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MANAGING THE PANDEMIC CRISIS: POPULATION-BASED SURVEY TO ASSESS STATE SUPPORT MEASURES

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ABSTRACT. The COVID-19 pandemic, a global crisis of unprecedented scale, has profoundly affected societies worldwide, transcending political, economic, cultural, and social boundaries. Kazakhstan, like many countries in the world, faced multifaceted challenges stemming from the pandemic, which revealed vulnerabilities in its governance systems. This study explores the impact of the pandemic on income levels and employment in Kazakhstan and evaluates the effectiveness of government support measures in enhancing the population's well-being. Methodologically, the study employs a population survey conducted over two quarters in 2021, encompassing 7,475 respondents. The survey data were analyzed in the Statistical Package for Social Sciences (SPSS), version 25. Utilizing both qualitative and quantitative analyses, the research is based on statistical estimations, correlation assessments, and visual representations. The results offer significant insights into the pandemic's effect on the income and employment levels of citizens and their assessment of the government's policy actions in Kazakhstan. A notable proportion of respondents reported an income decrease, while employment changes varied across regions and sectors. Furthermore, the study assesses the impact of government support measures, revealing a varied awareness of these measures among the population. The effectiveness of these measures in improving well-being is examined, highlighting the need for enhanced public awareness and implementation strategies. In conclusion, this research contributes valuable insights into the socioeconomic consequences of the COVID-19 pandemic in Kazakhstan for evidence-based policymaking in the future.

Keywords: COVID-19, pandemic, state support measures, population-based survey, Kazakhstan.

Introduction

The beginning of the COVID-19 pandemic forced governments to conduct emergency measures against the disease spreading rapidly around the globe. Coronavirus infection affected all areas of society - political, economic, cultural, social, etc. Many countries encountered numerous problems related to COVID-19, which highlighted the absence of universal methods for coping with the consequences of such a crisis. The large-scale and rapid spread of the pandemic throughout the planet displayed the vulnerability of almost all countries, regardless of their political, economic, innovative, or military potential.

The unprecedented spread of the coronavirus infection exposed weaknesses in the state management systems across various countries. According to estimates, the pandemic severely worsened the unemployment rate, leading to income loss, decline in well-being and other related problems.

Globally, governments swiftly responded to COVID-19 by adopting localized approaches for health and socio-economic measures. They allocated large amounts of funding to support businesses, households, and vulnerable groups, priopitizing funds for healthcare, small businesses, and regions hit hardest (Veselovska, 2023). Many OECD countries relaxed fiscal rules and boosted subnational finances, announced sizable recovery investment packages, focusing on healthcare, digitalization, and a carbon-neutral economy (OECD, 2021).

Several authors in the social and medical sciences immediately began research to assess the effectiveness of government decisions to combat the consequences of coronavirus spread (Bollyky et al., 2023; Buthe et al., 2020; Ursin et al., 2020; Tiirinki et al., 2020). Local-level studies in different countries offer specific examples of government policy responses to mitigate the crisis (Takefuji, 2022). For example, Haldane et al. (2022) discuss the implementation of state support measures in Latin America and the Caribbean, focusing on public heath interventions, social and economic measures. Talabis et al. (2021) employed a quantitative approach to analyze economic and demographic factors linked to epidemiological metrics and conducted a comparative examination of regions, provinces, and cities in the Philippines. An overview of these studies reveals that the most successful strategies include proactive government actions, introducing quarantine stages and restrictive measures, and combining diverse regulation methods.

Despite numerous studies on the effectiveness of government decisions in response to COVID-19 globally, similar research is scarce in Kazakhstan (Aubakirova et al., 2023; Sembiyeva et al., 2023). One of the most comprehensive research efforts in this regard was conducted by the Academy of Public Administration under the President of the Republic of Kazakhstan in 2020. Abisheva and Dulambayeva (2020) aimed to assess and gather the opinions of residents of the republic regarding the effectiveness of public administration during the pandemic. Sabyr and Abilkaiyr (2021) compare social protection measures carried out in the EAEU countries during the global pandemic. This paper's objective is to evaluate the state support measures implemented in Kazakhstan through a large-scale population survey, addressing the need for a post-implementation assessment of these measures over a reasonable period.

