

## Macroeconomic Policy of Employment after the Covid-19 Pandemic Crisis

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### Abstract

The paper analyses the macroeconomic situation at the labor market and proposes measures to restore employment to the pre-COVID -19 level. The study of the basic concepts of state regulation methods of employment demonstrates that various forms of application apply to the country's macroeconomic level. The long-term restrictive measures in developing countries result in the dramatic decline of economic activity, contraction of production, unemployment increases, labor productivity decreases due to the spread of COVID -19.

Countries with high macroeconomic indicators have better social cohesion and reliable systems of social protection. It has consequences that are more reliable on the employment level compares to the developing countries. The assessment of the various policy approaches of full shut up measures for localization dissemination disease, imposition of restrictions on the working life, the introduction of new remote forms of work and education suggests countries define special policy, which depends on the national economic and financial potential. The health system development and adoption of stabilization measures of the epidemic situation in the country are the basis to restore confidence and trust in the society.

The article proposes a deep account of the challenges that the Ukrainian economy has faced, and continues to face due to the COVID-19 pandemic effects, deterioration of macroeconomic indicators, including employment decline. Rethinking the relation of quarantine measures and employment demonstrates that the "adaptive quarantine" measures in regions show better results comparing with complete shut up business measures in Ukraine. The article assumes that employment restoration to the level pre- COVID-19 quarantine will take lingering nature

in Ukraine. The various methods related to the development of the unemployed population, social support, education, assistance in creating additional jobs are proposed.

**Keywords:** pandemic, state regulation employment, macroeconomic policy, correlation analysis.



## 1. Introduction

The pandemic COVID-19 has led to dramatic consequences in all spheres of activity, including the situation on the labor market. According to the EBRD forecast, the global GDP contracts 5.2 percent, using market exchange rate weights. Lower investment, human capital aggravations, destruction of global trade, and supply linkages accompany the deep recession. The pandemic effects of a deep decline in economic growth results of the inequality gap rise between developed and developing countries, and wealthy and poor people in countries. Governments apply various macroeconomic policies and forms to withstand SARS-CoV-2 from stringent lockdown to less restrictive and adaptive based on various countries and regions. The first lockdown measures dramatically affected the labor market. According to the estimates of the International Labor Organization (ILO), in Q2'20 the number of hours worked reduced by a total of 10.5 percent, which is equivalent to 305 million full-time jobs. The 1.6 billion people working in the grey economy, which accounts for almost half of the global workforce affected. Most countries show employment growth until 2019 and a major inversion of the trend in 2020, which adequately displays the effect of the current pandemic. The International Monetary Fund (IMF) assumed that a new economic crisis could radically change consumer behavior. For example, prolonged quarantine and work from home can make some of the office work remotely. This will reduce the demand for paper, office equipment, and office space. The real estate market will change that will result in a decrease in the demand for commercial premises, an increase in rental prices.

The theoretical analysis of modern economic theories suggests using an economic policy that could be assessed with the point of adaptability to the prevailing economic conditions in the modern economy, while not excluding ideological and theoretical preferences, and economic interests hidden behind the choice problem. The application of the restrictive policies demonstrates negative effects for business development. Nevertheless, the austerity policy can reduce the debt to GDP ratio that improves the solvency of the country. The estimation results of effectiveness's macroeconomic policies demonstrate that governments need to speed anti-pandemic measures to overcome the consequences of SARS-CoV-2. Adopting complex measures to prevent infection includes well-targeted policies to support the health system and health workers, control business activities, support business entities, and ordinary citizens with low income.

The European Commission adopted the policy measures against the spread and impact of the coronavirus on 12 October 2020 that directed to provide creation effective system of the prevention of the pandemic in the European Union. They include the following categories: expenditure measures, tax measures, measures related to public guarantees, other measures than fiscal providing liquidity support.

The analysis of potential long-run outcomes of SARS-CoV-2 on productivity growth shows that East European countries have diverse rates, consequences, and effects in Ukraine. Lower wage rates lead to aggregate demand decreases. The investment rate growth with total productivity increase could improve the country's current account position. Economic consequences of Covid-19 illustrate the increase of international competition for labor-intensive products, and trade expansion with different product qualities in industry, and decrease of employment in small and medium-sized enterprises (SMEs).

## 2. Literature review

The literature review of the assessment of the pandemic COVID-19 impact on employment indicates that governments develop measures to support workers in need, and apply both approaches of the effect on the supply-side labor market reforms (Kleinknecht, 2017) and an effective demand-side labor market theory (Dutt, 2006) for stimulating economic growth. We start our analysis from the sociological point of view that explains economic outcomes, decisions in the labor market, and the difference in corporate governance methods. The sociology approach deals with the concepts of social structure, social capital, and system of social relations. Social structures and social networks affect economic outcomes. All social interaction unavoidably transmits information, details about employers, employees, and jobs flow continuously through social networks that people maintain in large part for non-economic reasons. Social changes in norms, values, behavior result in the formation of networks in the labor market. Some of them establish an uneven playing field in the labor market (Granovetter, 2005, p. 37). Thus, managing economic units, as well as a global business, requires balancing forces between homogenization and differentiation. The management of the trade-off between integration and variety (for example cultural responsiveness) can be informed by an evolutionary account of how social systems unfold (Ioannides, 2008, p. 200).

