Impacts of the coronavirus on the labor market: Labor market transformation and considerations in the post-pandemic era

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ABSTRACT

The aim of this study is to analyze the risks, as well as the level of risk preparedness of the states and the policies pursued by them in the fight against the COVID-19 epidemic, which appeared in China in December 2019 and soon spread globally. The experience of certain countries, including Azerbaijan, has been taken into account in the face of future risks in this epidemic process, which paralyzes social life, closes the borders of states, destroys economic structures, especially health infrastructure.

Key words: COVID-19, risks, risk preparedness, Azerbaijan.

INTRODUCTION

Throughout history, mankind has faced many natural disasters and tried to overcome them as much as the current level of development allowed. The relationship between humanity and nature has been multifaceted and complex. Until today, the human-nature relationship shaped in the form of man's struggle to control nature, and along with the industrial revolution such relationship has led to the greater destruction of nature. In fact, very important environmental disasters such as climate change, ozone depletion, deforestation, rapid desertification, biological diversity reduction, nuclear power accidents, wars, famine, disasters, and epidemics have emerged lately, and countries are taking global level measures to solve these problems. All above, remind us of a significant principle in environmental policy: although environmental problems arise at the local level, their affect might reach national, regional and global scope.

The main difference between the epidemics of the past and the epidemics of today has become the high rate of spread and infection due to the increased mobility of people compared to the past. High mobility being one of the consequences of the globalization process has caused the disease that originated in China spreading to many world countries, closure of states’ borders, imposing a quarantine regime in countries and cities, and actually bringing life to a standstill. The process that started with recording of the first infection case on December 31, 2019, progressed with the rapid increase of cases, and since the end of April 2020, has reached serious and alarming numbers all over the world.

The study covers the history of the epidemic, including the Covid-19 virus, its impact on various sectors of the economy, policies implemented by states during the pandemic, social awareness, restrictions on transportation and trade, economic policies and regulations, and social relief measures.

Part I

At various times in history, humanity has been affected by a number of deadly diseases, which in most cases resulted in the deaths of hundreds of thousands and millions of people. Epidemics that lasted for a short or long time, but each time caused many deaths, occurred throughout history, and humanity tried to take measures against and eliminate them. Apart from loss of life, epidemics have resulted in

1 Dissecting the early COVID-19 cases in Wuhan. Elucidating the origin of the pandemic requires understanding of the Wuhan outbreak:
https://www.science.org/doi/10.1126/science.abm4454
significant changes for economic, administrative, social and political realms of human societies. Equally, each epidemic has greatly affected the economies and labor markets of the time, including employment.

In terms of chronological order, hereafter we shall describe the effects of the Antonine Plague, Justinian Plague, Bubonic Plague, Spanish Flu, and others being among the brutal pandemics in human history and resulting in the death of millions of people, on the economies of countries and the labor market typical for that period:

An estimated 60-70 million people died in the Roman Empire from the Antonine Plague (165-180 AD). This had a major impact on the empire, resulting in the weakening of its military and significant damage to its economy. Mass deaths caused a decrease in the empire's available workforce.

More generally, the horrific death toll reduced the number of taxpayers, military recruits, candidates for public office, businessmen, and farmers. Government revenues fell at a time when spending to protect the empire from threats had to increase, as well as more military was needed to secure the empire.

The decline in tax revenue was associated with less production on farms, because fewer farmers meant less plowed lands. Crop shortages led to price increases along with reduced food supplies. However, the impact of the plague on the economy went beyond the agriculture. Fewer artisans meant fewer things were produced. Labor shortages led to increased wages for those who survived the epidemic, and the absence of businessmen, merchants, traders, and financiers caused deep disruptions in domestic and international trade. Such decay meant less tax liability (revenues) for the state and plunged the empire into a deeper crisis to meet its mounting financial obligations.

Bubonic plague (1347-1353) destroyed entire communities throughout the Middle Ages. At a rough estimate the plague killed 50 million people before it subsided. Such deadliest rate impacted severely on the economy of the time. Most of the labor force was depleted, workers were forced to work under the law.

The "Statute of Laborers" Act of 1351 in England required a healthy unemployed person to work for anyone willing to hire them. Those who refused to work were punished. The plague created such a need for workers that healthy people were forced to work by law. By law, any man or woman, whether bond or free, not engaged in trade or craft, not having their own land to cultivate, able to work and under 60 years of age, had to work for whoever wanted to hire them.