The research questions for this study are as follows:

1. To what extent has the pandemic influenced income levels and employment in Kazakhstan?
2. What is the impact of government support measures during the pandemic on the well-being of the population?

1. Literature review

The COVID-19 pandemic does not leave any sector of society development in any country untouched, and its consequences will affect the coming period (Masri & Sabzalieva, 2020). It has led to a number of lifestyle changes. Changes have taken place in access to medical care, education, employment, emergency response, and provision of public services.

In countries where there is social vulnerability or inequality in the family in access to resources, means of transportation, clothing, speech, food, and leisure, there may be a division of society (Featherstone, 1987), especially in disaster conditions. The way of life is shaped by culture, religion, economic and social status, social norms, personal beliefs, education and demography. Despite widespread lifestyle changes, mental and physical health care (Balanzá–Martínez et al., 2020; Venkatesh & Edirappuli, 2020), education (Dubois et al., 2021), employment (Bennett Gayle et al., 2021), emergency response (Dubois & Yuan, 2021), and social protection of vulnerable groups remains vital for population.

There is a large amount of literature on the effects of the COVID-19 pandemic on the labor market. An impressive amount of research is focused on the heterogeneity of the consequences. The impact of the pandemic on gender equality is one of the main issues in political discussions. Various studies provide convincing evidence that, unlike previous recessions, the COVID-19 pandemic has a disproportionately greater impact on women's socio-economic indicators (Brodeur et al., 2021; Alon et al., 2022), pointing to a relatively higher proportion of women in industries that have been more affected by the pandemic due to increased childcare responsibilities, school and kindergarten closures as the root cause of their unemployment. At the same time, the opinions of scientists were divided. Thus, researchers in the USA and Spain believe that women suffered more from the pandemic (Farré et al., 2022), and other scientists in the USA and Great Britain did not find discrimination during the pandemic period (Milovanska-Farrington, 2021; C. Hupkau, B. Petrongolo, 2020).

Age and education may be another source of heterogeneity in the results of the COVID-19 pandemic. It is expected that in a typical recession, young people will suffer more, since older workers can keep their jobs, and new entrants to the labour market will suffer more from a decline in hiring (Hoynes et al., 2012). Research by US scientists (Cortes and Forsythe, 2022; Lee et al., 2021) and the United Kingdom (Crossley et al., 2021) found that the negative effects of the pandemic on the labour market in the first months of the epidemic were more pronounced for young people, although there are empirical results in the opposite direction. In line with data from previous recessions, several studies such as Cortes and Forsythe (2022) in the US and Adams-Prassl (2020) in the US, UK and Germany show that the pandemic has largely affected less educated people. On the other hand, Montenovo et al. (2020) found the opposite pattern: workers with higher education could extend their work remotely, and the least educated workers were concentrated in industries less affected by quarantine.

Pandemic problems in the education system were the most serious that the world community has ever faced (Azzi-Huck and Shmis, 2020). According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the closure of academic institutions has affected more than 1.5 billion students and youth around the world directly or indirectly (UNESCO, 2020). It has changed the world, creating the need for new actions on the part of society, including universities and research centres (Alvarez-Risco et al., 2021). The cessation of the physical presence of students and teachers in the classroom for teaching and learning led to the transition of educational institutions to online learning and virtual education. Educational institutions are facing an economic crisis due to declining enrollment, delays in fee collection, and the use of alternative teaching and learning methods, such as online or virtual

methods, which are unlikely to ensure the quality of education provided in the classroom (Viner et al., 2020).

The state's role in preventing the spread of coronavirus and supporting the economy, the population and, accordingly, the management measures taken by the government bodies to overcome the pandemic has significantly increased worldwide. Many countries are taking action to support the citizens, and many emerging economies, due to limited resources, face particular difficulties in adapting vulnerable people to the pandemic (Panneer et al., 2022).

In countries with higher macroeconomic indicators, greater social cohesion and more reliable social protection systems, the recovery is likely to be faster and more confident. The vulnerabilities, such as high sovereign debt, weak balance sheets of companies, households, and banks and limited confidence in the policy, will hinder the economic recovery. Governments will need to solve the task of gradually curtailing the measures taken in connection with the crisis. Lower-income countries need a thorough analysis to implement more effective strategies to cope with the pandemic's consequences.