Baudry & Chassagnon (2018) analyze contract theories comparing American and French legal structures. Authors argue that French labor legislation aims at reducing the asymmetry of power between employer and employee. They propose to limit the discretionary decisions made by employers. Opposite American labor law rests on “the balancing of power” by actors themselves. Contract economic theories do not seem to consider this balancing of power as important in the regulation of the employment relationship as compared notably to the benefits of employment that will and pure private ordering. They stress that the major inconsistency in French labor legislation appears by the importance of the role of the State and the judges’ actions. Hupkau & Petrongolo (2020) explore the impacts of the pandemic crisis on the labor market and stress that the labor market outcomes of men and women are equally affected at the extensive margins. Authors argue that women as households provided on average a larger share of increased childcare needs. They emphasize the increased inequality over the prolonged term as pandemic consequences. Kalenkoski & Pabilonia, (2020) examines changes in the employment and work hours of unincorporated self-employed workers. The initial impacts of COVID-19 on the employment and hours worked of the unincorporated self-employed indicate differential effects by gender, couple status, and parental status.

Supply-side policies refer to those that shift the wage- or price-setting curves. In many instances, supply-side policies are implemented to support government objectives other than those associated with macroeconomic stabilization. For example, the government may seek to alter the distribution of income, to reduce child poverty, to boost innovation and entrepreneurship, etc. (Carlin & Soskice, 2007).

Scientists suggest several scenarios for the pandemic COVID-19. The common feature of all scenarios is that infection will spread in the global world, and results in dramatic damage to the world economy. The velocity and degree of damage to economies and populations depend on the government’s active role to confront the global spread of infection and quarantine

measures. OECD “domino” scenario proposes the dramatic spread of pandemic COVID-19 in the Asia Pacific region and the main developed countries that account for 70 percent of the world GDP (in purchasing power parity). This forecast can demonstrate to entrepreneurs and authorities around the world how strongly they are directly or indirectly dependent on China and the international supply and value chains “passing” through it. This, in turn, could push businesses and authorities to rethink the existing international market order and redistribute transnational economic chains to reduce their dependence on Chinese imports or demand, which is unlikely to benefit the Chinese economy.

A survey of more than 1,000 venture capitalists (VCs) finds that investors predict only a tiny dip in portfolio performance — and that the cash spigot remains open (Simmons, 2020). The venture capital business model is unique in that VCs remain deeply involved in managing their portfolio companies, working much closer to the ground than other investors. As a result, they know the businesses and can guide founders through the white-knuckle process of building a company. In a newly released survey of more than 1,000 venture capitalists, representing some 900 firms, Compers and his co-researchers found that VCs are as busy as ever, and optimistic about the future. The COVID-19 pandemic has abruptly changed the way of living, in ways that often require more tech mediation. That may be part of the reason why VCs report that half of their portfolio companies are either unaffected by the pandemic or have benefited from it. Only 10% of portfolio companies are severely negatively affected. VC funds anticipate only a tiny dip in their financial performance (Compers et al, 2020).

Fasih et al. (2020) study outcomes of the impact of COVID-19 on the labor market, and consider the key spheres of state regulation education, income support and employment, and digital economy development, that measures help people to keep their confidence for the future.

The research reflects the complementary tendency for the system transformation process in Ukraine. The correlation analysis illustrates the degree of relationship between variables, where a moderate correlation coefficient is for GDP from government stability, from an index of economic freedom, and absence of corruption (Nosova, 2020).

The International Labour Organization (ILO) develops policies addressing the impact of the COVID-19 crisis on the international labor market. They highlight the following three key elements: the number of jobs, the quality of jobs, and an effect on specific groups who are more vulnerable to the adverse labor market. Unemployment levels are expected to rise between 5.3 and 24.7 million people, based on the best and worst-case scenario respectively. The decrease in labor supply due to quarantine measures and the drop in economic activity will most likely result in large income losses for workers. The pandemic has dramatic consequences on vulnerable groups of the population and worsens inequality (Changes in the Labour Market, 2020). The ability of restoration economy after the pandemic COVID-19 depends on the depth and duration of a recession.

PwC Kazakhstan a quarterly survey on macroeconomic indicators among leading economists shows that 83 percent of respondents consider scenario U for a future global economic recovery that proposes a slightly longer period of low economic activity, but followed by restoration of the global economy.