However, while the short-term economic consequences of the plague were very negative (loss of knowledge, skills, and competences due to massive human casualties, significant disruption of trade, other commercial activities, and many manufacturing activities), most records of the long-term economic consequences of the pandemic were highlighting generally positive results. These outcomes included restructuring agricultural production to increase efficiency, significantly increase of real wages, and redistributing the population and available resources. Indeed, bubonic plague and subsequent epidemics in Western Europe led to the establishment of a new equilibrium with high mortality and high income levels, which laid foundation for faster economic growth for many years.

After the plague, the wealthiest 10% of the population lost control of 15% to 20% of the total wealth, and pre-plague wealth levels were not reached until the first half of the 17th century. The decline in inequality was driven by 2 main reasons: an increase in the real wages of the above-mentioned skilled and unskilled workers and generally more favorable working conditions. Second, the divided inheritance system that characterized many European territories such as Italy in the late Middle Ages. This has resulted in many people inheriting more property than they needed or wished for. Consequently, extraordinary glut of properties on the market was observed. Such situation, combined with rising real wages due to labor shortages, helped a greater proportion of the population to own property.

The Spanish flu (1918-1920), which occurred towards the end of the First World War, estimated to have killed 50 million people around the world. The virus stood out for claiming lives of healthier people with strong immune systems comparing to those with weakened immune systems. Men aged 18-40 were the most affected. Labor force significantly decreased, as men were the main source of working power at the time. As a result, the Spanish flu created a demand in the labor market, thereby again increasing the labor force participation rate and reducing the unemployment rate.

The 21st century was no exception in terms of the spread of epidemics and their significant impact. Ebola (mortality rate 40%), SARS (mortality rate 9.5%), H1N1, MERS (mortality rate 34%) and bird flu have posed very serious

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2 History’s Worst Global Pandemics: https://www.publichealthonline.org/worst-global-pandemics-in-history/
3 Antonine Plague: https://www.ancient.eu/Antonine_Plague/
4 Devastating Plagues: Take a look back at six of the most infamous outbreaks of the disease once known as the “Great Mortality.”: https://www.history.com/news/6-devastating-plagues
5 The Statute of Laborers; 1351: https://avalon.law.yale.edu/medieval/statlab.asp
7 Preparing for the first influenza pandemic of the 21st century: https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(05)01288-0/fulltext
8 Economic Effects of the 1918 Influenza Pandemic. Implications for a Modern-day Pandemic: https://www.stlouisfed.org/-/media/files/pdfs/community-development/research-reports/pandemic_flu_report.pdf
threats in the affected territories, and brought to forefront such important reforms for the countries, as improving health system, increasing access to health care services9.

Many factors impact the survival and rapid spread of viruses, which further become a threat to human life, the health system, and, as a result, to the country’s economy. On one hand, climate might contribute the pathogen (virus) to survive, develop, and spread, thereby facilitating its spread. However, in this context, the decisive role of the climate in the emerging of new adverse effects is highly unlikely. On the other hand, climatic change embrace broader and more complex consequences which cause drastic anthropogenic alteration of ecosystems, leads to gradual change of biological species, decline of ecosystems and decrease of species diversity. Similar changes potentially lead to side effects in different ways, closer and more common encounters between wildlife and people10.

The likelihood of transmission of the virus increases dramatically as human-to-animal interactions increase through hunting, animal trade, animal husbandry, wet markets (a market outside supermarkets where fresh meat, fish, other produce, and perishable goods for consumption are sold), and the domestication of animals or exotic pets11.

The COVID-19 virus, first case of which was recorded in Wuhan province of China in December 2019, has spread to more than 200 countries in a short period of time12. Due to the rapid spread of the virus, the World Health Organization declared COVID-19 a pandemic in March 202013.

