid from the state. On the contrary, there were cases of financial assistance from major logistics operators (TIS, Nova Poshta) to the state — the allocation of funds was directed to help Ukrainian hospitals (purchase of medical equipment and personal protective equipment, etc.).

## Forecasts and risks

Currently, postal operators predict that deliveries will remain at the planned level, which existed before the introduction of quarantine. However, given the growing trends of the e-commerce market in Ukraine, the market for delivery of goods is expected to expand in the future.

The most serious risks for logistics companies in Ukraine are seen in the fiscal policy of the state, in particular the issue of further tax increases, as well as regulatory policy. This is especially true for those companies which regulate part of the income (in Ukrposhta 50% of income is regulated and depends on the tariff policy). In addition, there is a significant risk of staff shortages.

In case of further strengthening of quarantine measures, freight companies and postal operators have already developed plans for personnel management in a crisis. Employees of the respective companies are currently being instructed and monitored for compliance with safety regulations. Operators also prepare stocks

of personal protective equipment in advance so as not to buy them at higher prices in case of shortage.

## Recommendations

In the context of promoting greater efficiency of logistics operators in Ukraine, the state should focus its activities on economic liberalization processes, including deregulation, tax cuts and the fight against monopolies, while avoiding increasing pressure on domestic business. For today's logistics operators, it is recommended to continue their activities in the framework of facilitating delivery processes to consumers, as well as to conduct a search for more flexible approaches to work in crisis conditions.

For further successful work of the industry in the conditions of pandemic spread, logistics operators should opt for a preventive way to the organization of their branches operations. It is necessary to purchase personal protective equipment in advance and provide medical equipment to its staff between the waves of the disease.

In addition, the state should conduct information work with the population in order to provide the latest operational information on the dynamics of the disease and to avert possible speculation. Plans for potential strengthening of quarantine restrictions should be based on international standards and research.

## Medical technologies and drugs

## Characteristics/Impact of the pandemic

The impact of quarantine measures on the work of pharmaceutical companies in Ukraine was uneven: after a sharp but short-term increase in demand for certain categories of drugs in March 2020, the drug market in the following months (April-May) began to decline — the volume purchases fell to 20 %.

Sales stabilized in May (after the May holidays); for example, in the first half of 2020, the market of products of the pharmaceutical company Darnitsa grew by 5% and it is foreseen that the firm will meet the projected indicators by the end of the year.

Subsequently, the market of medicines and technologies gradually began to recover (in July-October 2020, the demand for various products increased slightly). At the same time, the restoration still remains slow due to a decrease in the overall purchasing capacity of Ukrainians (besides, the market is more than 80% dependent on consumers) and a fall in the number of prescriptions given a decrease in hospital visits by patients in quarantine. The lifting of strict quarantine restrictions has improved people's expectations of their financial situation. However, the volume of purchases of medicines and drugs remains low and has not yet returned to the pre-quarantine level.

Quarantine had a negative effect on the organization of pharmaceutical companies, which were forced to respond quickly to the sharp increase in demand for certain types of goods. In addition, quarantine restrictions have had an adverse impact on global drug supply chains, although large networks of national pharmacological companies have created a strategic stockpile of raw materials by the end of the year to produce important medicines and meet the needs of health facilities. The temporary closure of hospitals also affected the pattern of drug consumption, as many people were unable to receive fully planned medical care. At the same time, some pharmacological companies (for example, Farmak) at this time began to take orders from abroad from various countries (Israel, EU countries), where there was a shortage of certain types of drugs.

Under the conditions of quarantine, profound transformations of corporate culture, communications and management approaches in some pharmacological companies of Ukraine (for example, Darnytsia) contributed to the growth of production, introduction of innovations and optimization of time and resources. There have been changes in the company's strategy, which can now be identified as the restructuring of the commercial function as a priority; focusing on digital transformation; strengthening the export direction; diversification of the supply of active pharmaceutical ingredients (API); growth of investments in digitalization projects; improvement of the inventory management system (Warehouse Management System); review of projects and rationalization of the portfolio of drug development. Meanwhile, some other large networks of companies have not changed their strategy significantly, although they have revised the administrative costs of business and marketing policy.

During the quarantine period, pharmacological companies took the opportunity to increase the production of products for which demand has recently increased (antiseptics, protective masks). The possibility to launch clinical trials to develop drugs that reduce the risk of COVID-19 (eg, hyperimmune immunoglobulin) has become a positive development.

## Measures taken

The anti-crisis measures of companies for the production of drugs during the quarantine period provided flexibility and rapidity of response to the changes and included the following:

- adjustment of production plans in response to growing demand (increased production of high-demand drugs);
- establishment of a strategic stock of raw materials by the end of the year;
- preventive measures within the digital transformation of business (checking the readiness of IT infrastructure);
- ensuring the safety of personnel (purchase of personal protective equipment, disinfection; health insurance; creation of a reserve fund of medicines for employees, etc.).

During the quarantine there was also an active use of e-commerce tools (Liki24. com, PromUA, etc.).

The organization of remote work was carried out promptly: in a short time it became possible to switch employees to a remote mode, electronic document management was introduced as well. At the beginning of the spread of coronavirus (even before the introduction of quarantine restrictions in Ukraine), some companies restricted travel and offline training for their employees. At some companies, employees could optionally take tariff paid leave or leave at their own expense. Non-production staff of pharmaceutical companies have demonstrated the ability to work in a flexible schedule.

The personnel of the companies were not reduced during the quarantine period. Some pharmacological companies have introduced regular monitoring of the effectiveness of the measures taken to assess the feasibility of their use (surveys were conducted among employees who demonstrated staff satisfaction with the established regime of remote work). Besides, the management of pharmacological companies provided safe transportation (by minibus) to the work of those workers who worked directly on the production (engineers responsible for quality control, workers of specific equipment). A procedure for measuring temperature among staff (using thermal imagers) was provided. In addition, particular regulations have been developed and adopted to prevent the spread of infection and to take action in case of detection of sick patients at the enterprise.

The pharmaceutical industry did not receive financial assistance from the state. At the same time, consultations were held at all levels of the executive and legislature given the needs of business and companies (for example, on the registration of some products used during the pandemic). Throughout the quarantine, pharmacological companies also provided significant additional funding for charitable assistance (purchase of a laboratory-diagnostic complex, mechanical ventilation, laboratory equipment); to protect staff; transfer of employees.

### Forecasts and risks

The threats and risks for drug manufacturers are pertinent to the prospects of both reduced consumption and demand due to falling incomes. Under these circumstances, some companies forecast a reduction in their profits by 20% the following year.

The risk of canceling a significant number of planned procedures and operations can be revealed in a possible sharp increase in complications of chronic diseases, heart attacks, strokes, etc., which will significantly affect the health care system, complicate the work of doctors and exert more pressure on the economy. Economic risk is not ruled out for small pharmaceutical companies, therefore many of them will find it difficult to overcome the crisis caused by the pandemic.

Among other risks, the problem of resumption of supply chains of pharmaceutical companies for export and import of raw materials from abroad remains relevant. A more global risk concerns the possibility of economic collapse in the country in the event of a return to strict quarantine.

In addition, there is a risk of a shortage of qualified personnel in the context of entering new markets, which needs to be addressed at both the company and government levels, given that this problem has existed before the pandemic.

#### Recommendations

The main recommendation for the future activities of pharmacological companies in Ukraine concerns the processes of cost optimization at each individual enterprise, taking into account the efficiency of staff, supply chains, etc.

Among the topical issues are the introduction of e-prescription and the organization of a full supply of medicines (following the adoption of the law on e-retail trade in medicines on September 21, 2020), which can dramatically change the state of the pharmacy and pharmaceutical market. The matters related to investing in innovation and further digital transformation of business are similarly of a great importance, given that after the end of quarantine the role of digital technologies, digitalization of communication within the healthcare system and the use of e-commerce will continue to grow.

The health care system in general needs further improvement and additional regulation. The inadequate provision of medical facilities with qualified medical personnel to work during the pandemic is also a matter of concern. In this context, a priority issue is to establish regular communication between government and business in order to find optimal solutions to prevent negative consequences for various sectors of the economy.

In addition to the above mentioned, an important issue remains the support at the state level of the domestic pharmaceutical company Biopharma, which specializes in the development and production of innovative high-tech drugs from human blood donor plasma. Given the specifics of the company and the importance of the company for the market of domestic drug manufacturers, there is a need to develop infrastructure for plasma collection processes in places where the company currently does not have access (for example, in Western Ukraine).

## Media

## Characteristics/Impact of the pandemic

The spread of the pandemic has ambiguously affected trends in the Ukrainian media environment. The introduction of strict quarantine measures in March-April 2020 had a positive impact on the work of the media. Due to restrictions on the movement of people and their stay at home, there was an increase in website traffic and the number of views of domestic TV channels.

The situation changed with the easing of quarantine in July-August 2020 — during this period, the dynamics of television viewing fell significantly; positive indicators resumed only in September. Meanwhile, notwithstanding the gradual increase in television viewings in the autumn, the indicators still remain less successful compared to the same period last year.

The first months of quarantine had a negative impact on the print media — during this period, publications partially stopped sales, and this led to the reduction in the annual performance of relevant institutions (for example, the magazine Novoe Vremya during the period of strict quarantine witnessed a decrease in the planning figures by 50%).

A similar picture was observed with regard to advertising activity in the media space. At the time of the introduction of strict quarantine, advertisers suspended their activities due to the uncertainty of the socio-economic and epidemiological situation in the country. Advertisers, which had become affected by the crisis, following a reduction of orders. This led to the decrease in their budgets. In this context, April-May 2020 became a non-profit season for the media business. The advertising market of advertisers, revenues and expenses of advertisers decreased in the television realm by almost 50%, in the segments of radio and outdoor advertising.

Nevertheless, due to the easing of quarantine measures, as well as the growth of brand activity and political advertising before the election, there was an increase in the occupancy of advertising units in the domestic media environment this fall. The period of adaptive quarantine demonstrates the gradual recovery of TV channels' revenues at the level of last year (1+1 media). Website traffic of such popular portals (LIGA.net, Novoe Vremya) also shows a tendency to increase, respectively, the revenues from advertising on Google have also increased. In accordance with the annual indicators, the profits of the relevant online publications are projected to grow by 30%.

As the structural changes brought about by the quarantine period have not yet been fully explored, this forces media companies to be pragmatic and cautious about investment decisions in the short term. In general, quarantine has led to a revision of the business strategy of domestic media, which are forced to choose more flexible and mobile approaches to work, making situational and operational decisions.

## Measures taken

Since the beginning of the quarantine, media markets, like other industries, have switched to remote mode. Leading web resources have been sufficiently prepared for this. Thus, the LIGA Group of Companies has all its processes and systems stored in «cloud» services. Accordingly, it has reduced costs and simplified the transition to remote format. Large media groups (1+1 media) kept financial indicators within the plan due to cost optimization: restructuring of the broadcasting network, suspension of production, reduction of the number of premieres.

Some companies had to lay off staff or send them on vacation at their own expense. The LIGA group of companies has temporarily reduced the system of bonuses and incentives without reducing salaries. Novoe Vremya withdrew from the planned increases and reduced 30% of its staff on the radio. At 1+1 media holding, the salaries of top management were reduced by 25–35%. At the same time, the 1+1 group had no plans to reduce staff due to quarantine, assessing the effectiveness of functions and processes before the crisis. Various projects — television programs, image initiatives, events and simply related businesses or business projects — were restricted due to non-compliance with the tasks of the media group. Therefore, the slight staff downsizings related to the earlier circumstances, rather than to something unplanned or emergency case.