This study examines the pandemic's impact on the income of the population and assesses the effectiveness of government interventions designed to alleviate the pandemic's consequences in Kazakhstan. Generally, administrative responses to combat COVID-19 are similar across many countries and focus on supporting small and medium-sized businesses, offering unemployment benefits, implementing labour market measures, and providing social protection to vulnerable population groups. However, the variation lies in the form of administrative measures, the speed of response to the pandemic outbreak, and the cost assessment of these measures by governments, all of which influence the outcomes in the battle against the pandemic and its long-term consequences.

According to the theories above and under two research questions, the following hypotheses are put forward:

H1. The pandemic negatively affected the income level of the population based on age.

H2. The pandemic negatively impacted the population's income level based on geographic region.

H3. The pandemic negatively influenced the population's income level based on their field of activity.

H4. The pandemic had an adverse impact on employment based on geographic region.

H5. The pandemic had a negative effect on employment based on the field of activity.

2. Methodological approach

We initially conducted a literature review to explore the study's context and theoretical foundation on the research topic. Subsequently, we conducted an international review of practices and policies on supporting the economy and population during the pandemic, outlining the specific government measures taken in Kazakhstan.

A population survey was conducted to gather the majority's opinions and assessments of state policy implemented in the country. A questionnaire on the Google platform was used to collect relevant data. According to Liaw (2022), web-based survey tools are low-cost, give faster feedback, and are easy to generate a basis for analysis. Survey links were shared on social media platforms and circulated among different groups. Previous research has shown that sending surveys to a well-defined and specific population positively affected the response rates (Wu et al., 2022). The collected data is subjected to both qualitative and quantitative analyses, including the calculation of descriptive statistical measures, ranking and scaling, identifying correlations among individual characteristics, and visually representing the information.

A continuous survey was conducted in the first and second quarters of 2021. The total sample size was 7475 respondents. The data were processed using the SPSS 25 program. To test the hypotheses, cross-tables were built and the relationship between the variables under consideration was assessed using the Pearson chi-square statistical test.

According to the demographic data of the National Statistics Agency for Strategic Planning and Reforms of the Republic of Kazakhstan under the Bureau of National Statistics, quotas by gender and region were observed and, according to official statistics, the final data were re-weighted. The socio-demographic characteristics of the respondents are presented in the *Table 1*.

Table 1. Socio-demographic characteristics of respondents

Parameters	Answers	Distribution %
Age	18-30	49,5
	31-40	38,0
	41-50	9,6
	51-60	2,3
	61 and higher	0,6
	Total	100
Gender	Male	48,4
	Female	51,6
Level of education:	General secondary education	11,2
	Vocational education	15,6
	Incomplete higher education	9,6
	Higher education	56,3
	Scientific degree	7,3
	Total	100,0
Monthly income	No income	15,9
	Up to 60 000 tenge	6,9
	From 61,000 to 100,000 tenge	17,6
	From 101,000 to 250,000 tenge	37,5
	From 251,000 to 400,000 tenge	15,4
	From 400,000 to 600,000 tenge	4,1
	More than 600,000 tenge	2,6
	Total	100,0
Employment status	Hired worker	52,1
	Recipient of social benefits	8,6
	Entrepreneur	7,6
	Self-employed	14,4
	Unemployed	17,3
Total		100,0

Source: *own compilation*

3. Conducting research and results

To address the first research question, we analyzed respondents' answers regarding the population's income and employment levels. Overall, it is evident that the pandemic has affected the population's standard of living and employment in diverse ways. This influence may vary depending on socio-demographic and regional factors. To test the hypotheses and

assess the impact of age, region, and field of activity on income and employment during the pandemic, cross-tables were built, and the Pearson chi-square statistical test was applied *(Table 2)*.

Table 2. Results of hypothesis testing using the Pearson chi-square statistical test

	Value	df	Asymptotic Significance (2-sided)
H1. The pandemic negatively affected the income level of the population based on age.	92,350	20	0,000
H2. The pandemic negatively impacted the population's income level based on geographic region.	364,122	80	0,000
H3. The pandemic negatively influenced the population's income level based on their field of activity.	973,593	50	0,000
H4. The pandemic had an adverse impact on employment based on geographic region.	349,629	96	0,000
H5. The pandemic had a negative effect on employment based on the field of activity.	1225,438	60	0,000

Source: *own compilation*

As shown in Table 2, the "Asymptomatic significance" (two-sided) hypotheses reveal a p-value of 0.000, indicating a statistically significant and non-random relationship between the variables.