Before beginning analysis of the effects of Covid-19 on the economy, including the labor market, the specifics from the start of the epidemic for the countries might be grouped as:

1. Global pandemic resulting in high death toll: more than half a billion people (as of 29.06.2022) have been infected with the pandemic worldwide. The number of people who died from the pandemic equals approximately to 6.3 million (1.2% of the total infected)14.
2. In order to prevent the pandemic, closures were first chosen as adequate response measure by the countries. Closures aimed to reduce the virus risk indicators by limiting both social contacts between people and internal economic activity.
3. In a number of countries, the direct impact of Covid-19 on the country’s economy has been less than that of the shutdowns, what demonstrates not just a crisis of health and the health system, but also an economic and social crisis.
4. Both the virus and the shutdowns affected people and their lives as a part of the economy. Present structure also allows defining some aspects of the problems facing public policy and public finance. In the short term, incomes fall as the economy suffers mainly due to the shutdown. At the same time, pressure is mounting to spend more on strengthening health and social protection systems to mitigate the effects of the pandemic and shutdowns.
5. One of the key challenges for public policy in the short term has been to find a trade-off between the risks of widespread infection and potentially deadly virus risks and the costs of economic and social closure15.

It should be noted that the impact of the pandemic has been stronger on low-income and emerging market economies. Thus, in addition to limiting domestic economic activity in the fight against the pandemic, the decrease in external demand aggravated the situation. The decrease in tourist flows in the countries depending on tourism, as well as the decline in the prices of raw materials in the oil exporting countries have been observed16. Worldwide, tourism has become one of the sectors most affected by the crisis, mainly due to the numerous restrictions on travel around the world.

Based on the World Tourism Organization analyzes, there has been a major decline in the tourism sector in 2020 and 2021 compared to the pre-pandemic period. Thus, in 2020, the number of international flights decreased by a record 73% compared to 2019. Although the number of international tourists (overnight stays) in 2021 increased by 15 million compared to 2020 (400 million vs. 415 million), the number of international flights in total was 72% less worldwide than in the pre-pandemic period17.

At the same time, it has been suggested that the uneven distribution of vaccines against the Covid-19 virus between developed and poor and low-income countries has led to further deepening of income, gender, ethnic and other inequalities18. Both vertical and horizontal inequality are expected to worsen as a result of the pandemic, with more

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10 Changing climate and the COVID-19 pandemic: more than just heads or tails: https://www.nature.com/articles/s41591-021-01303-y
11 The Origin and Prevention of Pandemic: https://academic.oup.com/cid/article/50/12/1636/305066
12 COVID-19 Dashboard: https://coronavirus.jhu.edu/map.html
14 COVID-19 Dashboard: https://coronavirus.jhu.edu/map.html
18 COVID-19 is increasing multiple kinds of inequality. Here’s what we can do about it: https://www.weforum.org/agenda/2020/10/covid-19-is-increasing-multiple-kinds-of-inequality-heres-what-we-can-do-about-it/
severe disruptions to the employment of low-skilled labor, slower remittance flows, and limited employment prospects for low-educated workers over the next few years. According to a new analysis, an estimated 435 million women and girls lived on less than USD 1.90 a day by 2021\textsuperscript{19}.

In addition, the Sustainable Development Goals 2020 report mentioned rise of extreme poverty line due to Covid-19 from 8.4\% in 2018 to 8.8\% in 2020 (pre-Covid-19 estimates were 7.7 \%), for the first time since 1998. According to estimates, the pandemic will push an additional 71 million people into extreme poverty\textsuperscript{20}.

Scenarios developed by the RAND Corporation in late 2020 for four different assessments provide an overview of the scale of the pandemic-vaccine relationship\textsuperscript{21}, as shown in Figure 1.

According to the study:

a) Until a vaccine for Covid-19 is developed, global costs related to COVID-19 and its economic consequences could be USD3.4 trillion per year;

b) “Vaccine nationalism” could lead to inequitable distribution of COVID-19 vaccines and cost the world economy USD 1.2 trillion in GDP per year. Even if the virus has been taken under control in some countries, global economic costs related to COVID-19 will remain if populations in other regions of the world do not get immunized against the virus;

c) If the poorest countries fail to obtain vaccines, the world’s GDP could lose USD 153 billion per year.

The study already has provided assessments for all 4 scenarios in the countries where more cases of infection with the Covid-19 virus were observed (Table 1).

As in the first periods of the pandemic, the impact of the pandemic dynamics on the labor market continued in 2021. According to the International Labor Organization, the share of fully vaccinated people worldwide was 34.5\% by the beginning of October 2021. However, tremendous difference between countries in the percentage of people vaccinated in high-income and low-income countries might be observed. Although about 60\% of the population has been fully immunized in high-income and low-income countries might be observed. Although about 60\% of the population has been fully immunized in high-income countries, this index equals to 14.6\% in lower-middle-income countries, and to only 1.6\% in low-income countries\textsuperscript{22} (Figure 2).