In general, most media companies have been working remotely (except for radio, due to their own specifics) during all months of quarantine. Offices are more commonly utilized exclusively by administrative staff (IT staff, accounting, developers,

secretaries). Attendance at the 1+1 Media office is 30–35% of the pre-quarantine level, shift work methods have been introduced. The media holding closed 7 out of 10 offices (lease agreements with some offices have already been terminated and they will not resume operations until the end of the year), and an open space has been established in the central office.

The publishing house of Novoe Vremya magazine has completely switched to remote mode, no employee comes to work in the office. Staff mobility and adaptability to the changes reveal positive outcomes that quarantine has brought. It is likely that the office regime in the format that people were used to before the introduction of quarantine measures will not return. At the same time, the media are not ready to completely abandon the offices. This partially appears to be so given the low motivation of staff working remotely. It is difficult to control the amount of work «from home», productivity falls, there is no exchange of information and ideas. The need to organize video conferencing slows down communication, complicates the process of receiving feedback, and approves of a creative idea.

During the crisis, the media had the opportunity to restart new products, review commercial offers, restructure the work of studios (in particular, to abandon the audience), to reschedule debt. The work of radio stations was reformatted as well. For example, during the two crisis months (April-May), Novoe Vremya radio streamed replays half of its airtime. In general, the radio segment is the least profitable, and quarantine has accelerated the transformation of conventional analytical radio into a more traditional music and speech segment. In addition, the radio is only one of the platforms of the media holding, which should consist of podcasts hosted on the site. This determines the synergy of media products; broadcasts have got a «second chance».

The media industry was not provided with the adequate support from the state to overcome the crisis caused by the pandemic. The only assistance the media sector received was a permission to extend staff leave at its own expense. But this was insufficient, especially given the foreign experience of similar support for the media at the state level (in Europe and America). Large media holdings (1+1 media) continue to count on the declared support of the film industry by the state.

### Forecasts and risks

In general, the domestic media sector demonstrates some positive expectations for the future prospects, along with a sense of uncertainty about the risks of the second wave of the pandemic in Ukraine. At present, it is quite difficult to assess any financial results for the media, as the plans of key stakeholders and media clients are constantly changing. Under these circumstances, the only way out for Ukrainian media companies is to remain mobile and refrain from long-term costly projects.

The productivity of certain areas of the media business, such as radio or magazines, has been called into question under the crisis circumstances. With no ads presented in print magazines, they are more likely to switch to online mode. Radio will be transformed into a unit of podcasts — or even a service gathering ideas, which will become its own source of information. Instead, websites and online will continue to grow rapidly in their popularity, as there are no obstacles to impede the progress currently. It has become obvious that the future is being led by the Internet resources. The media that use alternative platforms of activity and representation become stronger in terms of the volume of views and subscribers (the use of such channels of communication with readers and viewers as Telegram, Facebook, You-Tube, Instagram gains relevance).

As for the media sphere, a significant risk is a state regulation, in particular the issue relates to the tensions in relations with the National Council on Television and Radio Broadcasting. If the National Council is given additional powers to regulate print and online media, the outcomes of such a situation could negatively affect freedom of speech in Ukraine. Problems related to the lack of qualified personnel, currency risks, currency fluctuations (because most of the profits are tied to the currency) are also relevant. There is also a significant commercial risk connected with the outflow of advertisers to Facebook and Google. In this case, media holdings will be forced to compete with each other for a relatively small market.

## Recommendations

Given the current problems in the domestic media space for the state, the main task in this area should be the formation of rules of the market, taking into consideration the conditions of balanced quarantine restrictions. For mass media representatives in Ukraine, the need to implement changes at the legislative level in terms of the advertising market and the introduction of incentives measures is urgent.

In addition, one of the most important recommendations for the state in terms of improving the work of the media sector in Ukraine is to increase transparency in matters of ownership and financial support of certain media. In this context, there is a necessity to review and improve state programs for the development of independent media in Ukraine, in particular at the regional and local levels. Currently, for such projects, grant support from international funds serves to be almost the only source of livelihood, since given decentralization and administrative consolidation of districts, most local newspapers will be deprived of the main source of funding (district council budgets). Thus, the survival of the local press should attract more attention, owing to the fact that it is an important component of information security of the state. Targeted state support programs, specialized training and fundraising courses for regional journalists are to be introduced to reformat the work of resources to new conditions.

## Oil and gas sphere

### Characteristics/Impact of the pandemic

The COVID-19 pandemic has significantly affected the review and restructuring of complex technological processes at the production facilities of oil and gas companies, as well as the work of fuel retailers in Ukraine. The introduction of strict quarantine measures has had a great impact on the movement of people, consumer activity and, as a consequence, on energy needs both in Ukraine in particular and in the world as a whole.

In the gas sector, the spread of COVID-19 did not directly affect the production of natural gas, gas condensate and propane-butane, but had an influence on the decline in world hydrocarbon prices, which began to reflect the downward trend in the second half of 2019. Due to unstable economic conditions, prices in the hydrocarbon market during quarantine turned out to be twice lower than last year (\$37–40 per thousand cubic meters of gas).

In Ukraine, gas companies have not faced that substantial problems with sales, so lower prices have solely considerably affected the industry. Thus, a group of Smart Energy companies in the first half of 2020 increased gas production by 9.5% but received 31% less revenue compared to the same period last year. The largest drop in gas prices occurred in May-July 2020, and, consequently, producers had to adjust their budgets and previous plans. Under such conditions, domestic gas companies (Smart Energy) revised operating budgets and reduced investment plans by 40%. In addition, the schedule of enterprises was further changed and appropriate internal procedures were introduced in compliance with the new sanitary working conditions for employees.

In general, the oil industry in Ukraine has not experienced significant disruptions in production and bureaucratic processes as a result of the introduction of strict quarantine. Nevertheless, the restrictive measures had somehow affected the revision of the organization of production (hence, groups of NJSC Naftogaz, namely Ukrgazvydobuvannya, Ukrnafta, were forced to restructure a large number of work processes). Coronavirus had also some influence on the work of contractors involved in oil companies (NJSC Naftogaz), who could not manage to provide their services in a timely manner due to blocked supplies of equipment.

The spread of the pandemic has mostly negatively affected the work of domestic fuel retailers. As a result, sales of KLO products (petrol, diesel) in the period from the second half of March to mid-May 2020 decreased by 20%. Meanwhile, due to falling global hydrocarbon prices, gasoline became more affordable, which usually led to an increase in demand and, consequently, rise in sales. However, under the conditions of strict quarantine, such a trend was not observed — for the first time the price and sales of fuel fell simultaneously. This affected the company's operating costs, which increased during the quarantine. In addition, revenues and turnover of the fuel retailer business decreased: the decline was more than 30% in the second quarter of this year (compared to the first). In June and July, after the easing of strict quarantine, the situation with fuel sales improved slightly — volumes increased by 17%, and the frequency of refueling per month increased 2 to 3.7 times (KLO).

## Measures taken

The pandemic has necessitated a different view of crisis management in the mining industry and in the work of fuel retailers. During the period of strict quarantine restrictions, all companies made efforts to develop preventive measures to minimize the risk of spreading the disease among their employees. NJSC Naftogaz has introduced a special algorithm for regular temperature screening for staff. Much work has been done to provide sanitary conditions in the offices for employees: mask mode; limiting the number of people present at meetings; providing the staff with disinfectants, etc. In some organizations (Smart Energy) during the quarantine period special «crisis headquarters» were established, which comprised of all functional managers and regional managers of companies.

Mining companies have introduced a special mode of operation for their staff: Smart Energy's mining operations were transferred to three-week reservations (workers stopped by and worked for three weeks with regular medical examinations). The rest of the staff was transferred to part-time work, and top managers were forced to take tariff leave. At Naftogaz, the duration of employees' shifts was increased from one to two weeks; disinfection of vehicles and production sites was introduced. The companies tried to exert every effort to switch part of the staff to remote work in conditions of restricted movement of public transport. In general, the company's personnel policies have not changed due to the spread of the pandemic. The quarantine restrictions have contributed to the acceleration of digital transformation in mining companies, which included the transition to a single digital signature, the introduction of electronic document management in general, strengthening the capacity of servers by increasing the load on the IT sector (NJSC «Naftogaz»). Whenever possible, all data began to be stored in the cloud, and work was carried out through terminal farms (Smart Energy).

Fuel retailers (KLO) partially offset their losses during the quarantine period by virtue of the operations of beverage and food stores. The network has expanded the range of goods; agreements were concluded with partners Local and !FEST for KLO on the provision of platforms for the sale of their products. In addition, due to the ban on the sale of fast food at gas stations of the KLO network, a certain number of their employees had to be retrained. The rest of the network's staff was forced to go on vacation at their own expense during the severe quarantine restrictions.

The mining industry has been developing a package of proposals and planned government stimulus programs for the pandemic and economic downturn during the period of severe restrictive measures. At the same time, most of the proposals were not taken into account at the state level (in particular, in the context of the tax burden and rent for land use).

### Forecasts and risks

In the recent months, there has been a somewhat positive trend for the mining industry given the upward trend in prices for hydrocarbons, in particular gas. Meanwhile, the average price for the relevant products in the second half of the year is still lower than in the first half of 2020. Thus, in the short term, extractive companies will face the task of compensating for losses by increasing oil and gas production.

The main risks for the further functioning of the extractive sector in Ukraine (apart from the spread of the next waves of the pandemic) are over-regulation by the state; price fluctuations in the world market; currency fluctuations, etc. Such prospects complicate the planning and implementation of investment projects, and, as a consequence, reduce the deduction of taxes to the state, increasing the risk of job losses. Among the specific risks for the industry, geological and technical issues remain relevant.

For fuel retailers in Ukraine, there is a problem of supplier diversification (for example, due to the political crisis in Belarus, the threat of restricting the supply of fuel from this country is relevant for gas station networks). Another problem is related to the operation of illegal gas stations in different regions of Ukraine (27% of fuel sales in the domestic market are illegal). The risk of formation and fluctuations

in gas prices (propane-butane, methane), including excise duties remains significant for fuel retailers. Due to this, in some regions gas sales reach 70% of the total. Meanwhile, gas cars remain exempt from excise taxes that go to the road fund.

### Recommendations

An important issue in the context of improving the conditions for the functioning of the mining industry in Ukraine may be the review of strategies for doing business with the involvement of international positive experience on behalf of the state. The domestic extractive industry is in demand to stimulate additional investment at the state level, as well as to further regulate and improve the tax regime (for example, in the context of extending the guaranteed period of invariability of taxes on new wells). For the industry, recommendations on setting an incentive rate for the position of well renewal through overhauls are considered feasible; stimulating oil and gas production from unconventional hard-to-reach deposits can be appropriate as well.

The diversification of suppliers of fuels and lubricants, which is actually an element of energy security of the state, is the current matter for the state. In the context of today's political and socio-economic development of Ukraine, further reduction of energy dependence on the Russian Federation and its regional allies (Belarus) is promising at the state level due to intensified cooperation with Azerbaijan and interested EU countries (Lithuania, Poland, Romania).

With regard to domestic fuel retailers in Ukraine, the urgent issue that is to be addressed at the state level lies in increasing the transparency of the gas station market, which includes the removal of «shadow» schemes and the creation of equal opportunities for players. A promising direction in the fight against illegal gas stations may be the implementation of state supervision (through the relevant ministry and regional state administrations) for compliance with the requirements for quality and fair competition in the fuel market.