The findings showed that nearly one-third of the population was negatively affected by the pandemic, with 29.0% of respondents reporting a significant decrease in income or income loss. For half of the respondents, income level remained unchanged (50.2%), while it slightly decreased for 12.3% of the population and increased only slightly for 7.4% *(Figure 1)*:

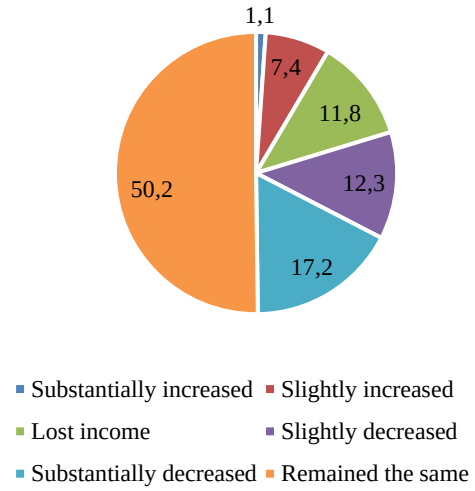

Figure 1. Impact of the Pandemic on Income Level (%)
Source: *own data*

Figure 2 provides a tabular representation of income changes among different age groups during a pandemic, with four categories of income change. It appears that the age group 18-30 experienced the highest percentage of "Income loss and substantial decrease," while the age group 41-50 had the highest share reporting an "Increase" in income. Despite the "61+" age group having the lowest percentage of individuals reporting an "Increase" in income at 6.5%, a

significant proportion (63.0%) of them reported that their income "Remained the same", showing a certain level of income stability. Overall, the visual representation of the data supports the conclusion that the pandemic negatively affected the income level depending on age and validates H1.

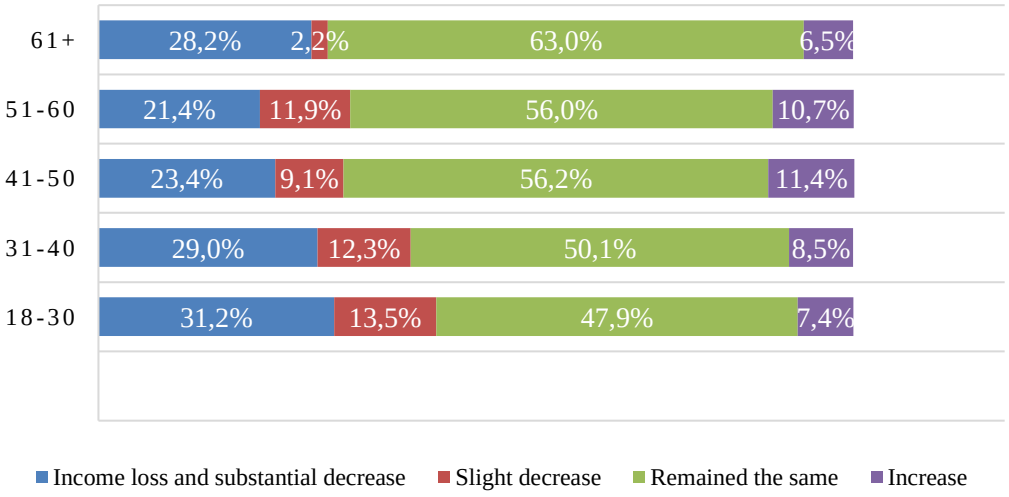

Figure 2. Income Changes by Age Group During the Pandemic
Source: *own data*

The table in Annex 1 presents data on how income levels changed across different regions in Kazakhstan during the pandemic. Analysis of this table shows significant regional variation, supporting H2.

Urban areas like Astana, Almaty, and Shymkent generally had higher percentages of respondents reporting "Income loss" or "Substantial decrease" compared to rural regions (33% on average). This could be due to the economic impact of lockdowns and reduced economic activity in urban centres. Some regions, such as Turkestan and Atyrau, had a relatively higher percentage of respondents reporting a "Substantial decrease" or "Income loss", indicating a more pronounced negative economic impact (32,3% and 30,7% respectively). In northern parts like Pavlodar, North Kazakhstan, and Kostanay regions, a significant percentage of respondents mentioned that their income remained "Same as before," suggesting a level of economic stability or resilience in these areas during the pandemic. Interestingly, in some regions, a small percentage of respondents reported a "Slight increase" or even a "Substantial increase" in their income during the pandemic (Kostanay - 16,7%; West Kazakhstan - 13,4%; Karagandy - 13,2%). This could be due to factors like job opportunities in specific industries or government support measures.