The Census Bureau’s Household Pulse Survey (Tracking the Covid-19 Recession’s Effects, 2020) provided data that the unemployment rate in the U.S. jumped in April

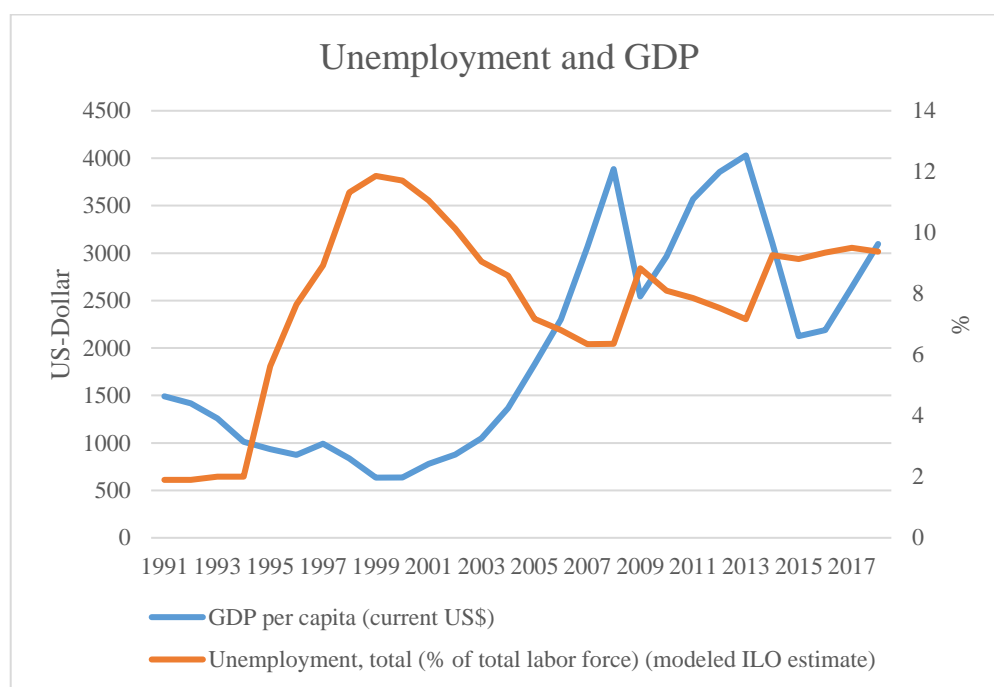
2020 to a level not seen since the 1930s — and still stood at 6.7 percent in November. Some 10.3 percent of Black workers and 8.4 percent of Latino workers were unemployed in October, compared to 5.9 percent of white workers. The majority of jobs lost in the crisis have been in industries that pay low average wages, with the lowest-paying industries accounting for 30 percent of all jobs but 53 percent of the jobs lost from February to November, the latest month of Labor Department employment data. Jobs in low-paying industries were down almost twice as much between February and November 2020 (10.4 percent) as jobs in medium-wage industries (5.5 percent) and three times as much as in high-wage industries (3.4 percent).

Brik & Obrizan. (2020) identify aggravation well-being of urban Ukrainian during the pandemic COVID-19. They suggest that the government of Ukraine should pay more attention to the labor market in regions, and provide social support to lower-skilled social groups. The European Business Association survey data for Ukraine (EBA Survey, 2020) confirm that the adoption of strict restrictions and full lockdown measures in the second wave of the pandemic COVID-19 will lead to the prolonged economic stagnation of SMEs. One-third of the respondents state their readiness for the above-mentioned restrictive measures. Forty - two percent of entrepreneurs are categorically refuse to admit such constrained forms for business activity.

The scenario and macroeconomic policy assessed against the point of view of adaptability to the prevailing economic slowdown, while not excluding countries' preferences and economic interests that hidden behind the harsh consequences of the pandemic. The application of each of the mentioned approaches depends on the goals and expected results of the state's macroeconomic policy.

