

Mejora de la gestión de crisis en Kazajstán en el contexto de la pandemia y las acciones militares rusas en Ucrania: desafíos y direcciones de desarrollo

Improvement of crisis management in Kazakhstan in the light of the pandemic and Russian military actions in Ukraine: Challenges and development directions

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Abstract

The purpose of this study was to offer some recommendations in the field of crisis management for Kazakhstan in order to reduce the negative impact of the consequences of the pandemic COVID-19, as well as the war in Ukraine. The main methods of research within the framework of the work were analysis, forecasting, abstraction, historical method and others. Within the framework of the work, the assessment of modern complexities of crisis management was carried out. The problems were divided into 4 separate groups; also approaches to them were described, which should be applied by the state or enterprises to ensure the most effective functioning. The paper assessed the importance of structuring business activities in order to prepare in advance for possible crisis events while maintaining financial stability and optimal profitability. It also analysed the impact of crises on macroeconomic factors using Kazakhstan as an example,

highlighting the impact of events such as the Russian-Ukrainian conflict and the COVID-19 pandemic. In summary, the role of competent decision makers who can navigate and implement development strategies during crises was described, taking into account the unique characteristics of each event.

Keywords: management; adaptability; economic development; macroeconomics; instability.

Resumen

El propósito de este estudio fue ofrecer algunas recomendaciones en el campo de la gestión de crisis para Kazajstán para reducir el impacto negativo de las consecuencias de la pandemia Covid-19, así como la guerra en Ucrania. Los principales métodos de investigación en el marco del trabajo fueron el análisis, el pronóstico, la abstracción, el método histórico y otros. En el marco del trabajo, se llevó a cabo la evaluación de las complejidades modernas de la gestión de la crisis. Los problemas se dividieron en 4 grupos separados; También se describieron enfoques para ellos, que deben aplicar el estado o las empresas para garantizar el funcionamiento más efectivo. The paper assessed the importance of structuring business activities in order to prepare in advance for possible crisis events while maintaining financial stability and optimal profitability. También analizó el impacto de las crisis en los factores macroeconómicos que usan Kazajstán como ejemplo, destacando el impacto de eventos como el conflicto ruso-ucraniano y la pandemia Covid-19. En resumen, se describió el papel de los tomadores de decisiones competentes que pueden navegar e implementar estrategias de desarrollo durante las crisis, teniendo en cuenta las características únicas de cada evento.

Palabras clave: gestión; adaptabilidad; desarrollo económico; macroeconómica; inestabilidad.

1 Introduction

Anti-crisis management is a set of measures and strategies designed to effectively manage and overcome crisis situations that may arise in various spheres, including the economy, politics, society and the external environment. It is aimed at minimizing the negative consequences of the crisis, restoring stability and normal functioning of the system. Crisis management includes such components as analysis and forecasting (risk assessment, identifying vulnerabilities and analysing the causes of crisis situations to develop adequate prevention and response strategies), direct action and mechanisms to mitigate the likely negative consequences, coordination of follow-up actions, adaptation of the chosen scheme or model and evaluation of effectiveness at the immediate end. It is an essential element to ensure resilience and safety in complex situations where the normal functioning of the system is seriously jeopardized. It requires a concerted effort on the part of government agencies, public organizations, businesses, and citizens to effectively respond to and overcome the challenges facing society. The main crisis events whose consequences are observed and remain relevant at the moment in the global economy are the consequences of the COVID-19 crisis, as well

as the recent events related to the war in Ukraine and their impact on international factor flows (Rexhepi et al., 2023; Rexhepi, 2024). Thus, within the framework of this study, it was decided to analyse the impact of these factors on Kazakhstan, as well as to find opportunities to reduce the negative consequences of these events for the country.