Figure 3 displays how the COVID-19 pandemic affected income levels in different fields of activity in Kazakhstan. H3 can be supported with several key observations: Public service, science and education, and healthcare sectors generally experienced minimal income disruption during the pandemic. The military sector stands out as having the highest percentage (79.3%) of respondents reporting that their income remained the same as before. It appears to have been relatively unaffected by the pandemic in terms of income. On the contrary, the "Tourism" and "Logistics" sectors were hit hard, with a significant percentage of respondents reporting a "Substantial decrease" or "Income loss." Tourism, in particular, had the highest percentage (62.5%) of respondents reporting a "Substantial decrease." As expected, the "Unemployed" category had a significant percentage of respondents reporting "Income loss" or "Substantial decrease" in income, highlighting the vulnerability of unemployed individuals

during crises. The diagram highlights the need for targeted support measures for industries that were severely affected, such as tourism, logistics and construction, while recognizing sectors that remained resilient or adapted effectively. It underscores the need for targeted economic and policy interventions from the government.

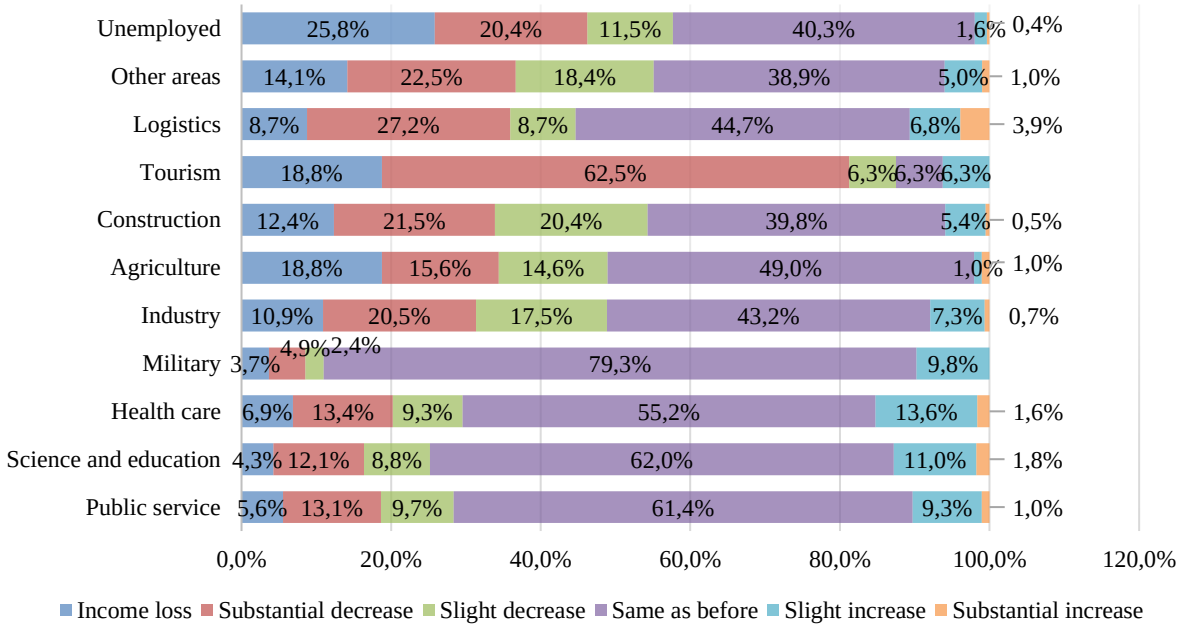

Figure 3. Income Changes Across Sectors During the Pandemic
Source: *own data*

According to the survey results, the pandemic did not impact the employment level of more than half of the respondents (*Figure 4*). However, a total of 42.3% of respondents reported experiencing various changes in their areas of activity. For instance, 10.8% transitioned to self-employment, 9.9% lost their jobs, 7.6% had to change their jobs, 4.1% started their own businesses, and 3.6% had to switch to a different field of work.