## Real estate and development

## Characteristics/Impact of the pandemic

The introduction of strict quarantine restrictions had a short-term impact on the real estate market in Ukraine, which generally did not have significant negative consequences from the spread of the pandemic. The introduction of quarantine in March 2020 was accompanied by a suspension of real estate investors' plans to purchase apartments and office space for several months. Sales witnessed falls, and

profits decreased, impeding the approach to secure a financing plan and abide by construction schedules. The extent of market subsidence at the beginning of quarantine can be traced to the example of the construction products purchase. If the average monthly fittings in Ukraine used to be 70,000 tons, in April this figure amounted to 30,000 tons.

The difficulties have occurred for those contractors who pragmatically assess the risks. Due to the fact that payments for construction take place in two stages (30% is paid at the beginning of construction, 70% at the end), the risks associated with payments at the end of construction and removal of crews from the facilities have increased. In addition, it was necessary to organize logistics for workers, given the fact that public transport services were cancelled. Sometimes it was a necessity to rent buses and provide means of individual protection of workers.

However, this situation was temporary, and in June-July 2020 the market reached pre-crisis levels. Currently, there is a surge in demand and a return to the dynamics. This was caused by the effect of "catch-up demand" and closed borders — people can not spend money on travel, so they use the money to buy real estate.

Employees of construction and development companies were not greatly affected by the strict quarantine. Offices began to operate remotely, construction sites operated in the usual mode, even at a faster pace (due to the threat of a state of emergency in April 2020). Due to the fear of stopping the sites, the builders worked for 15-16 hours, but in compliance with all the updated sanitary requirements.

Despite the short-term inconveniences, the contractors were not significantly affected either, as the increase in production turned out to be more beneficial for them. Construction corporations employ 50–70 contractors on one site. There were temporary difficulties with supplies from Italy, Germany, and Belgium, given the closure of borders. Moreover, barter relations were established with suppliers (for example, this format was chosen by SAGA) — partial payments for products (concrete, reinforcement, etc.) were exercised in «square meters». Besides, it was agreed with others to defer payments for 90 days through factoring.

In general, the financial performance of large developers has been marked as the lowest in 10 years. This is influenced not only by the coronavirus epidemic, sales figures for February 2020 were much worse than in the same month the previous year. The decline in revenue operators in April-May amounted to 30–40%.

In addition, the periodic demands of utilities to suspend construction work on some sites were compounded by restrictions on the number of people who could gather in public places (more than 10 people). This led to delays, misunderstandings with contractors. Through the Confederation of Builders of Ukraine, developers joined the promotion of the decision by the Ministry of Regional Development to allow more than 10 people to stay on the construction site.

Only measures related to the possibility of granting leave to employees for a certain period of time (at their own expense) have proved to be useful, which helped reduce the burden on developers.

#### Measures taken

The situation has appeared difficult especially with those contractors who pragmatically assess risks. For example, payments for construction occur in two stages: at the beginning of construction is paid 30% and 70% upon completion of construction. And the contractor, realizing that they fail to pay in the end, can remove the crew from the facility. It was also necessary to organize logistics: given the fact that public transport services were canceled; as well as to rent buses and provide means of individual protection of workers.

Due to difficulties with delivery in the lockout, individual developers (SAGA) had to revise the models of payment for materials. It is currently practiced paying a small amount of subscription money, wait for the performance and receipt of material, and afterwards pay the remainder.

During the quarantine, operational headquarters were set up in construction companies, with top management and, in part, sales departments remained in their workplaces, while staff were mostly switched to teleworking. However, if for SAGA such an approach allowed to stay convinced of the effectiveness of such activities, KAN returned the staff to the offices as soon as possible in compliance with sanitary norms.

The quarantine has affected the optimization of its staff by developers. For example, KAN was forced to reduce its staff to 5%, and Kyivmiskbud to 20%. The transition to remote work allowed developers to review some activities that did not require a significant amount of staff in the offices, and therefore — to review cost items and increase wages or give bonuses to other employees.

The processes of digital transformation of construction corporations had been launched long before the pandemic — in 2–3 years. Accordingly, the companies were more or less ready for new production realities. In this case, all designers now have the opportunity to work in one information field, in a single database and as a team. Under conditions of quarantine restrictions, developers have partially switched to remote communication with customers. Therefore, Kyivmiskbud has developed a special mobile application for choosing an apartment, as well as launched a system of consultations in electronic form (via Skype). However, accord-

ing to some owners of the construction business, with the remote form of work, the initiative of employees has somewhat been reduced, so maintaining contacts and team work on a «face-to-face» basis remain important.

### Forecasts and risks

The planned construction indicators for the year are expected to be reached (at this time, for example, Kyivmiskbud is fulfilling up to 80% of the total plan). With regard to the future planning, there is a risk of non-fulfillment of plans by about 20%, not because of the reduced sales, but due to the delay in launching new construction projects.

The profits of the construction business will not increase, on the contrary, they will witness a decrease as the cost of construction has been growing. In addition, developers' profits continue to be affected by significant costs of providing personnel with personal protective equipment, conducting regular testing for employees, conducting temperature screening both in sales departments and on construction sites, etc.

According to the owners of the construction business, the COVID-19 pandemic could have far-reaching consequences: the reduction in the demand of the population for the purchase of individual point projects that do not provide opportunities for the epidemic (failing to have large yard, recreation area, playground, or requiring additional transport) is projected. For the most part, this applies to low-income housing. Given the fact that during the quarantine people are forced to spend a significant amount of time at home, for potential residents, the issue of comfortable exterior design and infrastructure becomes relevant. Thus, the investor is trying to purchase not only housing, but also the external environment, which affects the intensification of competition in the real estate market.

Among the general trends in the construction market, it should be noted that many projects of little-known developers have been suspended, and the secondary market has decreased significantly. In addition, two large companies, UKRBUD and Arkada, had gone bankrupt over the past year, leaving thousands of investors without receiving their apartments on time.

Regarding the risks for the industry, it is important to state political instability and imperfect tax policy of the state. Reforming the State Architecture and Construction Inspection of Ukraine and dividing it into three bodies has not been effective. In general, developers believe that at the state level, the reform of SACIU was not carried out properly.

At the state level, the need to reduce NBU discount rates is urgent for the real estate industry. For businesses involved in the industry, the rate lowering can lead to an outflow of deposits in favor of housing investment due to the potential benefits for the population from investing in real estate (as opposed to deposit accounts, where the interest rate is not stable and may fall).

In addition, representatives of the real estate market in Ukraine have a request to develop a state-level mortgage lending program for the population, so that people can take loans for 20–30 years and be protected from possible inflation or currency risks. Thus, a mortgage lasting 10–20 years will allow Ukrainians with a profit of 15–20 thousand UAH to pay 10–12 thousand UAH per month for their own housing.

# Private kindergartens, schools, higher educational institutions

## Characteristics/Impact of the pandemic

For private educational institutions, quarantine measures have become a difficult challenge: educational institutions were forced to close indefinitely in a very short period of time. Some educational institutions, which have more or less adequate material and technical support, have switched to distance work (for example, the All-Ukrainian School Online project) in order to provide their pupils and students with a full and ongoing learning process. Under such circumstances, the profitability rates of private secondary education institutions have increased due to the introduction of online projects; however, in terms of revenues from the main plans and educational projects, there was a decline in indicators. This was also caused due to seasonality in the process of studying in schools (in the summer all students went on vacation).

The situation with private pre-school institutions is somewhat different: some of them (for instance, Umka educational complex) lost a large number (up to 70%) of contracts with parents during quarantine, and the number of pupils decreased accordingly. Due to the specifics of such institutions, online education in some of them was not fully organized, only 15% of the total number of children managed switched to distance learning. This situation has significantly affected the profits of private preschools, which in April-June 2020 suffered significant financial losses and increased arrears due to the need to pay salaries to educators and teachers.

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Education institutions faced a different scenario, since the situation has improved somewhat after the introduction of adaptive quarantine, when about 50% of children returned to them. However, the financial situation remains difficult and cannot be compared with the pre-quarantine level of revenues. Currently, private preschools face the task of repaying debts and loans in order to continue their operation.

In higher education institutions, quarantine, for the most part, did not have a negative impact on their work, in particular on the processes of the admission campaign. In some private universities (King Daniel University) the number of entrants has increased compared to last year, due to the information and career guidance work of the institution, which began before the introduction of quarantine. There was also no special impact of quarantine on the solvency of persons studying in private educational institutions. Thus, up to 50 students were expelled from King Daniel University for the current year due to economic debts (however, the same number of deductions was for the previous year).

Among the most difficult challenges for educational institutions during quarantine, it is important to mention the psychological factor and the attitude of students' parents to the process of organizing distance learning, given the lack of such experience in the past.

Quarantine affected the mobility and speed of decision-making by the management of educational institutions, which were forced to organize the work of their staff and students in a new format in a short time. In addition, the need for more flexible approaches to the activities of educational institutions has become clear, most of which have not been sufficiently prepared for rapid adaptation to new conditions.

Following the introduction of quarantine, many educational institutions have witnessed a significant acceleration of digitization processes. In addition, the widespread introduction of distance education has made it possible for higher education institutions to include additional categories of persons who were previously excluded from the education system in the list of potential entrants.

### Measures taken

Measures taken by the management of private educational institutions during the quarantine included both a review of the structure of the institution (taking into account the organization of distance learning) and strengthening management. In the institutions of higher education in the first weeks of quarantine, teachers were engaged in the implementation of the annual individual plan for educational and methodological work.

As for the private educational institutions, there was no significant reduction in staff during quarantine restrictions. In some higher education institutions, only a small number of freelancers resigned of their own free will. Private preschools (Umka) in the financial crisis due to the loss of pupils were forced to reduce wages to their employees by 50%. The management of some institutions on an individual basis agreed to reduce the rent by 50%, but there were no significant benefits for the financial condition of the relevant institutions.

Adaptation to the new conditions of distance work in private schools took place, for the most part, fairly rapidly (during the first two weeks of quarantine). Some preschool institutions (Umka) promptly organized work remotely due to the experience of implementing an online educational platform.

Students attended live broadcasts with teachers on a daily basis, had access to a platform for homework and communication with teachers and educators. Meanwhile, the introduction of distance learning in not all educational institutions was rapid; in some places the teaching staff had to go through a difficult period of adaptation to new conditions. The situation with the student community has now become similar: many applicants for higher education institutions, including full-time, prefer full-time education and direct communication with teachers.

Distance learning in higher education institutions took place via the platforms Moodle, Google Meet; Coursera courses, etc. Some private universities have purchased additional technical equipment (webcams) and servers for state certification. To control the presence of students in remote classes, corporate accounts have been created, which require them to log in the system.

Following the easing of quarantine restrictions and the opening of educational institutions, students continue to be provided with personal protective equipment and disinfection; non-contact temperature measurements are carried out regularly; classes are held in classrooms in compliance with the norms of social distancing.

Private educational institutions did not receive financial assistance from the state for the period of intensification of quarantine measures. Meanwhile, these educational institutions were also provided with recommendations on the organization of the educational process in the context of a spread of the pandemic.

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### Forecasts and risks

At present, pre-school, school and higher education institutions are focusing their activities on developing different approaches and methods to education and teaching, so that in the conditions of further strengthening of quarantine institutions it would be possible for them to adapt faster and not suffer devastating financial consequences.

In the event of an increase in the dynamics of diseases and the strengthening of quarantine restrictions, a further decline in profitability indicators for private educational institutions is forecast. However, these institutions are prepared for a possible increase in quarantine given the experience gained in organizing the educational process online. Nevertheless, in such circumstances, the problem of uncertainty of operating conditions in the short term remains.

Among the current risks for preschool education, a lack of qualified personnel still remains due to fluctuations in the process of reforming the education system in Ukraine. Another significant issue lies in a large number of unlicensed preschools (kindergartens), which discredit the work of those institutions that operate officially.