Vaccination plays a crucial role in economic recovery. Vaccines are highly effective in protecting against COVID-19 and reducing mortality. Such protection enables the economy recovery through the easing of public health restrictions and behavioral changes. After a somewhat significant increase in the second half of 2020, 2021 saw a further decline in work hours comparing to pre-pandemic levels. According to estimates, in the fourth quarter of 2021, global working time (per population aged 15-64) was still 3.2\% below the level of the fourth quarter of 2019 (the pre-

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\textsuperscript{20} End poverty in all its forms everywhere:

\textsuperscript{21} COVID-19 and the cost of vaccine nationalism:

\textsuperscript{22} ILO Monitor: COVID-19 and the world of work. Eighth edition Updated estimates and analysis. 27 October 2021:
### Table 1: Assessments for all 4 scenarios in the countries with more cases of infection with the Covid-19 virus.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>USA</th>
<th>UK</th>
<th>China</th>
<th>India</th>
<th>Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccine not available (USD billion)</td>
<td>-480</td>
<td>-145</td>
<td>-356</td>
<td>-88</td>
<td>-52</td>
</tr>
<tr>
<td>Availability of vaccine only to vaccine manufacturers (USD billion)</td>
<td>-127</td>
<td>-41</td>
<td>-110</td>
<td>-26</td>
<td>-18</td>
</tr>
<tr>
<td>Vaccine distribution among high-income countries and vaccine manufacturers (USD billion)</td>
<td>-30</td>
<td>-10</td>
<td>-27</td>
<td>-7</td>
<td>-5</td>
</tr>
<tr>
<td>Vaccine distribution among high- and middle-income countries, as well as among vaccine manufacturers (USD billion)</td>
<td>-16</td>
<td>-5</td>
<td>-14</td>
<td>-3</td>
<td>-2</td>
</tr>
</tbody>
</table>


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**Figure 2:** Fully immunized population share.


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In the first and second quarters of 2021, a decrease of 4.5% and 4.8% was observed, respectively, compared to the fourth quarter of 2019.

Obviously, a change/reduction in working hours is tantamount to losing a full-time job. As per estimates, lost work time in 2020 was the equivalent to 255 million full-time jobs, resulting in USD 3.7 trillion in lost income.

According to the analyzes by the International Labor Organization, the decrease in working hours in 2021 compared to the 4th quarter of 2019 was equivalent to the loss of 125 million full-time jobs. The change in working hours in 2020 and 2021 (the 4th quarter of 2019 is taken as a baseline) and the decrease in the number of full-time jobs is shown in Figure 3.

**Part II**

Considering the experiences of different countries, we might assert that the coronavirus has changed the lives of citizens and the future development priorities of states. But first, it would be useful to look at the list of countries most affected by the coronavirus in terms of number of infections (more than 10 million) and deaths, and their characteristics to better understand the general picture.

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23 Statistics on working time: [https://ilostat.ilo.org/topics/working-time/](https://ilostat.ilo.org/topics/working-time/)

24 COVID-19 has caused a huge amount of lost working hours. Feb 4, 2021: [https://www.weforum.org/agenda/2021/02/covid-employment-global-job-loss/](https://www.weforum.org/agenda/2021/02/covid-employment-global-job-loss/)

The ranking of countries among most affected by pandemic by number of infection cases and death of the coronavirus is shown in Figure 4. According to the conducted research, the common aspects for countries that suffered most from the pandemic were grouped in the form of the sequence of measures implemented for reducing the negative effects of the coronavirus pandemic, the confidence level of the population in the effectiveness of the implemented measures, the adequacy of hospital beds, the scale of international tourism and the age structure of the population. In addition, those countries have another common structural feature that determines the role of all the listed factors - distribution of income and wealth (Figure 5).

So, looking through the Gini index in the countries listed above, the indicator turns to be quite high. With certain exceptions, definitely such a correlation prompts suggesting that as the degree of inequality in income distribution increases, the number of COVID-19 cases and deaths toll rises, as well.