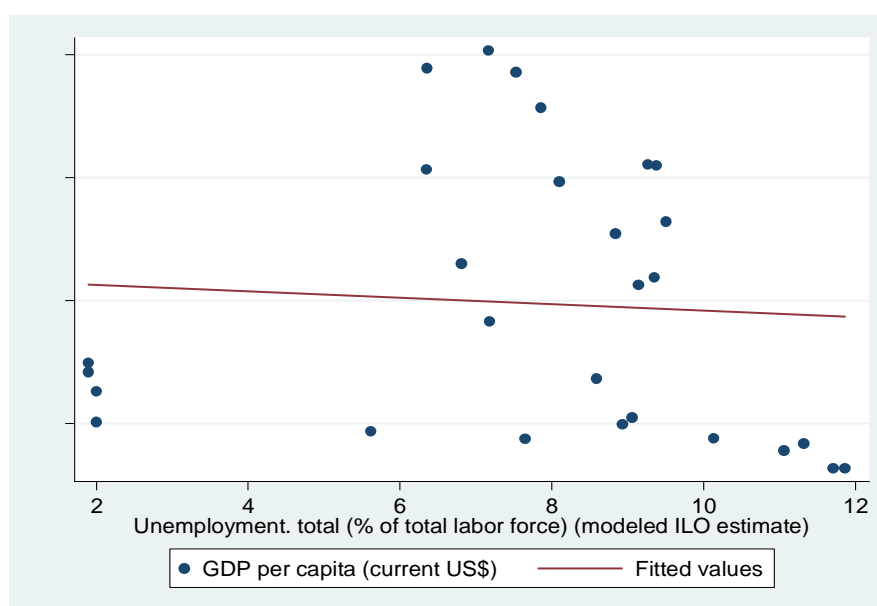
### **2.1. Statement of the problem**

The paper aims to define the macroeconomic policy of employment in Ukraine in the pandemic COVID-19. We check the hypothesis that the employment rate depends on the duration and extent of government restrictive measures for business. We apply an interdisciplinary approach in defining the research object, and considering what kind of macroeconomic policy the government uses to mitigate the consequences of the pandemic. A comparison analysis aims to compare various kinds of policies, and provides basic measures to policymakers. The correlation analysis uses for estimation of the depth and complexity of the current situation in Ukraine, identification of future scenarios, and government mechanism of employment restoration to the pre-COVID-19 level. We examine the impact of the pandemic COVID-19 on the labor market from the analysis of economic activities in domestic and foreign markets. The development of the situation in the Ukrainian labor market is affected by changes in the segment of the national economy, the operation of which is focused on the domestic market of Ukraine. The segment of the national economy, focused on foreign trade, influences the domestic demand and supply of labor. The current situation of the direct migration of workers forces from Ukraine abroad impedes the stabilization process in the labor market. In general, the impact of the COVID-19 pandemic on the Ukrainian labor market in all the above-mentioned areas leads to a direct and indirect reduction in the involvement of labor in economic activities. Such influence manifests through a direct temporary ban, or restriction of certain types of economic activity, and constraint of labor migration from Ukraine abroad.



**Figure 1. GDP per capita and unemployment in Ukraine**

The correlation analysis GDP and unemployment rate in Ukraine demonstrate the low intensity of the relationship between parameters, where the correlation coefficient is equal to  $-0.0675$ . (See Figures 1, 2). The unemployment rate after the jump to almost 10 percent in the second quarter of 2020 will gradually return to neutral.



**Figure 2. Correlation analysis GDP per capita and unemployment in Ukraine**

The end of the strict quarantine phase assumes economic recovery and rising social standards. Nominal wages will increase by almost 9 percent in 2020 and by 16 percent in 2021, and real wages by 6.2 percent and 9.5 percent respectively. The National Bank Ukraine suggests that a smaller increase in unemployment may be partly due to employment being informal and the strong uptake of remote working in Ukraine, particularly among larger companies (The COVID-19 crisis in Ukraine, 2020). Low domestic savings and limited fiscal space further constrain the ability of households or the public authorities to absorb exogenous shocks.

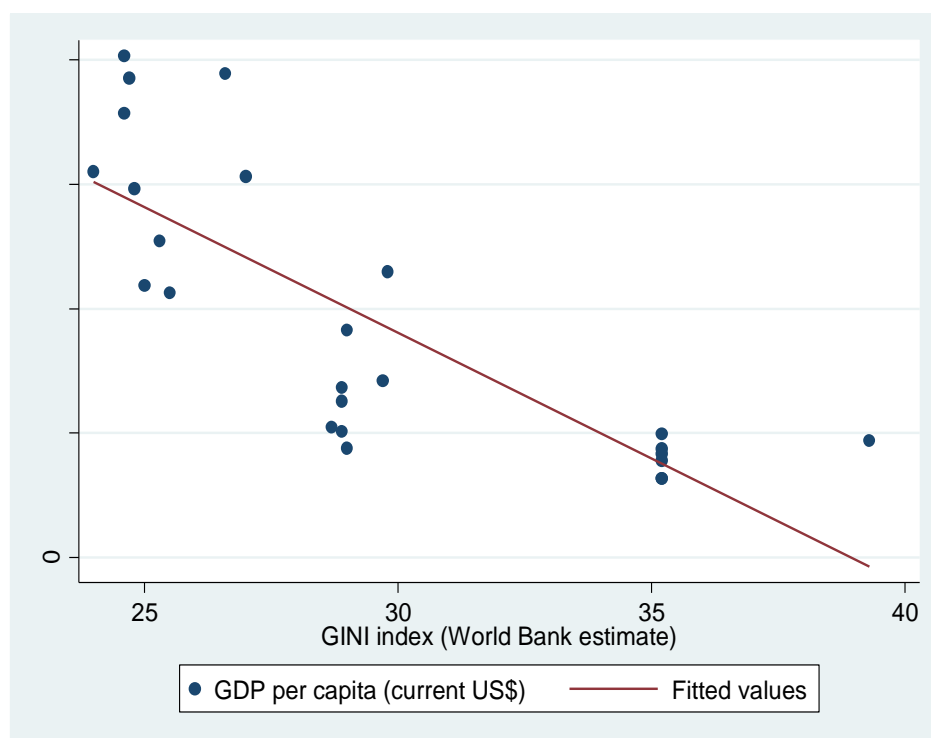
Given the present uncertainty in the factor in Ukraine, estimates of the economic impact of COVID-19 differ greatly. According to multiple recent estimations, Ukraine's 2020 GDP may decline from the earlier predicted growth of 3.2 percent to 0.5 percent and could even fall to -4 percent. The very optimistic scenario of low growth assumes that the lockdown will not be prolonged beyond 28 February 2021 and that the Ukrainian economy will regain some of its positions in 2021.