At present, educational institutions face the task of maintaining a quality educational process without the threat of increasing the dynamics of morbidity among students. In private schools, the idea of further implementation of a mixed form of education is popular, when part of the disciplines is taught remotely, and part individually, with the physical presence of students in the classroom.

### Recommendations

Regarding the main problems for educational institutions that exist nowadays, it is essential to mention the outdated legal framework in the field of education which blocks the transparency of work for private educational institutions and requires significant updating. Approaches to teaching methods in many domestic educational institutions, including public ones, also are to be revised. Further reform of the education sector should include the provision of adequate psychological conditions for children to receive a quality education.

Currently, many provisions on the processes in preschool education in Ukraine have a negative impact on the work of private institutions which results in their closure and, thus, causes an increasing burden on public educational institutions and the budget. In order to ensure further development of preschool education in Ukraine, the state should exert its efforts on strengthening communication and exchange of ideas with representatives of educational institutions on the development and implementation of innovations in the relevant field.

Given the prospects for the application of online education even in the period, when the quarantine will be canceled, the issue of developing and complying with quality standards for distance education remains relevant for private schools. Private institutions must undertake responsibility for the fact that pupils and students comprise the main source of funding, as well as ensure the existence of appropriate institutions. Therefore, the respective representatives of these institutions are to provide quality education in a pandemic, even online.

## Restaurants/cafes/bars

## Characteristics/Impact of the pandemic

The service sector, in particular catering establishments, is one of the sectors being mostly affected by the severe quarantine restrictions given the spread of COVID-19.

Following the introduction of restrictive measures in March 2020, restaurant business (in this case — a number of Kyiv and Lviv chains of institutions) suffered the most significant losses. Indeed, the particular business sphere faced the need to cover the costs of staff, territory, security, utilities in a significant reduction in profits due to the visits ban to food establishments in the first months of quarantine.

The introduction of targeted delivery services in catering establishments did not significantly affect the income of the restaurant business under quarantine conditions — delivery allowed to compensate only up to 5% of total profits. The situation was somewhat better with establishments that had a car service line for buying meals (such as McDrive McDonald's). At the beginning of the quarantine, their profits decreased by only 25% due to a significant increase in car traffic.

The opening of summer terraces in mid-May, according to the interviewed restaurateurs, allowed them to restore about 20–30%, and by the end of the summer — up to 50% of revenues compared to the planned indicators. Those restaurants located in shopping center areas had been closed for the longest time — almost 6 months of quarantine. The dynamics of profitability of such institutions following the opening showed a decline to –60% compared to the previous year. In addition, 90% of restaurant staff in malls had to be re-hired.

The profits of individual establishments (for example, the restaurants of the Lviv emotion holding !FEST) were significantly affected by restrictions on international passenger traffic — before the introduction of strict quarantine measures,

the share of foreign visitors to the establishments was usually 65% of the total customer flow.

As of the third quarter of 2020, the restaurant business market faces a trend of losing the revenue for institutions at the level of 30-40% compared to the planned indicators. Food chains in regional centers (Lviv, Kyiv) continue to deal with a large number of visitors due to quarantine restrictions, the departure of a significant number of people to other regions, their transition to remote work, etc.

### Measures taken

The restaurant business faced the largest staff reductions compared to other domestic industries, it was forced to stand idle for 2 months from the beginning of the introduction of strict quarantine. Restaurant chains switched some employees from offices to remote operation; some workers worked in shifts. In order to save part of the staff, some networks, such as Lviv's !FEST, have been engaged in professional retraining. For example, office and restaurant workers who were unable to work in the second quarter became engaged in sewing masks and worked as couriers to deliver orders.

The rent for the use of the premises remained a problematic issue for restaurateurs. The owners were forced to negotiate individually with the landlords about possible discounts during the quarantine.

In order to minimize the consequences of the loss of visitors, some restaurant chains under strict quarantine have expanded their offerings, which included the development and launch of a brand of semi-finished products (Lviv network !FEST); development of sites to place orders online. However, this practice, on the one hand, failed to bring significant profits to offset the costs of restaurants to support their activities; on the other, it was not a common practice among catering establishments that did not use delivery services before the introduction of quarantine.

## Forecasts and risks

Following the easing of quarantine restrictions, visiting rates to the catering establishments remain low, due to both the prolongation of quarantine and the decline in the purchasing capacity of the population.

According to the most optimistic forecasts of restaurants, which partially opened in the open air in May, the reduction of profits at the end of this year by 30% (compared to last year) is expected. Other restaurants foresee reaching at least a break-even point. Due to the crisis, the stage of business budgeting has become much more complicated. Mostly, the planning is aimed at the survival and optimization of the business, not its development. It is obvious that the stage of active development may not be implemented until the spring of 2021 with the normalization of the epidemiological and socio-economic situation. Adjacent areas were also negatively affected — as for the small farmers who supplied food to restaurants: some of them went bankrupt, others suspended their activities.

Small family restaurants are overcoming much complicated challenges with the crisis. Large restaurant chains with capital reserves are currently buying out smaller facilities that have gone bankrupt as a result of the crisis. In this dimension, the gradual monopolization of the market by large networks of catering establishments is promising. Indeed, even during the quarantine, the emotion holding company !FEST managed to sell three franchises of «Drunk Cherry» in Ukraine and has come up with plans to open establishments in Romania.

The main risks for the restaurant business in Ukraine include an unstable hryvnia exchange rate; further increase of tax pressure; excessive over-regulation of economic activity.

## Recommendations

In general, the demand for review by the state of the mechanisms for implementing regulatory policy in the context of relevant crises is relevant for domestic food chains. The recommendation to reduce regulatory pressure from the state on the restaurant business and take measures to strengthen the responsibility of market participants is topical as well. To this end, it may be appropriate to establish a direct dialogue between government agencies and industry business associations. State and municipal authorities should provide comprehensive clarifications on restrictions and recommendations during the crisis. If it is necessary to suspend the operation of these facilities, the state must partially compensate for the damage (through targeted assistance to employees, tax benefits, etc.), as it is being practiced in the EU.

In responding to the crisis, restaurateurs should develop their own operational plans in case of deterioration of the epidemiological situation in Ukraine and the world. These scenarios should include staff reductions, restructuring, longterm investment savings, and the retention of critically qualified staff (in particular through the provision of food kits. This crisis has been a crash test that has given an opportunity to review business process positioning and efficiency. The restaurateurs should improve their food security, personal protection of visitors and be ready to work even at 50% occupancy.

## Retail (chain stores)

## Characteristics/Impact of the pandemic

Quarantine measures have mostly had a negative impact on the activities of large retail chains in Ukraine, which in March 2020 were forced to close a significant part of their outlets. The situation with grocery stores and supermarkets was somewhat different. Due to the specifics of the activity, the mass closure of the relevant networks did not take place, but the quarantine affected the processes of visiting such institutions in different ways. A decrease in the number of customers was observed in shops and supermarkets located near office centers; instead, the number of visitors, as well as the average check for purchase, increased in stores located in residential areas.

In this context, the efficiency of retailers depended on the adaptation level of a particular retail network to the load on their online services, if such were ever developed. Under such circumstances, stores have focused their efforts on working online on their Internet platforms. In the first weeks of quarantine, traffic and, consequently, offline sales, i.e. in stationary stores, decreased significantly due to restrictions on population movement (for example, in the case of large retail chains such as Foxtrot, there was a 60% drop in sales). Other retail chains (Intertop) had to close all their stationary stores at the same time and develop a new digital strategy as soon as practical, conduct a technology campaign to connect distributors and manufacturers to their electronic platforms.

During March-May 2020, online sales of some large chain stores increased significantly (for example, during this period, the share of Foxtrot in online trade in electronics and home appliances in Ukraine increased 1.5 times). In the network of Intertop stores, online sales tripled during the period of strict quarantine restrictions, but this was only up to 30% of the total planned sales, as trade through stationary stores was not carried out at all. Meanwhile, compared to last year, the profits of large retail chains for the current year did not decrease that significantly (for example, the profit of the network Intertop fell by only 10%).

According to some chain stores (Foxtrot), in the first half of 2020, the number of customers combining online and offline purchasing methods has doubled, which indicates a change in customer behavior patterns to which retailers must adapt, developing as many digital channels for sales services as possible.

The gradual opening of stationary stores has begun following the introduction of adaptive quarantine. With the easing of quarantine restrictions, the sales market started to gradually recover and in June-July 2020 approached the pre-quarantine indicators. After the opening of stationary stores in June, the demand increased

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significantly (for example, the network Intertop rates were +20% compared to the same period last year), but by mid-summer began to witness a slight decline in sales due to a general decrease in traffic in shopping malls due to quarantine restrictions. Currently, there is a seasonal dynamic of traditional turnover growth in autumn.

### Measures taken

In a short time and in complete uncertainty, retailers had to build a strategy for companies in atypical market circumstances. Anti-crisis headquarters of trade networks (Foxtrot, Silpo) worked in the strengthened mode for optimization of activity. Alongside the introduction of strict quarantine, retailers immediately switched both the front office personnel to remote mode and all employees whose positions provided for the possibility to work remotely. The workload of logistics and supply services, as well as call centers of stores, was significantly increased. Some retail chains (Intertop) have even launched their own mobile applications.

Those chain stores that were not closed during quarantine (grocery supermarkets) exerted their efforts on providing their employees with personal protective equipment, disinfecting the premises, and raising people's awareness of the new working conditions. Large supermarkets have introduced Scan & Go (Free Checkout) technology, namely scanning the barcodes of goods using a mobile application and paying at self-service checkouts to avoid queues and contact with other people. In addition, large chains of grocery stores during the quarantine period have focused their attention on creating conditions under which customers can make purchases online. The Silpo chain of stores has significantly accelerated the process of launching e-commerce and making a large number of non-cash payments through the operation of the online store. The activity in the online format also included the prompt creation of content for customers of chain stores (recipes, offers, invitations of additional experts, etc.). In addition, some networks have introduced a quarantine system from the very first months to supply goods through services such as GLOVO.

Large chains of retail stores during the quarantine period have significantly expanded the geographical scale and capabilities of their own supply services. Being authorized to sell goods in the category of «means of communication», the management of the «Foxtrot» network has organized the secure operation of selling outlets to provide purchasing of tools of communication, as well as sales point to receive orders from Internet buying. Under strict quarantine restrictions, Foxtrot succeeded in refocusing on contactless after-sales service. Overall, its service centers have expanded their portfolio of offers for customers.

During the period of restrictive quarantine measures, it was important for retailers to keep the workplaces and end up with minimal losses. In some chain stores (Silpo), workers from one sector of activity were relocated to work in other areas in order to save as many jobs as possible and to avoid staff reductions. When the most severe restrictions were imposed, up to 20% of the staff of large retail chains (Foxtrot) were on vacation, however following the normalization of the situation, stores returned to their normal operation. Currently, the work in stationary stores is carried out in compliance with sanitary and epidemiological requirements for both employees and visitors. Retailers pay additional attention to alternative ways of selling goods, as well as new approaches to attracting customers (for example, opening a network of Silpo themed stores).

In most cases large retailers secured their own needs for the period of quarantine restrictions, without requesting direct assistance from the state. Some of them even provided the authorities with material aid to fight the epidemic, as well as suggested proposals to minimize the consequences for the economy during quarantine. However, perhaps the only measure received in return from the state was the possibility of deferring payroll taxes for two months for employees of retail chains.

#### Forecasts and risks

Prospects for further development of the situation for retailers remain rather uncertain due to the risk of a «second wave» of strict quarantine measures, which include restrictions on the movement of the population, which, in turn, may provoke a new drop in stationary stores traffic. In addition, large retail chains depend on currency fluctuations, as they sell mostly imported goods.