Part III

In the fight against the pandemic, two main goals have been noticed - to reduce disease and death cases and, in parallel, to minimize economic losses. On one hand, these goals do not conflict with each other. The sooner the peak of the disease is removed, the sooner the economic recovery begins. However, strictness, duration, efficiency of the restrictive measures, the policies implemented on the restoration of economic activity applied in different countries differed greatly from each other as well as the economic consequences of the crisis:

Germany

Despite the recovery of the economy and the easing of restrictions, companies, especially the self-employed, are still suffering from the coronavirus pandemic. To provide needed support the period of the IV Temporary Aid Program (the previous III aid program covered July-December 2021), one of Germany’s central aid programs, has been extended until the end of June 2022. To be eligible for a grant to cover fixed costs, companies must demonstrate a reduction in turnover of more than 30%.

The implementation of the Fresh Start Assistance Program was also continued. The Fresh Start Assistance Plus and Fresh Start Assistance 2022 programs provide targeted support in the form of grants to self-employed individuals who do not have fixed costs such as rent or facility costs and therefore cannot benefit from the Temporary Assistance Program. From July to December 2021, the Fresh Start Assistance Plus program enabled

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26 Number and change of coronavirus (COVID-19) cases and deaths among the most impacted countries worldwide as of May 2, 2022: https://www.statista.com/statistics/1105264/coronavirus-covid-19-cases-most-affected-countries-worldwide/professional
28 Comprehensive pandemic-related assistance for companies and self-employed individuals: https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Priority-Issues/Corona/comprehensive-pandemic-crisis-support.html
Figure 4: ranking of countries among most affected by pandemic by number of infection cases and death of the corona virus. Source: statista.com. Number and change of coronavirus (COVID-19) cases and deaths among the most impacted countries worldwide as of May 2, 2022.

Figure 5: countries with common structural feature that determines the role of all the listed factors - distribution of income and wealth. Source: World Development Indicators.

payment of Euro 1,500 per month to self-employed persons. The extension of the program shall continue providing participants with EUR 1,500 per month from January to June 2022. This means that over the course of the programme, self-employed people affected by the pandemic might receive up to EUR18,000 in total through the Fresh Start Assistance Plus and Fresh Start Assistance 2022 schemes, what offers them some recovery opportunity after the worst of the crisis.

In addition, large-scale tax reliefs and simplifications have been applied to employees and companies during the Covid-19 pandemic:

- Tax relief for working remotely from home until December 31, 2022;
- Extended deadlines for filing 2020 tax returns submitted by tax advisors and 2021 and 2022 tax returns submitted by tax advisors or taxpayers themselves;
• Accelerated depreciation options for movable assets;
• Extension of investment periods for tax-free investments;
• Reduction of value added tax for food items from 19% to 7% by the end of 2022.

At the same time, the Economic Stabilization Fund, established to stimulate the economy and employment, offers adjustment measures to companies to strengthen their capital bases and overcome cash shortages. These measures have been available for all sectors of the economy. Fund is targeting real economy companies whose insolvency would have a significant negative impact on the German economy or the labor market.

The cultural sector has been allocated 2.5 billion euros in 2021 in order to protect jobs in cases where cultural events needed to be canceled due to the pandemic and the number of participants reduced due to infection protection.

Italy

The government intervened with a series of legislative decrees to protect the economy during the pandemic. The first major intervention in 2020 was the March 2020 "Cure Italy" decree aimed at strengthening the healthcare system and providing immediate economic assistance to workers and businesses. "Liquidity" Decree in April 2020 introduced additional support arrangements to protect economic activity by facilitating access to credit. As part of the "Cure Italy" Decree, another set of measures was implemented to revive the economy in May 2020. The August decree ensured additional assistance to the sectors most affected by the pandemic. In the fall of 2020, four different "Ristori Decrees" outlined a series of measures to support workers and businesses facing financial difficulties. These measures were adapted and/or extended by the "Sostegni Decrees" in March and May 2021.

In addition to the aforementioned for mitigating the effects of the Covid-19 pandemic, the Italian government has taken a number of actions to support families, including working parents, to ensure the required level of liquidity through income guarantees and the suspension of taxes and social security contributions. Significant allocations were made to expand new programs and social protection programs such as “Emergency Income” for families hardest hit by the pandemic. The Decree on the reopening of production finally removed the “safeguard clauses” by removing the planned increase in VAT and excise taxes from 2021, providing significant benefits to the country’s economy and families.