The correlation analysis of GDP per capita and inequality rate in Ukraine demonstrates an intensive negative relationship, where the correlation coefficient is equal to  $-0.7914$ . (See Figures 3, 4). The linear correlation coefficient of the GINI and GDP for Ukraine was 0.84 in 2020. The value indicates a significant negative relationship between the level of development of the economy and the degree of differentiation of household incomes in the period of the pandemic.



**Figure 3. GDP per capita and Gini index in Ukraine**





**Figure 4. Correlation analysis GDP per capita and Gini index in Ukraine**

The correlation analysis of GDP per capita and unemployment rate, GINI index in Ukraine confirms the negative tendency of impoverishment and deterioration of living standards of the majority of the population.

The International Monetary Fund (IMF) forecasts a drop in Ukraine's GDP by 7.7 percent in 2020 compared to the world GDP fall 3.6 percent. An increase in unemployment will drop to 12 percent in seasonally adjusted terms and a suspension of wage growth. The public financial deficit will reach 8 percent GDP in 2021. A recovery wage growth and a reduction in unemployment to pre-crisis 9-10 percent will be in 2021. The growth outlook for Ukraine in 2020 remains highly uncertain and will depend on the duration of the health crisis, progress on major pending reforms, and the ability to mobilize adequate financing to meet major repayment needs (World Bank, 2020). Meanwhile, a prolongation of the lockdown and the widely anticipated global economic recession may result in a very negative scenario; one similar to the economic crises of 2008-2009 and 2014-2015, with the GDP plummeting by as much as 20 percent. The National Bank forecast proposes the economic growth in Ukraine in 2021 and full compensation of losses from the coronavirus crisis in 2022 (NBU inflation Report, 2020). Private consumption will remain the main driver of GDP growth at 4 percent in 2021-2022. The situation in the labor market will improve. The unemployment rate after the jump to almost 10 percent in the second quarter of 2020 will gradually return to neutral. The end of the strict quarantine phase assumes economic recovery and rising social standards. Nominal wages will increase by almost 9 percent in 2020 and by 16 percent in 2021, and real wages by 6.2 percent and 9.5 percent respectively. The Ukrainian economic recovery will occur unevenly by sectors. The new wave of the pandemic raises the gap between Ukraine

and developed countries in social benefits, living standards of people, and healthcare systems. Consumer Price Index CPI in Ukraine increased to 316.90 points in May from 312.90 points in April of 2021. Rising production costs led to higher food prices. Driven by more active consumption and a weakening of the hryvnia (in annual terms), prices for rice and fish products increased. Overall, **nonfood prices** were up by 1.6% for the year. Meantime, the fall in prices for clothing and footwear sped up further. (NBU inflation Report, 2021).

The Ukrainian government introduced the division of all regions in Ukraine according to the incidence rate into four zones: “green,” “yellow,” “orange” and “red.” Depending on the epidemiological situation in the region, either a light quarantine or a hard one was proposed. The local authorities received the right to strengthen anti-epidemic restrictions. The Central Commission on Technical, Environmental Safety, and Emergencies decide to ease quarantine.

**Table 1. Macroeconomic Indicators for Ukraine in 2021 (pre and post-COVID-19)**

	2019	Post-COVID-19 2020	Post-COVID-19 projections 2021
GDP per capita (USD)	3678	3224	3106
GDP (USD bn)	154	153.78	160
Inflation rate (%)	4.1	8.4	9.5
Exchange rate (vs USD)	23.70	27	26.9
Economic growth (GDP, annual variation in %)	3.2	0.8	-1.1
Unemployment (%)	9.0	9.5	10.1
Monthly average salary (UAH)	12.5 thousand	11.9 thousand	13.5 thousand
Current Account Balance (USD bn)	2.2	-3.3	-2.7
External debt (Percent of GDP)	79.2	79.1	80.8
International reserves (USD)	25.3	26.1	29.1

Source: Constructed on the data Ukraine Economic Outlook (2020). November 3.