The strict restrictive measures introduced in the first months of quarantine mainly had a negative impact on the prospects of meeting the planned indicators by some chain stores. In this dimension, it is predicted that even large retailers with a well-established online sales system (such as Intertop) will not be able to meet the planned targets of almost 20% — 30%. Major retail chains forecast an increase in sales next year only along with a reduction in the dynamics of morbidity and a gradual recovery of the economy.

For retailers, the main risks are related to consumer demand, namely: population outflows and declining consumption; as well as the outflow of consumer traffic from official («white») sellers towards the «gray» due to the economic crisis and declining solvency of the population. Accordingly, the risk of further immersion of the trade sector in the shadows remains relevant. This is facilitated by the feature of non-transparent online commerce, where entrepreneurs hide information

about themselves, although the law on e-commerce requires this to be stated on the product website. This situation can provoke significant violations of consumer rights in terms of warranty service. Currency risks are also significant, as retailers are directly dependent on currency fluctuations. In addition, supply chains from abroad are currently recovering rather slowly, which is also a negative factor in the economic activity of large retail chains.

## Recommendations

For the industry as a whole, the quarantine situation is a test of the ability to adapt quickly to crisis conditions. Currently, the industry itself needs to be more active in de-shadowing trade activities: analyze how registrars of settlement operations (cash registers) work, how much the cash register in a smartphone facilitates the work of sellers and minimizes the cost of classic RROs, etc. Effective analysis of the state of the market should continue to be conducted at the level of trade associations and profile committees.

In the current circumstances, the state authorities must constantly monitor the situation in order to ensure the restoration of stability in the country in a timely manner. There is an urgent need to improve the conditions for the development of small and medium-sized businesses, which are a source of income for a significant number of people. It is necessary to pursue a policy that will not increase regulatory pressure on all economically active businesses, but through analysis and post-audit calculating violators and bringing them to justice is important. The state should create such a regulated and transparent system, which, on the one hand, will stimulate entrepreneurs (and retailers, in particular), and on the other — to monitor and effectively control their activities.

# Agriculture

# Characteristics/Impact of the pandemic

The agricultural sector in Ukraine in general has not experienced a significant negative impact due to the introduction of quarantine measures. First of all, this is related to the specifics of the work of industries involved in the agricultural sector. Most of the activities of the respective enterprises are carried out outdoors, which has allowed the agricultural business to minimize additional costs for compliance with the new sanitary requirements. Disruption of logistics networks due to the introduction of strict quarantine in the spring of 2020 by domestic agricultural businesses was offset by leftovers. During the spread of the pandemic, Ukrainian

exporters of agricultural products did not experience a decline in demand for their goods (wheat, corn, sunflower) and significant fluctuations in world market prices.

At the same time, the agricultural sector has faced a number of destabilizing factors in the domestic economic market. First of all, this was expressed in fluctuations in population demand for certain types of agricultural products (sunflower, buckwheat, lentils). In addition, due to the introduction of restrictive measures, the demand for food products among the domestic restaurant and entertainment business has decreased. Nevertheless, for Ukrainian agricultural industries, this situation was partially offset by the increase in stocks of agricultural goods by households during the quarantine period.

Another factor of negative impact on production volumes and profitability of domestic agrarian business was unfavorable weather conditions this year. The lack of the necessary amount of precipitation in winter and spring, as well as the low temperature in May in some way affected the yield in some regions of Ukraine (especially in the south and center). Meanwhile, these circumstances did not significantly affect the changes in plans and profits of large agricultural companies in Ukraine. According to preliminary estimates, the financial indicators for domestic agribusiness are expected to be better than last year ones by the end of 2020, due to lower production costs and average yields.

#### Measures taken

In order to minimize the possible negative consequences of the pandemic, domestic agricultural concerns have exerted efforts to take additional measures to verify the reliability of their supply chains, discuss risks with their suppliers, conclude additional agreements to strengthen the responsibility of the parties and more. In order to increase the efficiency of the agricultural sector, domestic companies during quarantine monitored the liquidity of businesses in the new conditions. Coordination of producers through agricultural associations for the exchange of information has also been intensified to prevent unfair competition due to possible abuses by companies of the quarantine situation.

Some domestic agricultural producers (Agro-Region) set up special headquarters to provide companies with personal protective equipment and disinfection (masks, goggles, gloves, disinfectants, thermometers). At the time of the pandemic, Ukrainian agricultural enterprises were monitoring the health of their workers on a daily basis. The companies have been regularly disinfecting both dormitories for workers and workplaces with equipment (machines, tractors, combines, etc.). In order to avoid overcrowding, some industries formed small teams with a limited number of specialized specialists during the field work (one engineer, one agronomist, two tractor drivers). Such conditions reduced the risk of infection among the entire staff while ensuring the continuity of production processes.

From the beginning of the introduction of quarantine in March until the end of May 2020, all central offices of agricultural enterprises, as well as their administrative units in the regions switched to remote operation. Employees of agricultural companies over the age of 60 also stayed at home with their salaries maintained for the time of quarantine restrictions. At present, employees of some companies («HarvEast») partially continue to work remotely, using the shift method. The remote regime of agrarian business activity in Ukraine during quarantine in general has proved to be positive and provided prospects for further review of the efficiency of the utilization of large premises for company offices.

In addition, quarantine has accelerated the process of digitalization in the agricultural sector by virtue of the introduction and daily use of internal electronic document management, corporate accounts, meetings and conferences using online platforms (Zoom). In addition, agricultural companies managed to adapt promptly to new working conditions through the active use of GPS-trackers, sensors, monitors, cameras, QR-codes, electronic markings in the workplace long before the pandemic. However, despite digitization processes, the companies concerned still use paperwork in their operations given legal and bureaucratic needs.

All social guarantees and responsibilities for the organization of work and benefits for employees during the quarantine period are in fact fully covered by the agricultural business. Moreover, Ukrainian producers have made additional efforts to implement a number of social projects and initiatives. Ukrainian agricultural companies at their own expense conducted informational and educational work in rural areas to raise public awareness of the pandemic. In addition, agricultural holdings used funds to help medical institutions, paramedics and orphanages to combat the negative effects of the infection.

## Forecasts and risks

The spread of the pandemic continues to be one of the factors of instability in the world market, which affects the reduction of a significant part of domestic agricultural companies in the estimated planning and budgeting period. Nevertheless, long-term sales agreements continue to be of a high priority for the Ukrainian agricultural sector. Currently, additional risks for the domestic agribusiness are borne by the regulatory policy of the state, in particular it is essential to mention the fluctuations of the hryvnia exchange rate and discount rate, the introduction of quotas for grain trade, constant changes in business taxation and more. The corresponding situation has a negative impact on investment decisions and economic development in general.

Another urgent problem for Ukrainian business is the lack of qualified personnel, which in particular is caused by the mass migration of educated youth abroad. Under such conditions, some agro-concerns (Agro-Region) spend money on special training (semi-annual and annual schools) for potential employees.

Environmental problems (fires, dust storms) and man-made risks (non-compliance with safety standards) that can cause devastating damage to the production and transportation of agricultural products remain significant for the agricultural sector.

# Recommendations

One of the most urgent recommendations for improving the working conditions of agribusiness in Ukraine is to reduce market regulation by the state. First of all, the matter relates to the necessity of avoiding artificial restrictions on the export of agricultural products for the period of quarantine restrictions; introduction of an additional duty; increase in taxes for domestic producers.

Instead, the state should make efforts to increase the efficiency of entrepreneurship by investing in business projects and creating special support programs for industries (in particular, cheap loans for small and medium farms).

Currently, the agricultural sector in the south of Ukraine (in particular, farms in Odesa region) needs special support from the state due to unfavorable weather conditions, which have led to lower yields and a significant drop in the level of profitability of local agricultural companies.

Particular attention should be paid by the state to the development of logistics links and the renewal of infrastructure for the transportation of agricultural products. In addition to the construction and repair of roads, it is advisable to invest in the restoration of river transshipment of agricultural products, which will reduce the cost of goods and increase their competitiveness.

Preventive policy aimed at minimizing the risks of land fraud remains an important issue in the context of the opening of the land market in Ukraine in the summer of 2021. In order to avert negative developments in Ukraine, there is a need for an unbiased information campaign to explain land reform at the community level;

in monitoring privatization processes; in the early prevention of unfair competition between entrepreneurs; in timely coverage of possible cases in the media, etc.

The agrarian business is currently one of the most profitable for Ukraine (agriculture brings the state about 44% of foreign exchange earnings) and shows a growing trend of importance in the context of the spread of the pandemic and restrictive measures. This situation deepens the technological backwardness of the country, so the issue of investing in the secondary processing of agricultural products, as well as in the development of innovative technologies in the agricultural sector is relevant for the state and business.

# **Telecommunications**

# Characteristics/Impact of the pandemic

The COVID-19 crisis has forced telecom operators to revise their year-round operational plans and costs. At the same time, quarantine became a period of new solutions and introduction of new products for the main market players.

During the period of quarantine, restriction of movement and social distancing, people needed to communicate more than ever. Due to the forced stay in self-isolation, customers have significantly increased the use of other services: voice, mobile Internet, fixed Internet, etc. As a result, the number of mobile Internet customers has increased, and they, in turn, caused a rise in the use of these services. The adaptation of companies has become successful by offering special tariff packages with unlimited calls to all networks (or unlimited Internet access) to customers.

The growth of data traffic was especially noticeable in small settlements, where mobile Internet often replaces stationary «home Internet». According to Kyivstar data, if in the period before the quarantine customers of the Home Internet service used an average of 9 GB of traffic per day, then in May and April the use increased by 20%, i.e. up to 11 GB per day. In June, this figure returned to pre-quarantine levels.

In general, telecommunications companies have become more flexible and «digitalized», on the other hand — many new challenges have been introduced, specifically associated with changing consumer demand, declining revenues from certain services, the need to change and cancel planned activities, drastically alter plans, yet continue the investment in network development. Large mobile operators have significantly increased the number of social and charitable projects: they have purchased ventilators for district hospitals, protective suits for doctors, etc.

The closure of borders and the travel ban in Ukraine have significantly affected roaming services. The resumption of roaming services began in May-June 2020. Retail revenues also decreased, since subscribers did not make purchases through stores.

Financial performance of telecommunications companies has increased — profits for the first half of 2020 increased by 7-9% compared to the corresponding period of 2019. For example, due to the efficient operation of «lifecell», the growth of consumption of data traffic and voice services allowed the company to reach net profit in June 2020.

The increase in Internet traffic profitability balanced the negative factors that affected the operation of telecommunications companies in a pandemic: almost complete absence of roaming revenue and a significant reduction in revenues from its own retail network, caused by the partial closure of branded stores in quarantine. In terms of the number of customers, Vodafone UA noted a slight decrease in the number of subscribed service users, following a fall in new connections established during the quarantine, which almost completely offset by an increase in contract and corporate connections, as well as in the use of Internet of Things (IoT) cards. The pandemic affected the growth of demand for digital solutions «Vodafone» for business in the first half. Under quarantine, business customers have been opting for the automation process, implementing IT solutions, using analytics services based on big data, resorting to cloud solutions.

Kyivstar declares a reduction of the total number of subscribers by 2-3%. However, according to the operator, this is not related to COVID-19, but can be explained as an annual market trend associated with negative demographic processes in the country and the gradual refusal of subscribers to use several SIM cards from different operators.

In general, due to the high adaptability of telecommunications operators and the specifics of the industry, companies are able to meet planned targets even in a pandemic.