Turkey

In Turkey, where more than 16 million infections and approximately 100,000 deaths (as of 1st of August 2022) have been registered, since the first periods of the pandemic, measures have been taken to prevent the spread of the virus, such as call to stay at home, the restriction of social, cultural and sports activities, the regulation of movement within the country, the distance education model, solving the problem of illegal migrants and refugees, restrictions on the Turkey-Iran border, mandatory quarantine for pilgrims returning from Hajj, curfew, increasing awareness, and supply of masks. Besides, on March 18, 2020, the "Economic Stability Shield Package" introduced a number of regulations comprising the loanable amount for houses with a value below 500,000 lira increased from 80 to 90%, the minimum down payment for apartments reduced to 10%, hotel rent fees and income share payments for April, May and June postponed for a period of 6 months, delay in principal and interest payments on loans to banks for at least 3 months and provision of additional financial support if necessary, facilitation of share financing support to exporter, limit of the Credit Guarantee Fund Increase from 25 billion lira to 50 billion lira, setting of short-term work allowance, increase of minimum pension to 1500 lira, continuation of minimum wage support and allocation of additional 2 billion lira for financial assistance to families in need, more effective flexible and remote work models, uninterrupted provision of employment such as extending the 2-month compensated work period to 4 months, implementing a periodical follow-up program consisting of social services and home health services for the elderly over 80 years living alone.

At the same time, implemented support measures included income tax and VAT declarations postponed for 6 months, taxes and levies by people with restricted access to public places delayed until the end of the lock-in period, a 25 thousand TL cash loan and a 25 thousand TL commercial card to small business owners by Halkbank, deferral and concessions on tax and credits, strengthening of health infrastructure.

Azerbaijan

According to the analyzes conducted by the Ministry of Labor and Social Protection of the Population regarding the measures introduced by the Italian government to support families: https://www.mef.gov.it/en/covid-19/The-measures-introduced-by-the-Italian-government-to-support-families-00001/

The measures introduced by the Italian government to support families: https://www.mef.gov.it/en/covid-19/The-measures-introduced-by-the-Italian-government-to-support-families-00001/

Turkey. Coronavirus cases: https://www.worldometers.info/coronavirus/country/Turkey/


employment during the pandemic, despite an increase of 148 thousand in the number of employment contracts in 2020 compared to the previous year; reductions in electricity production (-2257), public catering (-1593) and education (-3520) were recorded. About half of the increase in labor contracts took place in the trade (49 thousand) and construction (25 thousand) sectors.

General picture of distribution of registered terminations by types of economic activity in the ratio of the employed population in the similar structure (average indicator – 7.2%) shows the sectors most affected by the pandemic in terms of employment were public catering (5.6 times more than this indicator), healthcare and social services (3.2 times - at the expense of public works ) and construction (2.5 times). The trade sector, which has the largest share after agriculture in the structure of the employed population, has been more stable in terms of employment.

63% of labor contracts concluded in 2020 and active at the end of the year shifted between types of economic activity in the labor market. 59% of the total displacements were registered in the fields of agriculture, processing, construction, trade and provision of health and social services to the population.

The overview of age aspect of the pandemic impact on the labor market, indicates people under the age of 40 to be more active in the labor market (64%). As well, contracts for people of this age accounted for 60% among the employment contracts concluded and terminated in 2020 (Table 2).

It should be noted that the conditional share of persons under 40 in the structure of total employment equaled to 1% in agriculture, 10.8% in processing industry, 12.5% in construction, 9% in wholesale and retail trade, 21% in public catering, 2.9% in education and 9.3% in providing services in other areas.

At the same time, the conducted analyzes showed that the vocational education graduates proved themselves more stable in the labor market. Thus, 19% of the terminations of employment contracts were recorded for those with higher education, 26% for those with secondary education, 53% for those with general education, and only 2% for those with vocational education. Professionally educated persons acted as a more mobile group in the labor market according to criteria such as duration of employment contracts and frequency of contracting (employment frequency). In general, the sectoral structure of labor contracts terminated in 2020 has changed as shown in Table 3.