The peculiarities of the modern development of Kazakhstan have been studied by a significant number of scientists. Z.Z. Kenzhin et al. (2022) studied the general state of the economy of Kazakhstan, as well as the impact on it of the consequences of COVID-19. Scientists described a particularly strong impact of the consequences of the pandemic on the country, which was significantly higher than in past crises, for example, 2008-2009. R. Dulambayeva et al. (2022) also described the specifics of the impact of the crisis COVID-19 on the development of the economy of Kazakhstan in its individual sectors. A similar study was also conducted by D. Sharipova and A. Kudebayeva (2023), studying the general change in the level of welfare in Kazakhstan and Kyrgyzstan. They wrote that in Kazakhstan, subjective well-being has decreased, which may indicate a gradual dissatisfaction among the people. M.G. Kaiyrgaliyeva et al. (2022) in turn also considered the trends in the development of the economic system of the Republic of Kazakhstan. The work showed that in modern conditions, the development of Kazakhstan is quite difficult due to both external and internal factors. In order to achieve better results, it is worth paying attention to the innovativeness of local enterprises and favouring their development. M.A. Blackwood et al. (2023) in turn studied the impact of the war in Ukraine on the countries of Central Asia and Kazakhstan in particular. They described the impact in terms of finance, trade, and numerous macroeconomic indicators.

Thus, the purpose of this study was to provide general recommendations that will allow Kazakhstan to achieve better results in terms of preventing negative consequences of the COVID-19 crises and Russia's full-scale invasion of Ukraine. The work will allow for a more effective formulation of the principles of its functioning on the part of both enterprises and state authorities.

2 Materials and methods

A significant number of statistical sources of information were used during the research. In particular, data from the Trade Map statistical site was used, which allowed assessing trade relations between countries (provides data in the context of exports and imports of states). Information from the Macrotrends website was also used, in particular on the inflation rate in the country (Kazakhstan Inflation Rate..., 2023). Information provided by international organizations was also used, in particular – The World Bank (2023). From their official website was used information on the level of unemployment in the country, as well as the level of gross domestic product (in dollars). Data from the Bureau of National Statistics of the Agency for Strategic Planning of the Republic of Kazakhstan (2022) was also used, regarding the level of wages in the country. Within the framework of the study, the forecasted values of the level of gross domestic product (GDP) of Kazakhstan were constructed. Construction of the forecast was carried out using the method of

exponential smoothing, that is, when for forecasting future values of the graph movement, close values have more weight than older ones. Compared to forecasting based on arithmetic averages, it is more accurate, because of which it can be more easily used to make assumptions about future price movements. Also added to the forecast were the values of the confidence interval, beyond which the GDP value should not exceed, with a probability of 95%. The direct plots were carried out using the Microsoft Excel programme.

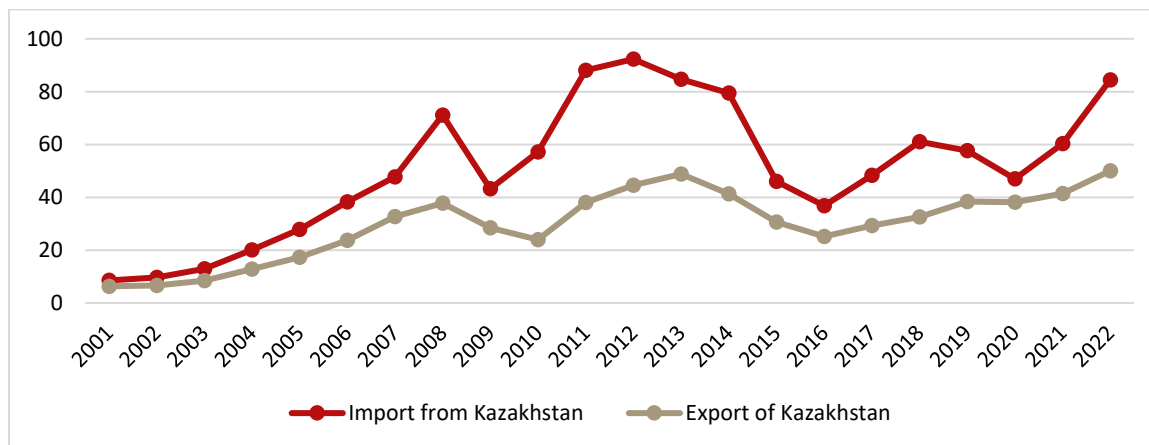
The approach used in the work was systematic. It allowed taking into account a fairly significant list of factors that in one way or another affect the ability of Kazakhstan to withstand the consequences of the crisis COVID-19 and the war between Russia and Ukraine, and to assess their interaction in the context of a certain list of time. The main method used in the study was analysis. It allowed drawing conclusions, based on the analysed information, about the existing and future consequences of the COVID-19 crisis and the war between Russia and Ukraine both for the world as a whole and for Kazakhstan as a whole. In addition, the historical method was used to analyse individual events in retrospect. Abstraction was also used, which made it possible not to evaluate individual factors that are unimportant within the framework of this study (may have an impact on the state of Kazakhstan and have a role for the formation of anti-crisis policy, but in fact are unimportant for these purposes). In addition, forecasting was used, which made it possible to assess the likely impact of the use of the described recommendations on the sustainability of crises in the country. The study also used a statistical method to analyse basic big data. A graphical method was also used to construct the figures within the work. It allowed a comparatively simpler assessment of individual indicators describing the impact of the pandemic and the outbreak of war between Russia and Ukraine on Kazakhstan.