# Measures taken

Digitalization has eliminated the risks that affected the business of mobile operators during quarantine — the transition to remote work, reducing the frequency of «live» contacts, the need to ensure uninterrupted paperwork both in the company and with external partners. Telecommunications companies, whose business is already connected with new technologies, managed to do it quickly. Companies such as Vodafone UA and Kyivstar set a key strategic goal a few years ago — the complete digital transformation of the business. The quarantine has

largely contributed to achieving it — in one day following the announcement of it, the company instantly switched to full-time teleworking without slowing down the company's functioning.

On the other hand, digitalization has provided the necessary conditions to increase the pace and increase business efficiency. For example, Vodafone UA has accelerated the development of electronic document management, ensuring its participation in remote cooperation with government agencies at all levels. The company began to actively use the Mobile ID service, which is the mobile equivalent of a digital signature. Over the next couple of years, the company plans to reach 80% of paperless paperwork (the remaining 20% can not be digitized due to legal requirements).

Lifecell has been utilizing a special software product — Dashboard, which allows you to remotely monitor workflows and performance indicators in real time from a tablet or mobile phone. A few years ago, Lifecell switched to electronic document management, so the company had no concerns about business continuity.

In the conditions of the strengthened data traffic the capacity of networks was increased, the companies provided development of digital channels of sales and service. Some mobile operators have launched a number of relevant products and services. For example, Lifecell has introduced online doctor consultations in the Likar Online application. Via this service subscribers from any region of Ukraine can receive remote advice from doctors-practitioners of various directions oper-ating in Kyiv. A travel insurance service for COVID-19 during a stay abroad was also implemented.

Preferential conditions for business products were provided to help companies effectively organize remote work through the introduction of virtual PBX, IP-telephony, a single corporate network, mass-targeted mailings. Kyivstar has developed a selection of the most popular modern and innovative solutions for the rapid transition of companies to remote work, including helping to set up remote workplaces and ensure communication between them and customers, organize uninterrupted access to IT systems of companies (Microsoft Office 365 and StarTeams, virtual mobile PBX, cloud solutions), use electronic document management (Star.Docs), sign documents online directly from the phone (Mobile ID), hold meetings, conferences, distance learning, etc. According to the company, during the quarantine restrictions, many corporations considered these services as a real salvation from stagnation. Thus, in just the first 2 months of quarantine, the number of connection solutions for remote workstations increased by 1330%, virtual mobile PBX — by 217%, and electronic document management service Star.Docs — by 489%.

During the quarantine, Kyivstar have been providing customers with access to an expanded package of TV channels, support for the All-Ukrainian School Online, accrual of bonuses for communication services for doctors and clients who could not leave the country due to quarantine, free access to consultations with doctors through the mobile application «Doctor online».

The particular sector did not witness any redundancies: all offices were relocated to teleworking with full pay and employee benefits. The redistribution of functional responsibilities and tasks was partially ensured. Mixed office operation is still maintained. In the selection of staff, the company has completely switched to video interviews, which reduced the interview cycle to 1–2 days.

Given the importance of communication in a pandemic, the government allowed telecom operators to keep the shops and offices open, as well as continue to serve the public in compliance with all anti-epidemiological measures, but some stores, including those located in malls, had to close eventually.

Telecommunication companies did not request assistance from the state, but rather expressed the need for clarifications in certain situations (with transport, application of certain norms and restrictions, etc.). Vodafone UA, Kyivstar and lifecell are actively cooperating with the National Security and Defense Council, the Ministry of Digital Transformation and the Ministry of Health to inform the public about the dangers of COVID-19, the need for self-isolation, and to take joint measures to prevent the spread of the disease. Within the limits set by law, companies cooperate with the application «Diia», provide access to their subscribers to the relevant applications and all necessary government resources aimed at providing the services to the population. Vodafone UA has also been presenting all the necessary analytical information to protect the population, which can be produced by the resources of its own telecommunications network. Vodafone UA is developing IOT projects in the areas of e-health, e-learning, which are important in a pandemic, and also continues to actively deploy the LTE-900 radio network. The latter project is developed at the initiative of the NCCIR and the Ministry of Digital Transformation; the main objective is to provide high-speed 4G mobile internet access to the population of Ukraine (especially living in rural areas).

# Forecasts and risks

The pandemic made adjustments to operating activities, but did not have a significant impact on the strategy of telecommunications companies and investment, affecting only the tactical level in terms of day-to-day processes. Companies have reallocated their operating costs, focusing on products and services that help customers adapt to quarantine conditions in a more successful way. The telecommunications sector has become less vulnerable to the risks posed by the COVID-19 pandemic. The same risks as the projected loss of roaming can be managed. The situation with economic risks is much more challenging, as this business sphere depends more on them than pandemic itself. Economic volatility and sharp changes in the hryvnia exchange rate can lead to severe consequences and, thus, have a negative impact on the expansion of the coverage network.

Telecommunications operators are also concerned about problems with unimpeded access of operators to infrastructure facilities for network deployment, high fiscal burden on users of the radio frequency resource within the scopes where operators develop new technologies, difficulties in sharing the radio frequency resource to ensure its maximum efficiency. In particular, the telecommunications industry of Ukraine gives the state 35% of its income in the form of taxes, while in the EU this figure is 21%. In addition, in Ukraine there are purely specific taxes levied in the field of mobile communications — regulatory payments, payments for frequencies, payments for radio monitoring, tax to the Pension Fund, etc. The amount of these taxes is 14% of market revenues, while in the EU this figure is 4%. The brake on market development, according to operators, is a very low ARPU (average revenue per subscriber), which is one of the lowest in the world, which does not encourage investment in the development of new technologies.

The threat of cyberattacks has also increased during the pandemic. Mobile operators state that during the active phase of quarantine, hackers tried to attack networks 10–15 times more often than before. At the same time, the quality of such attacks was significantly decreased. All such attempts were blocked by automated security systems, but the trend itself makes us consider again the importance of cybersecurity not only for telecommunications, but also for the entire IT sector.

Regulatory risks associated with the pandemic include a decrease in the state's focus on deregulation, panic caused by the introduction of new 5G technology, increasing the attention of the Antimonopoly Committee of Ukraine to the activities of telecommunications operators, given the growing importance of telecommunications in remote business.

Some companies (Lifecell) emphasize the problems associated with insufficient competition in the market and the blocking of all initiatives of the Regulator regarding compliance with obligations under the Association with the EU. Consequently, the emergence of many barriers results in the loss of the following: consumers, operators, the economic indicators. The regional monopolies, inflated interconnection rates and slowing down the simplification of the MNP procedure (changing the operator while retaining the number) are currently the main obstacles to the development of the telecom industry.

# Recommendations

In the context of a pandemic, telecommunications companies in Ukraine necessitate the provision of proper information and explicit recommendations for business on behalf of the state. It is also important to raise awareness at the state level of the importance of ensuring adequate communication and access to the Internet in quarantine and remote work.

The attention of the state to promote competition in the Ukrainian telecommunications market in accordance with the best European and world practices remains important for the industry. This primarily implies eliminating regional monopolies, reducing the interconnection rate to the cost level and simplifying the MNP procedure. A competitive market under any circumstances should be under the development of the industry and is to provide all the benefits to consumers.

The COVID-19 pandemic has exacerbated cybersecurity. At the state level, the issue of more systematic informing the population about possible cyber threats when using digital devices at remote work and the danger of phishing attacks is relevant. In today's environment, additional explanatory measures on cyber literacy (cyber hygiene) and personal cyber security can be useful for citizens who, as a result of quarantine, have switched to remote operation using digital means.

Given the vulnerability of the state's medical system, it may be appropriate to initiate the preparation of recommendations for strengthening cybersecurity of medical facilities.

# Transport

# Characteristics/Impact of the pandemic

The introduction of quarantine in connection with the spread of the pandemic had significant negative consequences for the activities of transport market operators in Ukraine. The restrictive measures in April-May 2020 included a complete cessation of passenger transport, which caused significant losses for various categories of operators: bus carriers (with the status of private individuals, rarely LLC); large corporations engaged in rail transportation (Ukrzaliznytsia) and air travel (UIA, SkyUp).

Quarantine had a negative impact on rail freight, the volume of which decreased significantly in the first months of the pandemic. The situation was even worse in the field of air freight: a total ban on international flights in March this year led to airlines being forced to suspend their operations.

In general, during this period, the main problems for domestic operators of the transport services market in Ukraine were the strategic uncertainty in the future and the constant changes in the policy of providing transport services in different countries. Under such conditions, transport companies were not able to respond and give clear answers to their customers' inquiries. Operators had to return significant funds for booking unused tickets to customers; maintain aircraft fleets indefinitely, etc. This situation has led to the cessation of travel planning by customers and a drop in operating performance of domestic transport operators (especially airlines) by almost 100%. Accordingly, this situation has affected the profits of large domestic airlines in Ukraine, whose figures for the second quarter of 2020, compared with the first, fell by at least 75%.

Strict quarantine restrictions have generally affected the business model in the transport services market in Ukraine. Instead of applying mathematical algorithms to the mass demand and profit management system, the management of transport companies was forced to return to manual business management. In order to minimize the damage caused by the pandemic, some air carriers in Ukraine (Sky-Up) had to review their activities and reconstruct aircraft for cargo to deliver goods for humanitarian needs, which helped to ensure the operational activities of companies during the crisis.

The easing of quarantine measures in May — early June 2020 did not significantly improve the situation with transportation for operators in the transport market in Ukraine. First, the resumption of passenger traffic was uneven (air services resumed later than the bus or rail ones); secondly, restrictions on the number of passengers in the cabins and carriages of vehicles remain valid.

# Measures taken

The crisis related to the spread of the pandemic has led to a radical change in all business processes in the field of passenger transport in Ukraine. Airlines that carried out evacuation flights at the beginning of the quarantine were the first to face the new working conditions. At the same time, the procedure of approval of the relevant flights was exercised with bureaucratic complications at five different levels of permitting authorities. Operators have introduced mandatory testing for crew and passengers following the flights to the «red» and «yellow» zones. In addition, to reduce the risk of infection on board aircraft and at airports, «contact items» (logbook, traditional meals during flights, duty free sales, etc.) were prohibited. At the beginning of the pandemic, some airlines (UIA) entered into agreements with domestic sanatoriums and boarding houses to provide 14-day observation of arriving passengers. The work of the offices and contact centers of air carriers during the period of severe restrictive measures took place remotely. Under the ban on air travel, some companies were forced to optimize the aircraft fleet, which led to a concomitant reduction in staff (SkyUp reduced staff by 10%, UIA — by 20%). The client-airline algorithm has been changed by introducing forms of feedback on the Internet and messengers.

For freight railway operators, the challenge was to ensure the continuity of technical processes during the quarantine period, which included the control of work shifts, compliance with sanitary norms, the establishment of shift work, etc. Ukrzaliznytsia temporarily introduced a four-day working week during the restrictive measures, and its employees were switched to remote work while maintaining wages (albeit to a lesser extent).

In order to minimize the negative consequences of the spread of the pandemic, aviation operators in Ukraine along with the state enterprise UkrSATSE have addressed proposals to public authorities with a view to putting an emphasis on the world experience in providing one's state support for crisis situations. However, the airlines have not currently witnessed any practical results from these consultations. The situation with railway transportation in Ukraine is somewhat different: the developed anti-crisis program for Ukrzaliznytsia is partially supported and implemented by the state (for example, the payment of dividends has been postponed until the end of the year); other bills and regulations developed in communication with line ministries are awaiting approval.