URL: <https://www.focus-economics.com/countries/ukraine>; Ukraine – Economic Forecasts. 2020 – 2022. Outlook. URL: <https://tradingeconomics.com/ukraine/forecast>

The unemployment rate in 2019 was above 9 percent of the labor force, the share of informal workers in the economy remains very high (up to 30 percent), and the social safety net is

weak. Low domestic savings and limited fiscal space constrain the ability of households or the public authorities to absorb exogenous shocks. Employment rates in Ukraine have also fallen more steeply for women than men. Women in employment represented 44.2% of the total population in H1 2020, a -3.18% drop (based on raw data) compared to the 45.5% they accounted for in H1 2019. By contrast, employed men represented 57.6% of the total population in H1 2020, a -2.67% fall compared to H1 2019 (The COVID-19 crisis in Ukraine, OECD, 2020).

Negative effects of the Ukrainian economy can be seen due to the stagnation of international markets, decrease of the demand for Ukrainian exports, not least agricultural products, and metals. Besides the impact on different business sectors, there are other serious risks, including those related to currency devaluation. For one, while a lower exchange rate and slightly weakened hryvnia may provide short-term benefits for the economy and intensify exports. The expected global downturn may limit the extent to which the Ukrainian economy will be able to benefit from a weaker currency. For another, if the exchange rate drops by more than 15 percent, almost all Ukrainian banks will need additional capital. Furthermore, a significant amount of national debt payments (i.e. 400 billion UAH, or almost €13 billion) – some 40 percent of the national budget – is planned for 2020. In the event of expanding deficit, there will be an urgent need for the government to start a dialogue on debt restructuring with the International Monetary Fund and private owners of national bonds. The National Bank of Ukraine's intervention to stabilize the economic situation, including spending more than USD 1 billion to support the hryvnia, was important. The creation of 200 billion UAH (USD 7.17 billion) of the Stabilization Fund aimed to support citizens and the newly unemployed (OECD, 2020). Despite these efforts, Ukraine will continue to need assistance from international donors. On 27 May, the government adopted a program for Stimulation of Economy to Combat Effects of the COVID-19 Epidemic.

**Table 2. The ratio of the most popular areas of professional activity in Ukraine**

Spheres of professional activity	Market demand (%to the total percentage employees)	Graduates with diplomas (share among all students)
Economy and management	13.7	31
Humanities	3	20
Metallurgy and mechanical engineering	7.6	3
Energy and power engineering	2.7	3

Constructed on the data of Banko (2016).

The employment activity in Ukraine covers the employed who concluded a labor agreement (contract, civil and legal treaty) at their work. This agreement could be either permanent or temporary. This category includes employees of entities, budget-funded and financial establishments, and nongovernment organizations as well as professional military personnel in career service (apart from military service for a regular term), persons from private corps, and key personnel of law-enforcement bodies. The ratio of the most popular areas of professional activity in Ukraine illustrates the decrease in the market labor demand for engineering professions (Table 1). The shortage of qualified engineering workers in construction, railway infrastructure, or mechanical engineering also does not contribute to technological development.

The Federation of Employers of Ukraine (FEU), the largest and most representative employer organization in the country, conducted a survey between 10 and 27 April 2020 to scan the impact of the COVID-19 pandemic among its member enterprises. One hundred one enterprises responded to the survey based on the International Labour Organization "Enterprise survey tool: Assessing the needs of enterprises resulting from COVID-19". The COVID-19 crisis has not spared businesses in Ukraine.

The public policy measures put in place to contain the spread of the virus resulted in significant operational disruptions for many enterprises. Almost one-quarter of surveyed enterprises reported complete shutdown, whereas 40 percent operated partially at the time of the survey. Only slightly more than a quarter operated at full capacity, either on-site or remotely. Under the current restrictions, almost one-third of enterprises anticipate they will be able to hold up for the next 2 to 3 months and nearly one-fifth indicated that their business would remain open for the next 3 to 6 months. The operational capacity of one-fifth of the enterprises surveyed is more distressing as they expect the lifeline of their business to cut after 2 months. Only 6 percent of surveyed enterprises have been unaffected by the crisis. More than half of surveyed enterprises assessed the level of financial impact as high (over 50 percent decline in revenue/sales), whereas almost 40 percent estimated the impact as medium (decline ranging from 20 to 50 percent). On the issue of liquidity shortages, almost 50 percent of surveyed enterprises indicated they did not have access to any source of funding to help their business recover. Almost 30 percent rely on loans and grants while another 30 percent have their cash reserves.

The data shows that 11 percent of surveyed enterprises were not able to retain their workers. Of enterprises that had to dismiss workers, a quarter dismissed over a third of their workforce, while 30 percent dismissed a small proportion between 1 and 5 percent. If the restrictions continue, the prospect of job cuts is worrying with 36 percent of enterprises signaling that they will force to resort to layoffs. Among the top three challenges faced by the enterprises due to COVID-19 are the incapacity of business partners to operate normally (76 percent), the incapacity of suppliers to provide inputs (49 percent), and the working capital deficit (34 percent). While government support schemes are supposed to be a real lifeline for business, when asked about their perception of the effectiveness of these measures, the majority of enterprises indicated that their needs were not met (58 percent) or only partially satisfied (39 percent). Looking into the future, business sentiments in Ukraine are showing confidence with the largest share of enterprises surveyed (40%) expecting that the recovery period would last between 1 and 3 months. Only 3% of enterprises indicated that they expected the worst-case scenario of being temporarily or permanently closed. Many businesses operate with reduced

staff as well as distancing rules. Digital technologies can help people to come up with solutions and ideas to create a more flexible organization (See table 3).