Along with it, the Action Plan was approved in order to reduce the negative impact of the coronavirus pandemic on the country’s economy, macroeconomic stability, employment issues and business entities. The measures included activities in three directions: economic growth and entrepreneurship support, employment and social welfare support, and macroeconomic and financial stability. Below mentioned measures targeted mitigation of the negative effects of the coronavirus:

- payment of a certain part of wages of employees engaged in areas affected by the pandemic in order to protect jobs;
- granting tax concessions and holidays to business entities (including small and medium enterprises);
- providing state guarantee and subsidizing loan interest for bank loans of 0.5 billion manats given to business entities (including small and medium enterprises) operating in areas affected by the pandemic;
- providing a state guarantee for 60% of the newly issued loans in the amount of 500 million manats;
- subsidizing 50% of the interest rate on guaranteed loans at the expense of the state budget;
- exemption from rent payments by business subjects (including small and medium-sized entrepreneurs) who have leased state property and suffered damage as a result of the pandemic until the end of 2020;
- exemption from rents paid by entrepreneurs (including small and medium-sized entrepreneurs) who leased plots of land belonging to the state land fund and suffered losses as a result of the pandemic until the end of 2020;

<table>
<thead>
<tr>
<th>Type of economic activity /age</th>
<th>15-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry and fishing</td>
<td>2567</td>
<td>1917</td>
<td>2620</td>
<td>2655</td>
<td>18028</td>
</tr>
<tr>
<td>Processing industry</td>
<td>5719</td>
<td>3537</td>
<td>3719</td>
<td>3695</td>
<td>27949</td>
</tr>
<tr>
<td>Construction</td>
<td>7357</td>
<td>6004</td>
<td>6659</td>
<td>6283</td>
<td>44695</td>
</tr>
<tr>
<td>Wholesale and retail trade, repair of cars and motorcycles</td>
<td>21086</td>
<td>9025</td>
<td>8096</td>
<td>6916</td>
<td>62306</td>
</tr>
<tr>
<td>Housing arrangements and public</td>
<td>4574</td>
<td>1628</td>
<td>1487</td>
<td>1351</td>
<td>13613</td>
</tr>
<tr>
<td>Education</td>
<td>3632</td>
<td>2479</td>
<td>1360</td>
<td>1002</td>
<td>10847</td>
</tr>
<tr>
<td>Provision of services in other areas</td>
<td>2771</td>
<td>2093</td>
<td>2427</td>
<td>2258</td>
<td>15282</td>
</tr>
<tr>
<td>Total</td>
<td>64268</td>
<td>37346</td>
<td>37183</td>
<td>34099</td>
<td>273294</td>
</tr>
</tbody>
</table>


Table 2: Number of employment contracts concluded in 2020 by some types of economic activity and age groups.

- payment of a certain part of wages of employees engaged in areas affected by the pandemic in order to protect jobs;
- granting tax concessions and holidays to business entities (including small and medium enterprises);
- providing state guarantee and subsidizing loan interest for bank loans of 0.5 billion manats given to business entities (including small and medium enterprises) operating in areas affected by the pandemic;
- providing a state guarantee for 60% of the newly issued loans in the amount of 500 million manats;
- subsidizing 50% of the interest rate on guaranteed loans at the expense of the state budget;
- exemption from rent payments by business subjects (including small and medium-sized entrepreneurs) who have leased state property and suffered damage as a result of the pandemic until the end of 2020;
- exemption from rents paid by entrepreneurs (including small and medium-sized entrepreneurs) who leased plots of land belonging to the state land fund and suffered losses as a result of the pandemic until the end of 2020;

In fact, it may seem odd to add globalization to this list. However, today we witness a gathering speed of globalization beyond comparison to the previous years. The fourth industrial revolution, technological innovations have made globalization an integral part of our lives. The rapid exchange of goods, services and other products brought along with technological innovations imply one of the important signals to consider for diseases that threaten humanity and are "dormant" somewhere. Since one cannot stop it, it is necessary to adapt to the process and to increase the level of preparedness for risks.

Epidemics shall be managed by taking into account risk management and crisis management processes, being two important elements of the disaster management process. However, each disaster has its own distinct stages as its impact, scale and disaster response methods might differ. Stages of risk management would include the process of epidemic prevention, epidemic preparedness and epidemic risk reduction.