# Forecasts and risks

Prospects for the resumption of full-fledged transport market operators in the world remain illusory: according to various estimates (International Federation FIATA), it will take about three to four years to overcome the negative consequences of the spread of the pandemic for the transport companies (in the absence of deterioration). Nevertheless, in the short term, the borders of European countries are expected to close again due to the spread of the «second wave» of the pandemic. Medical restrictions, the need for coronavirus tests, the country's transition from «red zone» to «yellow» and vice versa affect the logic of passenger travel, and, consequently, the activities of international transport.

Currently, there is a critical decrease in scheduled flights; charter flights are mostly exercised for tourists, bringing the bulk of earnings to airlines. Such trends can lead to a further decline in business activity in logistics, which will have long-term consequences for the economy of the whole country. In these circumstances, the domestic air transportation market in Ukraine is quite limited (based on consumer opportunities); therefore, it will be difficult, if not impossible, to compensate for the loss of the international market.

According to analysts, the financial performance of domestic airlines in 2020 will be only a third of last year, while similar performance in the global market in 2021 will be about 45% of the number observed in 2019 (estimated IAT).

Rail transport, which is mainly focused on providing services for the domestic market, remains more resilient to the crisis due to the spread of the pandemic. Ukrzaliznytsia, despite the incomplete resumption of work, is currently undergoing a course of reorganization and restructuring. The main risks for the operator in this matter are related to possible political interference; changing the regulatory environment; implementation of a market approach that involves minimizing so-cial functions, etc.

# Recommendations

The development of the railway transportation market in Ukraine depends on the minimization of the state regulation and the intensive engagement of private business in the relevant sector activities. For Ukrzaliznytsia, the priority in the coming years lies in resolving issues related to the land tax, renewal of rolling stock, restructuring of the company, and the adoption of a law on a new transportation market.

In the context of improving the working conditions of domestic aviation operators, public authorities are encouraged to take more prudent approaches to restrictive measures, as well as facilitate Ukrainians' visits to foreign countries. The need to provide state loans to Ukrainian airlines in order to support their activities in the crisis conditions, reduce fees and commissions at airports remains relevant.

Similarly, it is important to mention the issue related to the need for government support in terms of the retention of skilled workers in the aviation industry, the necessity to introduce targeted benefits and loans to airlines to pay salaries to employees by slowing down companies due to the pandemic. Recommendations directly to aviation operators in this regard are to be taken into attention with conjunction to the need to reduce planning time, increase mobility and diversify activities.

The state strategy for responding to the pandemic in the field of air transportation should be more adaptive given the risks of termination in the activities of Ukrainian freighters in the event of re-tightening of quarantine restrictions and a complete ban on flights. Due to the fact that aviation currently remains a competitive business, the financial security of domestic airlines (benefits, repayable and non-refundable assistance) from the state during the crisis is critical to increase operational capacity, as well as rise market competitiveness compared to international carriers.

# Tourism business and hotel industry

# Characteristics/Impact of the pandemic

The tourism sector has been particularly hard hit by severe quarantine restrictions caused by the response to the COVID-19 pandemic. The business activity of tour operators has practically stopped. The hotels were completely closed for two months (from mid-March to mid-May 2020). The hotel business suffered significant losses due to the need to refund for canceled bookings (for chain hotels it accounted for millions of hryvnias). Revenues from the available room (RevPAR — one of the main indicators of the hotel business) during the crisis in April 2020 fell to 89% marked «minus», while the level of «survival of hotels» was -25%. This situation has become completely new for all hotels, since this industry has never witnessed any such a crisis before.

During the period of adaptive quarantine (from June 2020), tourism gradually began to recover. Instead of reduced strategic tourist destinations (Greece, Spain, Thailand, Dominican Republic, etc.), the demand for domestic tourism has increased, which contributed to a certain load of Ukrainian hotels, in particular following the resumption of rail services in June 2020. Commencing on July 12020, tour operators resumed their operations in full.

The financial performance of the hotel sector has declined significantly. Currently, the hotel chain is 75% complete, mainly due to corporate agreements. In quarterly terms, hotel profits for the second quarter of 2020, compared with the first, decreased by 80–90%.

# Measures taken

The interviewed tour operators of Ukraine during the quarantine were forced to optimize staff (up to 25% reductions) and focus their activities on domestic tourism. Sanitary hygiene measures for employees were strengthened, and office staff were allowed to work remotely. Under the restrictions, preference was given to tour operators who possessed their own software and operating products, which, in turn, allowed users to purchase tours remotely, without having to visit the tour operator's office.

During the quarantine period, hotels tried to reduce the cost of maintaining the number of rooms (by closing the floors, turning off the elevators), but such measures did not significantly reduce the cost of utilities. Hotel employees had to switch to a reduced working day, using vacations at their own expense. Up to 25% of staff who were not satisfied with such working conditions resigned and changed their field of activity, realizing the vulnerability of the hotel and restaurant business during such a crisis. Hotel management companies began to work remotely.

Quarantine has significantly affected the digital transformation of the hotel business through the introduction of electronic document management and an increase of up to 50% in the number of online bookings through external services (Booking.com).

The tourism business received neither targeted assistance nor tax benefits from the state. Although the State Agency for Tourism Development launched the Travel Ukraine project in June 2020, the domestic tourism is currently being promoted at the national level and such advertisement has facilitated the increase in sales of tour operators.

Hotels holding a joint stock companies status were partially exempt from imposed tax and real estate tax for the duration of the strict quarantine regime. In general, the state has not fulfilled its functioning in terms of determining the rules of the game and their observance during the quarantine period. Some hotels and chains did not comply with quarantine restrictions, but the state did not take measures to influence such violators. Meanwhile, the number of competent bodies conducting inspections has increased, and, similarly, the number of hotel inspections has grown as well.

# Forecasts and risks

The pandemic has significantly affected the hotel market, the situation in the whole. Given the uncertainty of the «second wave» of the pandemic, it is difficult to predict a recovery. In the winter-spring period of 2021, according to optimistic expectations, hotel occupancy should be 50% of the maximum, subject to adaptive quarantine.

Due to low demand and oversupply, prices will change significantly (a dumping is likely to occur). The drop in occupancy to 70% compared to last year, with a drop in average daily rates (also one of the main indicators of the hotel), which decreased by almost 20% — the mentioned are expected to cause a fall in revenues in 2020 by 60–70% in comparison to 2019 figures.

The coronavirus crisis has led to changes in the implementation of business strategies in the tourism industry, including greater localization of tourism, short-term planning (monthly instead of quarterly), staff outsourcing, mobility and flexibility of market operators. Due to the pandemic, some investment projects have been reduced or frozen, the construction of which will be extended by a year or two. Another problem is the lack of small suppliers, who were forced to cancel their activities during the crisis. As a result, supply chains were lost. Therefore, restaurants operating on leased hotel areas have had to close as well. Volumes and directions of a tourist stream are undergoing limitations as well. The World Tourism Organization (UNWTO) in its official report entitled «Assessment of the impact of the COVID-19 outbreak on international tourism» stated that the current crisis has become the third and largest one in terms of negative dynamics since 2000. According to UNWTO forecasts, the decrease in the number of tourists will continue to take place in the next five to seven years. In the meantime, only the global aviation realm in this year will witness the loss of profits by 38%, or 252 billion dollars, compared to 2019.

The closure of state borders, as a restrictive quarantine measure, has led to a significant reduction in business activities, which negatively affects the occupancy of hotels. Strategically, the state does not protect domestic business, so the competitive advantage is given to tour operators with Turkish and Russian investments, given financial support from their countries.

# Recommendations

Reorienting the demand for domestic tourism requires introducing a media campaign within Ukraine and abroad, which would promote Ukraine as a brand; visa liberalization (introduction of electronic visas and visas on arrival, abolition of visas); infrastructure development in the regions, in particular the construction of roads and airports. At the state level, it is necessary to develop preferential lending conditions and regulatory policies for the transfer of land for the targeted construction of tourist facilities.

Coordinated cooperation of all hoteliers is of substantial importance. Their goal should be to combine efforts to develop the industry and focus on domestic tourism. Direct coordination between hoteliers is also needed to avoid unfair competition or market failures due to unjustified short-term decisions that could lead to a global crisis in the hotel industry, which will afterwards be difficult to overcome even after the end of the COVID pandemic. The professional association of hoteliers should enter into a dialogue with the relevant ministry, parliament and develop a roadmap for overcoming the crisis.

The hotel requires 20% of the monthly occupancy to ensure a minimum of its operating activity. The majority of hotels have not managed to reach this threshold. Respectively, they accumulate operating debt, while spending money on increased sanitation. This situation threatens the mass closure of hotels in the absence of state attention to the problem.

The state should present a plan of further action on possible restrictions in case of deterioration of the pandemic situation in Ukraine, develop a comprehensive approach to anti-crisis measures for entrepreneurs, as the operation of hotels is de-

pendent on many other industries. It would be useful to reduce the rates of wages, the abolition of regional fees, and so on. The study and implementation of the best world practices of crisis management are also necessary.

# Local government

The project team has interviewed two mayors: the mayor of the western Ukrainian metropolis — Lviv (population — 724 thousand people) **Andriy Sadovy**, and the head of the district center in the northeast — Trostyanets, Sumy region (population — 20 thousand people) **Yury Bova**.

# Impact of the pandemic/Reaction

**Lviv:** The city was one of the first in the country to set up a headquarters to monitor the spread of the disease in Europe. The mayor publicly was addressing the community, giving explanations and recommendations on a regular basis. Even before the introduction of quarantine measures in Ukraine, educational and medical institutions began to prepare in Lviv. The reserve fund allocated more than UAH 150 million for the purchase of equipment (ventilators, oxygen concentrators) and protective equipment. The mayor personally called the first patients with COVID-19 to support them morally and personally to learn about the specifics of the disease. One of the first laboratories in Ukraine for PCR and ELISA tests was established in Lviv. Over time, an average of 1,500 people have been tested by PCR per day (as of the end of August 2020).

Volunteers provided active assistance in the response: they delivered products for the elderly, masks, and disinfectants. From the first day, local businesses came to the rescue. Lviv was the first in Ukraine to start providing additional payments of UAH 10,000 to doctors from the local budget, and UAH 20,000 to hospital staff who fell ill. This is a guarantee for doctors that they will not be left to fend for themselves. About UAH 200 million was spent on all quarantine measures from March 2020 to the end of August. Lviv did not receive funding from the state, on the contrary, for example, real estate and land tax benefits were taken away from the city (only in this situation the city did not receive UAH 60 million to the budget). Another 180 million hryvnias turned out to be the shortcomings from public transport, the latter began to operate by providing transfer exclusively on the seats without compensation on behalf of the state (instead, the difference was compensated to the carriers by the city bodies). In general, by the end of the year the Lviv budget will likely lack more than UAH 1 billion receipts.

Despite the fact that the resources had not been enough to ensure the normal functioning of the city, Lviv demonstrated a flexible and innovative approach. Thus, in July 2020, the Lviv City Council completed the first placement of this year's domestic local bonds for UAH 300 million with a discount rate of 8.5%. The funds are expected to be spent on the planned development of the city's infrastructure, including road repairs.

**Trostyanets:** Since the beginning of the epidemic, local authorities have faced the problem of people's complete misunderstanding of the seriousness of the threat and the need for strict restrictions, later — fatigue from quarantine, reluctance of people to stay at home.

A headquarters was set up at the city council, where daily meetings took place. An important task in the functioning of the headquarters is to provide hospitals, Administrative Services Centres employees, and city council units with disinfectants and individual protection equipment. The headquarters coordinated the disinfection of vehicles, compliance with restrictions on trade, the operation of markets, responded to cases of disease in enterprises (rapid response, detection of contact persons, their isolation).