**Table 3. Forecast of employment in Ukraine in economic sectors, 2011-2025 (% to 2015)**

Sectors	2020	2025
Agriculture, forestry, fishery	121.1	130.6
Production	109.3	119.1
Construction	08.6	101.1
Digital technology and communications	93.4	89.8
Education	94.9	94.0

Constructed on the data of the Analytical report on professional qualification forecasting in Ukraine, 2020.

The impact of the COVID-19 pandemic on the domestic labor market during March – December 2020 led to significant changes. The actual reduction of employment in Ukraine, the growth of the unemployed in Ukraine, the reduction of the number of Ukrainians working abroad (labor migrants), the decrease of the income of the population from the sale of its labor force through the decline of wages, loss of jobs and income of individual entrepreneurs cause dramatic employment hardships, increase unemployment. Seasonal workers, workers in the entertainment industry, and other categories of people are struggling for survival to overcome debts and covering households' expenses.

### **3. Macroeconomic policy measures to help and support the employment**

The Ukrainian labor market trends depict the new features and forms during the COVID-19 pandemic. The main trend of the current labor market can be considered a multiple increase in various options for remote work. The pre-crisis "candidate market" has become the "employer market". For employees, stability becomes the most important; they are less likely to change jobs. Companies are radically reconsidering the need of people and functions, changing the ratio of the fixed and variable parts of the salary, and optimized costs. The labor market becomes highly competitive and unpredicted. To overcome the consequences of the COVID-19 pandemic, the Ukrainian state was forced to take a set of measures to compensate for economic and social losses caused by the forced lockdown. They supposed to include

payments forced the quarantine, deferred loan payment, tax holidays, reduction and cancellation of tax audits, and financial assistance to low-income groups of the population.

More than UAH 1.8 billion of the budget funds directed to curbing the spread of acute respiratory disease COVID-19. The Ministry of Finance constantly monitors budget expenditures for the purchase by budget managers (recipients) of budget funds for goods needed to implement measures to combat coronavirus infection. According to the State Treasury data, from the period March 1 to April 29, 2020, inclusive, payments to the tune of UAH 1.8 billion were made from the budgets of all levels, including UAH 455 million from the state budget and UAH 1.349 billion from local budgets. The total amount of registered budget commitments for all purchases of goods and services to combat COVID-19 makes UAH 2.398 billion (UAH 512 million - the state budget, UAH 1.886 billion - local budgets) (Inflation Report, 2020).

The Government approved measures in the face of a threat of coronavirus infection outbreak in Ukraine and prevented the spread of COVID-19. They decided to allocate UAH 100 million for the purchase of personal protection gear for the current needs of ministries, departments, and services, as well as for replenishment of the state reserve as priority measures. Simultaneously, to ensure the implementation of this decision, to prohibit the export of anti-epidemic goods till June 1 to guarantee the provision of population with the necessary protection means. The Cabinet of Ministers has decided to impose restrictions on conducting mass events in which 200 or more people are planned to participate. (Nosova, 2020). The government introduced an intensified quarantine and stricter restrictions in Ukraine from January 8 to 24, 2021.

The Cabinet of Ministers of Ukraine adopted the decree № 306 “About the statement of the Order of granting and return of the means directed on the financing of the help on partial unemployment for the period of lockdown” April 22, 2020. The Decree approved the procedure for providing and returning funds aimed at financing partial unemployment benefits for the period of lockdown established by the Cabinet of Ministers of Ukraine to prevent the spread of acute respiratory disease COVID-19 caused by coronavirus SARS-CoV-2 in Ukraine, acute respiratory illness COVID-19 caused by a coronavirus. In Ukraine, at the time of quarantine, the minimum unemployment assistance will amount to 1 thousand UAH, according to the State Employment Service. Employees may take unpaid leave for the whole duration of quarantine measures, subject to their consent (instead of the previous maximum duration of 15 days per year). During the lockdown period, employees were instructed for remote work.

Businesses have the option to delay payment of payroll taxes (income tax and military levy) until 31 May. For private individuals: Extension (not optional) for filing of an annual income tax return and payment of income tax and military levy for the year 2019. The government has expanded the subsidized loans program—the so-called 5-7-9 program—and credit guarantee scheme (launched in February 2020). The maximum amount of a loan has been increased to UAH3 million (about US\$100,000), the annual income limit to UAH 100 million (US\$3.7 million), and the eligibility criteria have been expanded to include COVID-19 crisis-related production as well as production costs (e.g., wages and rent) (IMF, 2020).