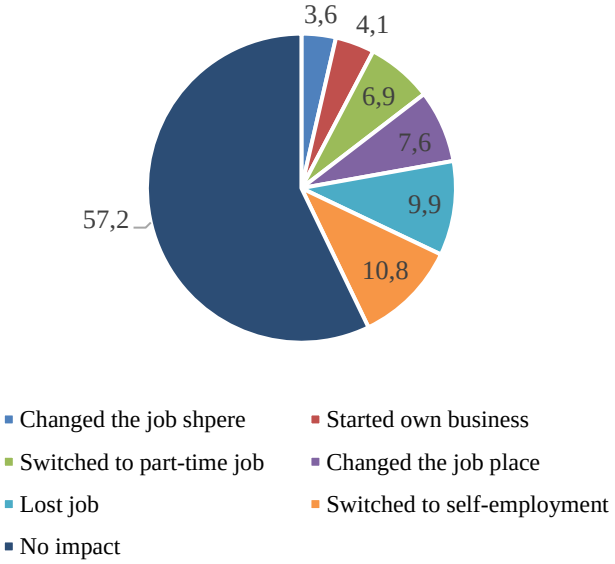

Figure 4. Impact of the Pandemic on Employment (%)
Source: *own data*

The table in Annex 2 provides valuable insights into how the labour market in different regions of Kazakhstan responded to the challenges posed by the pandemic, revealing varying degrees of job loss, mobility, adaptation, and resilience, reflecting the dynamic nature of the labour market. Across most regions, a significant percentage of respondents reported job loss during the pandemic. Shymkent city (12.9%), Astana city (11,6%), Turkestan region (11.7%) and Almaty region (11,4%) experienced relatively higher percentages of job loss. Akmola region had a higher share of individuals who reported changing their job sphere during the pandemic (9,1%), suggesting that some workers may have adapted by switching to industries that were less affected or in higher demand. A notable percentage of the population in regions such as Atyray (19,6%), Shymkent (18,4%), and Turkestan (18,2%) shifted toward entrepreneurship or self-employment as a response to economic challenges. The noticeable feature of the results is that a substantial proportion of respondents indicated that their employment situation remained stable or unchanged during the pandemic. Overall, the impact of the pandemic on employment was not uniform across Kazakhstan. Factors such as the local economy, industry composition, and government policies likely influenced these variations. Thus, H4 was validated partially.

Additionally, data analysis illustrates varying degrees of job loss across different industry sectors in Kazakhstan. The highest job loss was observed in the Tourism sector (25.0%), Construction (9,7%) and Agriculture (9.4%). Also, agriculture stands out as a sector where a notable proportion of individuals started their businesses (10.4%) and switched to self-employment (17,7%), exploring entrepreneurial opportunities in response to economic challenges. The Military sector appears to be the most stable, with the lowest percentages for job loss (1,2%) and the highest proportion (84.1%) reporting no significant impact. The majority of respondents in Public service, Science and education, and Health care reported no significant impact on their employment, suggesting relative stability in this sector (70,3%; 71% and 69% respectively). Based on these observations, it is reasonable to conclude that the data supports Hypothesis H5 to some extent.

For the second research question, evaluated the implementation of government support measures during the pandemic and its impact on the population's well-being. As indicated by the survey results, the measure involving "payment in the amount of 42,500 tenge due to loss of income or job" was the most well-known among the population, with 42.7% of respondents being aware of it but not needing it, while 19.2% of respondents received this state assistance, and it had a positive impact on them. Additionally, 17.9% of respondents expressed the need for this assistance but did not receive it. For other measures, the population exhibited a lower level of awareness, with responses predominantly falling under "haven't heard of it" or "don't need it" categories (*Table 3*).

Analysis of the survey results reveals that government measures, except for the 42,500 tenge payments, have not been particularly effective. This is due to the low level of public awareness about these measures. One of the reasons might be a low demand for the indicated list of actions taken by the government. Even when respondents expressed a need for some of these measures, they often did not receive the corresponding services. It's also worth noting that, to a limited extent, there are more who found services "helpful" than "not helpful" among those who did receive services. However, the share of individuals who received these services is relatively small. Thus, we can conclude that government measures have only partially impacted the well-being of the population.