Quarantine restrictions were generally justified, except for the closure of parks and squares. In addition, decisions to wash the streets with water (expensive and impractical) did not prove to be adequate and proper. Instead, the treatment of public transport stops and handrails in the entrances with special means was the right step, which was implemented in the city by special teams of housing and communal services workers.

These measures were provided at the expense of the local budget by reducing expenditures on landscaping. Significant funds were also allocated for the hospital, and this measure was identified as a support for patients with COVID. Patients from six districts of Sumy region are currently being transported here. Ventilators and resuscitation beds were purchased for the hospital, and oxygen was delivered to all wards. The city authorities turned to local businesses and philanthropists abroad for assistance (1.5 million hryvnias were raised for the hospital through joint efforts). Given the shortage of masks and speculative prices for them in March-April 2020, the mayor provided at his own expense through a personal agreement with an entrepreneur from a neighboring village to sew 3.5 thousand masks for citizens who were simply distributed on the street.

The local budget received almost UAH 3 million of tax revenues (with an annual budget of UAH 100 million, this figure is quite significant). In general, the losses of the city budget reached about 15%. As a result of the revision of expenditures, the utilities sector, landscaping, and transport suffered the most. Utility companies en-

gaged in passenger transportation incur monthly losses of about 60–70 thousand UAH. The city budget is undergoing an increase, but only by 4% (for the first time in the 15-year term of the mayor. For example, the growth in 2019 was 20%).

# Impact on local business

**Lviv:** The tourist cluster and conference tourism in the city have been significantly affected, and hotel occupancy has fallen sharply. At this time, it is gradually recovering, but does not exceed 50%. On average, about 2.5 million tourists visited Lviv annually, each of whom spent about 2.5 days in the city and spent up to \$85 a day. As a result, more than \$500 million was received during the year, mostly from small and medium-sized businesses. By the end of the year, the tourism industry will have approximately only 10% of the planned profit.

Catering establishments have also suffered significant losses. However, there is an interesting feature: institutions with a higher quality of service and focus on the local client have more calmly overcome the crisis, and those that concentrated exclusively on tourists and/or did not always adhere to quality standards, hence, are currently facing problems.

Most enterprises in the manufacturing sector have proceeded with their functioning. During the period of severe quarantine, local authorities tried to create favorable conditions for workers by helping to transport people to work. Office space continues to be empty — everyone works remotely. There is a large IT community in the city, therefore office complexes will obviously not make a profit.

In summary, Lviv has taken sufficient measures to support business for the quarantine period: entrepreneurs have been exempted from the single tax, from the advertising tax, land tax, real estate tax, hotel tax, from paying for the lease of communal property by non-business service, and managed to work in a crisis.

**Trostyanets:** During the coronavirus crisis, self-employed entrepreneurs suffered the most, as markets were closed and trade banned. In addition to the non-food category of entrepreneurs in the markets, the enterprises that cooperated with the railway were significantly affected (due to the cancellation of the railway connection in April-May 2020). Prior to that, the state had introduced benefits for farmers and large enterprises, despite the fact that they worked. Therefore, even those plants that were active and farmers who were sowing at that time took advantage of these benefits in March and April without paying land rent. Moreover, following the lifting of restrictions, the city of Trostyanets did not collect a single tax and rent from entrepreneurs for another month and a half.

But there were productions not actually affected by the crisis. For example, food producers in Trostyanets who worked in three shifts because people were at home did not witness any negative outcomes, given the fact that the demand for food did not change.

# Readiness for the second wave

**Lviv:** The ambulance hospital has a separate department for COVID infected patients with concomitant diagnoses (eg, heart attack), where they can receive professional care. In general, the dynamics of the coronavirus have led to the refusal to separate hospitals — each hospital must be ready to accept and treat patients with COVID. Hospitals and polyclinics of the «second turn» have already started operating in the region. The city is preparing for the worsening of the situation without panic: it has enough equipment, personal protective equipment, medicines purchased according to protocols.

In addition to combating COVID, Lviv is trying to develop other promising areas of medicine. Therefore, on the basis of ambulance hospital opportunities for transplantation of heart, kidneys, pancreas are created in the city. Lviv aims to become a center of transplantation in Ukraine, Central and Eastern Europe.

Lviv has introduced the necessary changes in educational institutions: opening all doors in the premises, training in junior and middle classes at different times, disinfection, masks, temperature monitoring.

**Trostyanets:** The main hospital in the city receives funds from the state special fund to combat coronavirus, but allocation of finances depends on how many patients are there with a severe form, the total number of patients, the number of devices and emergency crews. The formula for reimbursement by the state is imperfect — the money is allocated exclusively to patients with a confirmed diagnosis. Instead, funds for those who have an unconfirmed suspicion, but are hospitalized and occupy a place in the ward (2–3 days pending test results from the laboratory located in Sumy), should compensate the city budget. The number of patients equals the amount of aid to be rendered. Therefore, when funding came from the state, it was distributed exclusively among those people who worked directly with COVID patients (and who are not just on duty). Wage inequalities have emerged: some received 30%, some 50% of the surcharge, which led to misunderstandings in the teams. A total of UAH 6 million was spent on the hospital in 4 months, the funds came from the city budget and charities.

At present, the city tackles a challenge with the placement of patients, who have other diagnoses. There are no places to treat them, since the city hospital is completely dedicated to patients with COVID. The nearest hospital is located 20 km away in another city and is not adequately prepared (it does not have a boxing infectious department). Therefore, it is necessary to carry out compulsory actions — to equip places in the traumatology department under resuscitation.

A communal hotel has been allocated for observation for people in need of isolation. The problem is the lack of funds and reserves: the purchase of disinfectants for educational institutions is an additional hundreds of thousands of hryvnias to be allocated from the city budget.

# Recommendations

**Lviv:** There should be a common position of the state and the city, as well as a line of communication being properly and explicitly established. The state must have the necessary stocks of medicines in case of a deepening crisis, similar to March 2020, and their production should be concentrated in Ukraine.

International best practices should be studied and analyzed. In Poland, Germany, France, and the United States, the state is allocating billions of funds to support the economy and counter COVID-19. Currently, Ukraine lacks that systemic support from the state.

Certain restrictions were unnecessary, such as a ban on walking in parks. Instead, coordination of efforts on the ground is correct and necessary. Thus, the Lviv authorities have not only publicly and in detail explained the need and mechanism of precautionary measures to citizens, but also arranged weekly remote video conferences with local businesses, its various clusters, so that entrepreneurs are in full awareness of what is happening and, thus, feel more confident.

**Trostyanets:** Diagnosis plays a very important role. The more people pass PCR tests, even with suspicion, the more isolated they will be so as not to endanger others, the speed of the disease will depend on it.

First of all, the identification of the circle of contact persons of a patient with COVID should be done as soon as possible among primary care physicians and emergency ambulances. Afterwards, the following measures are to be taken: the closure, suspension of the work of institutions and enterprises, and interaction with managers to raise their awareness of the situation. Secondly, the acceleration of testing, given the current access to ELISA tests, is to be carried out. In addition, many clinics and hospitals have biochemical analyzers. And, at last, the work with business is to be undergone, in order to avoid the concealment of the disease cases and to explain the situation and the consequences, since an untimely response can only lead to an adverse increase in losses.

# CONCLUSIONS

he impact of COVID-19 and quarantine restrictions on various sectors of Ukraine's economy has been asymmetric. With this in a view, separate approaches to overcome the negative phenomena in each sector of the economy are required. Due to the fall in world prices for raw materials caused by the pandemic, negative trends are observed in strategic export-oriented industries, such as metallurgy and mechanical engineering. The impoverishment of the population and the related decrease in the purchasing capacity of the population of Ukraine have led to the drop in business incomes in the service industries — retail, restaurant business, tourism, etc. Certain industries face, first of all, the need to «survive» in the conditions of quarantine restrictions — a ban on the use of certain services or visiting public places.

In the context of the spread of coronavirus infection, the state must choose a pattern of behavior that on the one hand, will improve the epidemic situation, mitigate the effects of the second wave of the disease, and on the other — can prevent a deep economic crisis and bankruptcy. Anti-crisis measures in the economy should be aimed at ensuring the stability of supply chains and production of products important for overcoming the epidemic, in the context of continued quarantine restrictions. It is expedient to form national economic ecosystems in Ukraine on the basis of development of investment infrastructure, regional specialization and interregional cooperation.

To ensure an effective operation of entrepreneurs in Ukraine, it will be important to launch large-scale national projects to support the domestic business sector and the national producer, primarily — the development and implementation of government programs to save workplaces by reducing the credit burden on business; revision of the mechanisms of protection of the national producer given the new socio-economic conditions caused by the pandemic.

Priority should be given to such activities that will ensure the security of the state — food, chemical, pharmaceutical, engineering, etc. It is crucial to realize the state potential for the application of financial and regulatory mechanisms to support domestic producers, while adhering to the rules and provisions of the current Association Agreement with the EU. Small and medium-sized businesses (especially services) are also interested in tax benefits and targeted assistance, which will reduce losses from downtime during quarantine restrictions.

Unemployment is a significant challenge. Ukraine cannot allow subsidizing the unemployed to the full extent (in contrast to the EU and USA potentials, where the practice is common). With this in a view, a strategy must be developed to stimulate economic activity and restructure the unemployed. The steps planned by the Ukrainian authorities, in particular to increase the minimum wage to UAH 6,000 from the beginning of 2021, on the contrary, will lead to the growth of the tax pressure on entrepreneurs and stimulation of the underground economy.

Communication and the ability to build a digital infrastructure for business interaction with the authorities are of great importance. Public policy, given the necessity to accelerate digital transformations, should help increase the level of digital business competencies, the development of e-commerce. Businesses are already adapting to new conditions through the elaboration of remote access tools, the improvement of e-commerce, the transfer of online business processes. It is relevant to apply high-tech online payment solutions, cashless payments via credit cards, uninterrupted supply chains, ensuring the security of personal and payment data of customers.

It is advisable to develop new electronic tools for the interaction of public authorities and other organizations with economic entities. The possibilities for remote submission of electronic documents via a digital signature should be expanded within the requirements of current legislation. Creating transparent electronic tax administration procedures is an urgent challenge. Meanwhile, as for the entrepreneurs, online administration will facilitate the avoidance of pressure by regulatory bodies.

The introduction of repeated strict lockdowns in Ukraine will have a long-term destructive effect on the service sector, restaurant business, tourism industry, airlines, etc. Instead, the planning of such measures, the consistency of both their duration and rules of the common nature, will reduce the specific risks of quarantine restrictions. Давимука Олександра Олегівна Дєнков Дмитро Дмитрович Каракуц Андрій Миколайович Щедрін Юрій Володимирович

# НАСЛІДКИ ЕПІДЕМІЇ COVID-19 ТА КАРАНТИННИХ ЗАХОДІВ ДЛЯ ПРОВІДНИХ СЕКТОРІВ ЕКОНОМІКИ УКРАЇНИ

Дослідження за результатами глибинних інтерв'ю з власниками та топ-менеджерами українських компаній

(українською та англійською мовами)



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У публікації представлені результати опитування з використанням методу структурованих глибинних інтерв'ю з власниками та топ-менеджментом провідних українських компаній, а також представниками органів центральної та місцевої влади і сфери охорони здоров'я стосовно наслідків епідемії СОVID-19 та карантинних заходів для провідних секторів економіки України. Усього в період з серпня по жовтень 2020 р. було проведено 63 індивідуальних глибинних інтерв'ю за підготовленими сценаріями для кожної окремої галузі економіки України. Отримані дані можуть розглядатися як кейси щодо ситуації в кожній окремій галузі, але дають можливість в цілому оцінити наслідки епідемії СОVID-19 та карантинних обмежень для українського бізнесу в 2020 р.