The Ukrainian Government approved the Resolution “On allocation of funds for providing financial assistance in case of unemployment to the Compulsory State Social Insurance Fund

of Ukraine. The Unemployment Social Insurance Fund budget increased to support this change. Eligibility requirements for the Guaranteed Minimum Income program have been relaxed to extend the duration of payments and enable simplified enrolment online. The group 1 of 200 thousand individuals-entrepreneurs exempt from paying all taxes and fees, including unified social tax.

Under the pandemic influence, the significant changes in the labor market caused the costs' optimization by entrepreneurs, a severe increase in competition in the labor market, and market conjuncture change, which leads to a modification of tastes and preferences of consumers. According to the National Bank of Ukraine's July Inflation Report, 75-85% of companies had made no plans to change their staff numbers during the quarantine. The National Bank of Ukraine theorizes that this might be partly due to employment being informal, as well as the strong uptake of remote working in Ukraine, particularly among larger companies (Inflation Report, 2020).

Since the lockdown was introduced in Ukraine 16 percent of companies have decided to change their staff salaries and 14 percent have made personnel cuts. (EBA, 2020). The measures planned by the business to be introduced after the lockdown extension for another month included a reduction in wages – 23 percent of companies, personnel cuts- 17 percent, and closing down – 6 percent. Another 23 percent of companies do not play any reduction of downsizing, and 31 percent will search for new riches to develop their business.

The Ministry of Social Policy has introduced the online help platform "Help is Near" to provide targeted assistance to vulnerable groups during the quarantine period. In Ukraine, in March-April, out of 30 thousand restaurants across the country 12 thousand went bankrupt. They went bankrupt because of the quarantine.

Minimum unemployment benefits increased for the following groups of the population. People who are proceeding with registration in the employment service, have an insurance experience of fewer than 6 months or who are dismissed from their last job for negative reasons. Young people who have completed or stopped studying in secondary and higher educational institutions retired from military service, and require assistance in finding jobs in the first job, internally displaced persons who cannot document their periods of employment can apply for increase minimum unemployment benefits.

The previously granted social assistance payments will be extended for the period of quarantine, and 30 days thereafter without the person applying to the relevant institutions. Nevertheless, of the devastating effects of the pandemic on the labor market, it is suggested, that most companies would abolish remote work, restore office facilities, and return employees to office work after the end of the pandemic. The most vulnerable sectors of the economy are transport, service spheres, the restoration of which will take three or five years to the pre-COVID-19 level.

Economic analysis of macroeconomic policy indicates that the "adaptive quarantine," which means that most of the restrictions have been lifted, but in the areas, with high infection rate the continuation of the severe lockdown measures, demonstrates effectiveness. Decisions on easing off or return to confinement measures in cities or regions are to be taken by local and regional authorities. The results of adaptive quarantine usage put under consideration the necessity of strengthening quarantine measures in particular regions. The application of the

government policy of the adaptive quarantine system for regions creates incentives for possible recovery SMEs.

The assessments of the European Business Association survey show better results for the business environment from adaptive quarantine comparing with complete shut-up measures for business in Ukraine. The forecast of employment in Ukraine in economic sectors, 2011-2025 demonstrates a slow and prolonged recovery of the labor market. In 2018, industry polls indicated that Ukraine has over 116 000 Information Technology (IT) specialists, 60% of them are developers and the rest are QA, PM, BA, Designers, and business professionals who together make Ukraine IT industry work. The biggest numbers of remote development teams are focused on outsourcing services. The adoption of macroeconomic measures confirms the time and effectiveness of taken measures by the state at the starting period of the pandemic. The suspended tax inspections of companies, deferred loan payments, expanded the government program of affordable bank loans at discounted interest rates for businesses, eased transaction registration the rules for certain categories of entrepreneurs set up the new rules for SMEs and remote forms for employees in the period of the quarantine. Entrepreneurs are exempted from having to pay social security contributions.

Extension of tax holidays, deferral of taxes and fees for entrepreneurs, organization of financial business support will aim to mitigate the negative consequences of the pandemic.

## **Result and discussion**

The paper points to the advisability of a more in-depth study of the problem of employment in a pandemic. This is due to the continuation of growing negative trends in the spread of infection.

The correlation analysis of GDP per capita and unemployment rate, GINI index in Ukraine confirms the negative tendency of impoverishment and deterioration of living standards of the majority of the population.

The results of the research demonstrate the necessity of adopting a macroeconomic policy to compensate business losses, demonstrate new capabilities in remote work, and support people with low income. Rethinking the relation of quarantine measures and employment demonstrates that the “adaptive quarantine” measures in regions show better results comparing with complete shut up business measures in Ukraine.

The choice of priorities for financing direct business support, organization educational programs for young unemployed people to help them to adapt in the period of a pandemic, provide investment in the development of digital technologies, encourage people to obtain new skills and broaden theirs’ outlook in changing business environment will enhance them to overcome the pandemic.



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