Table 3. Respondents' assessment of the implementation of government measures to support the population during the pandemic, % by line

Package of measures to support citizens	Didn't hear	Don't need it	I needed it, but I didn't get it	Received, didn't help	Received, it helped
Payment of 42,500 tenge due to loss of income or job	12,3	**42,7**	**17,9**	7,9	**19,2**
Compensation for utility bills of 15,000 tenge	**45,1**	**31,4**	**17**	1	5,4
Providing food during a pandemic	**43,5**	**41,4**	**11,7**	1,2	2,2
Increase in pensions and benefits by 10%	**61,8**	**23**	8,1	2,6	4,5
Reducing the amount of utility bills for the population of quarantine cities with an emphasis on socially vulnerable segments of citizens	**67,2**	**21,8**	8,6	1,3	1,2
Exemption and deferment from taxes for individual entrepreneurs, small and medium-sized enterprises	**51,7**	**36,7**	6,3	1,3	4
Unemployment compensation	**54,2**	**33**	9,1	1,6	2
Extension until July 1, 2020, of the right of uninsured citizens to receive medical care through the Social Health Insurance Fund	**65,9**	**24,2**	6,3	1,6	2
Deferment of mortgage payment by Housing Construction Savings Bank (Otbasy Bank) of the Republic of Kazakhstan	**56,2**	**34,7**	5,6	1,5	2
Providing computers to children from low-income families during online learning	**34,4**	**48,6**	8,9	2,7	5,4

Source: *own compilation*

However, it should be noted that depending on the region and income level, support measures affect the standard of living of the population in different ways. The hypotheses regarding the impact of government measures on the well-being of the population in the context of the "region" and "income level" variables were confirmed. All constructed cross-tables yielded a p-value significance level of 0.000, confirming that government measures have varying impacts on the well-being of the population depending on the region and income level.

Analysis of answers to the open question "In your opinion, what measures of government support should be provided to the population in the post-pandemic period?" took into account the opinions of 43% of respondents (*Table 4*). Direct quotations are also provided to support the answers. The remaining respondents either found it difficult to answer, expressed uncertainty, skipped the question, or provided various responses, including calls to stop vaccination, eradicate corruption, or express dissatisfaction with the government's performance.

Table 4. Expected support measures in the post-pandemic period according to the respondents

State support policy	Share	Direct quotation
Creation of new jobs, measures to ensure employment	8,3%	"First of all, the problem of unemployment must be solved..." "Jobs need to be created". "To ensure employment for the population through the development of industrial production in the country..." "Providing new job places..." "It is necessary to create new, promising jobs..."
Psychological, material and moral support	7.9 %	"I need financial help to purchase food..." "I need financial support..." "The population needs psychological and moral support, as there are many financial problems..." "I need psychological, financial help..." "The state must create conditions for the development of individual entrepreneurship..."
Reducing prices for socially important consumer goods	6,63%	"Food prices must be reduced..." "Increasing the availability of essential goods for the population, the high cost of food products after the pandemic is a serious blow for the population..." "It is necessary to reduce prices for food and everyday needs. Because the salary is small, everything is expensive..." "Food prices have become much more expensive; I would like the Government to take this issue under control..."
Assignment of social benefits, increase in the amount of payments	6.27%	"It is necessary to increase the amount of child benefit..." "Assistance should be provided to all categories of the population..." "Needy categories of people need free medical care, assistance in providing food, increased pensions and benefits..." "It is necessary to increase state support for vulnerable segments of the country's population..."
Salary increase	2.9%	"We need to increase wages, reduce prices for food, clothing, housing, transport, there is not enough for anything..." "Salaries need to be raised; prices lowered..." "It is necessary to raise wages, all wages go to pay off the loan..."

Source: *own compilation*

Conclusion

The COVID-19 pandemic has undoubtedly left a mark on societies across the globe, affecting nearly every sphere of life. This research has shed light on the multifaceted impact of the pandemic on Kazakhstan, emphasizing its effects on income levels, employment, and government support measures. Through a comprehensive population survey conducted in the first and second quarters of 2021 with a total of 7475 respondents, we gained valuable insights into how the Kazakhstani population navigated the challenges posed by the pandemic and the effectiveness of government interventions.