Although not at the beginning shortly after the start of the pandemic, all states launched strategies for social awareness, emergency response, and prevention of the spread of the epidemic. At the same time, activities such as taking economic measures, ensuring social order, and strengthening solidarity were carried out.

Meanwhile, some scenarios predict that after the pandemic, the world and naturally the states will evolve towards a more isolated and authoritarian structure, state interventions in the economy will increase, yet according to some scenarios, a more democratic global system will be established.

During the Covid-19 pandemic, the labor market has undergone significant changes. On the one hand, the damage of the tourism sector has been extensive. Thus, hotels and inns, restaurants, entertainment and shopping

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**Table 3: Distribution of terminations by some types of economic activity and education level.**

<table>
<thead>
<tr>
<th>Distribution of terminations by some types of economic activity and education level</th>
<th>Higher education (%)</th>
<th>Vocational education (%)</th>
<th>Secondary education (%)</th>
<th>General education (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry and fishing</td>
<td>6</td>
<td>2</td>
<td>29</td>
<td>63</td>
</tr>
<tr>
<td>Mining industry</td>
<td>25</td>
<td>3</td>
<td>20</td>
<td>52</td>
</tr>
<tr>
<td>Processing industry</td>
<td>14</td>
<td>3</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>Construction</td>
<td>9</td>
<td>3</td>
<td>26</td>
<td>62</td>
</tr>
<tr>
<td>Wholesale and retail trade, repair of cars and motorcycles</td>
<td>20</td>
<td>2</td>
<td>30</td>
<td>48</td>
</tr>
<tr>
<td>Financial and insurance activities</td>
<td>72</td>
<td>2</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Professional, scientific and technical activity</td>
<td>53</td>
<td>2</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>Education</td>
<td>62</td>
<td>1</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>Provision of health and social services to the population</td>
<td>11</td>
<td>1</td>
<td>9</td>
<td>79</td>
</tr>
<tr>
<td>Activities of households; activity on goods and services produced by households for personal consumption</td>
<td>5</td>
<td>1</td>
<td>32</td>
<td>61</td>
</tr>
</tbody>
</table>

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centers, air transport suffered the most from this situation and therefore faced more job cuts. At the same time, education and health services, retail trade, construction, business services stand out as the sectors most affected by the Covid-19 virus.

Additionally, during the pandemics some companies were hiring thousands of new employees to keep up with changing consumer demands and spending habits. Grocery stores, delivery services, health equipment manufacturing companies, hospitals participated in the creation of new jobs.

Due to the fact that the general public were at home as a result of isolation measures, a large number of young people have been recruited for nurses, sales assistants and cashiers, sorters, courier vacancies by companies providing various types of delivery services. However, it is worth mentioning that the listed changes have been more transitory or temporary in nature. In many cases, employees are signing short-term contracts. However, such situation allowed at least a little compensation of the increased unemployment figures during the pandemic, which seriously threatens the labor market.

A comparison of the Covid-19 pandemic with other pandemics in history suggests that, due to its epidemiological characteristics, Covid-19 will not lead to large-scale reductions in the labor force, but by the same token, it is not expected to lead to any reduction in inequality, either. On the contrary, Covid-19 will almost certainly lead to a significant increase in economic inequalities, entailing extremely high unemployment, especially among the poorest and most economically fragile groups. The reason for this statement lies in the fact that large-scale cholera pandemics have not reduced inequality.

In fact, it would not be fair to analyze the pandemic from one dimension. Any pandemic drags behind the death of hundreds and thousands of people, a huge pressure accumulates on the health system of the countries, the level of unemployment might ramp up massively compared to previous times, therefore implying recession of economic growth. However, such environment also creates certain new opportunities in the economy. For instance, similar situation was observed when analyzing the indirect economic effects of atypical pneumonia that occurred in 2002-2003. As a part of self-isolation measures in China, the demand for more online shopping has begun to increase. The mentioned pandemic had a great impact on the future development of retail trade “Alibaba” on that eve.

Although the pandemic affects negatively in many ways on the economy, including the labor market, it also promotes the transformation of the labor market, making the labor market more flexible and amenable to global challenges, creating new habits and skills to adapt to the current situation, and encouraging market players to seek new opportunities. Such a situation enables small and medium-sized companies to pass the crisis period with less damage, to adopt faster decisions. Such atmosphere ultimately leads to establishing of a more flexible, more innovative economic environment.

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