Combining the findings derived from the analysis of survey data, one can assert that in Kazakhstan, the COVID-19 pandemic has impacted the socio-economic landscape by reducing

incomes and altering employment patterns within the population. This influence is noticeable in regional and socio-demographic dimensions. The government's policy actions to support the population displayed partial efficacy. Notably, the measure involving the payment of the minimum subsistence level (42,500 tenge) garnered greater popularity than others and exhibited regional variations in implementation across the country. Furthermore, our research confirmed that the impact of government measures on the well-being of the population was influenced by regional disparities and income levels. These variations underscore the importance of tailoring support measures to the specific needs and challenges faced by different segments of society.

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Annex 1

Regional Variations in Income Level Changes During the COVID-19 Pandemic in Kazakhstan

	Income loss	Substantial decrease	Slight decrease	Same as before	Slight increase	Substantial increase
Astana city	13,1%	19,2%	11,8%	46,1%	8,1%	1,7%
Almaty city	12,3%	19,7%	15,1%	46,1%	5,6%	1,2%
Shymkent city	14,7%	21,4%	12,0%	46,0%	4,6%	1,4%
Akmola region	6,6%	19,4%	9,0%	53,1%	10,4%	1,4%
Aktobe region	9,9%	13,3%	10,8%	55,8%	9,3%	0,8%
Almaty region	13,9%	17,6%	11,5%	48,8%	7,0%	1,1%
Atyrau region	13,4%	17,2%	12,6%	44,8%	11,5%	0,4%
East Kazakhstan region	4,9%	12,6%	12,1%	58,9%	8,9%	2,6%
Zhambyl region	12,1%	15,8%	10,3%	54,7%	6,7%	0,4%
West Kazakhstan region	10,3%	16,5%	10,0%	49,8%	12,6%	0,8%
Karagandy region	9,1%	12,3%	12,3%	53,1%	12,3%	0,9%
Kostanay region	7,7%	8,9%	3,9%	62,8%	15,5%	1,2%
Kyzylorda region	8,9%	15,3%	15,3%	52,5%	7,4%	0,6%
Mangistau region	12,0%	15,1%	9,3%	56,0%	6,5%	1,0%
Pavlodar region	5,1%	11,8%	11,8%	59,6%	11,8%	0%
North Kazakhstan region	4,8%	4,8%	14,3%	66,7%	9,5%	0%
Turkestan region	14,3%	18,0%	13,1%	50,3%	3,8%	0,5%

Annex 2

Employment Responses to the COVID-19 Pandemic in Kazakhstan's Regions

	Lost job	Changed the job place	Changed the job shpere	Started own business	Switched to part-time job	Switched to self-employment	No impact
Astana city	11,6%	10,6%	4,5%	3,4%	6,9%	10,0%	53,0%
Almaty city	10,8%	9,9%	4,2%	4,0%	7,5%	10,5%	53,1%
Shymkent city	12,9%	7,8%	3,4%	3,7%	7,4%	14,7%	50,1%
Akmola region	6,6%	7,7%	9,1%	2,4%	2,4%	10,5%	61,2%
Aktobe region	9,6%	6,8%	3,4%	3,1%	7,4%	9,1%	60,6%
Almaty region	11,4%	8,3%	3,2%	5,6%	6,4%	9,2%	55,9%
Atyrau region	10,8%	6,2%	2,7%	5,8%	5,8%	13,8%	55,0%
East Kazakhstan region	3,4%	4,1%	3,2%	4,1%	6,2%	10,2%	68,7%
Zhambyl region	8,9%	7,8%	2,7%	3,3%	5,6%	10,5%	61,2%
West Kazakhstan region	10,8%	5,4%	1,2%	4,6%	5,4%	9,6%	63,1%
Karagandy region	6,9%	5,2%	2,0%	5,2%	7,6%	8,0%	65,0%
Kostanay region	3,9%	9,0%	1,2%	3,9%	10,1%	7,8%	64,2%
Kyzylorda region	8,3%	5,5%	4,6%	4,0%	7,1%	9,8%	60,7%
Mangistau region	8,2%	7,2%	4,1%	3,1%	8,6%	10,3%	58,6%
Pavlodar region	4,1%	6,4%	1,4%	2,7%	6,4%	9,1%	69,9%
North Kazakhstan region	9,5%	0%	4,8%	9,5%	4,8%	4,8%	66,7%
Turkestan region	11,7%	5,4%	3,4%	4,2%	6,0%	14,0%	55,2%