3 Results

In general, the problems associated with crisis management can be divided into four main groups. The first group involves recognizing pre-crisis situations, detecting early warning signs of crises and understanding their nature. This recognition is crucial for potential prevention. However, not all crises can be prevented, so the actor (or the state as a whole) must be prepared to confront any such situation. The second group of problems relates to the main activity of the organization, which can include methodological problems of forming a mission and management goals, determining approaches to anti-crisis management, solving financial and economic issues. The third group of problems is related to crisis forecasting, understanding the behaviour of socio-economic systems during crises, collecting the necessary information and developing management solutions, which is the assessment and analysis of crisis situations, as well as the creation of innovative strategies to reduce their impact on the organization. The fourth group is related to conflict resolution, staffing during crises, investing in anti-crisis measures, quality financial management.

The impact of the consequences of crises can always be seen on the basis of individual macroeconomic factors (Kuzmenko et al., 2020). To begin with, it is worth considering the situation in Kazakhstan in terms of international trade, which is shown in Figure 1.

Figure 1. Data on Kazakhstan's trade with the outside world from 2001 to 2022, billion dollars

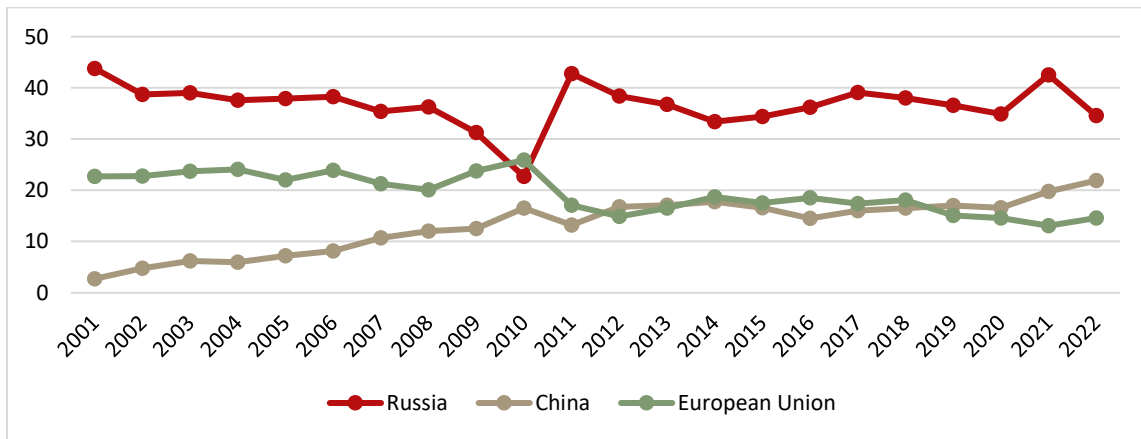


Note: hereinafter, foreign trade primarily means trade in goods, since they occupy the bulk of the country's trade and have a much stronger influence on its internal processes

Source: compiled by the authors

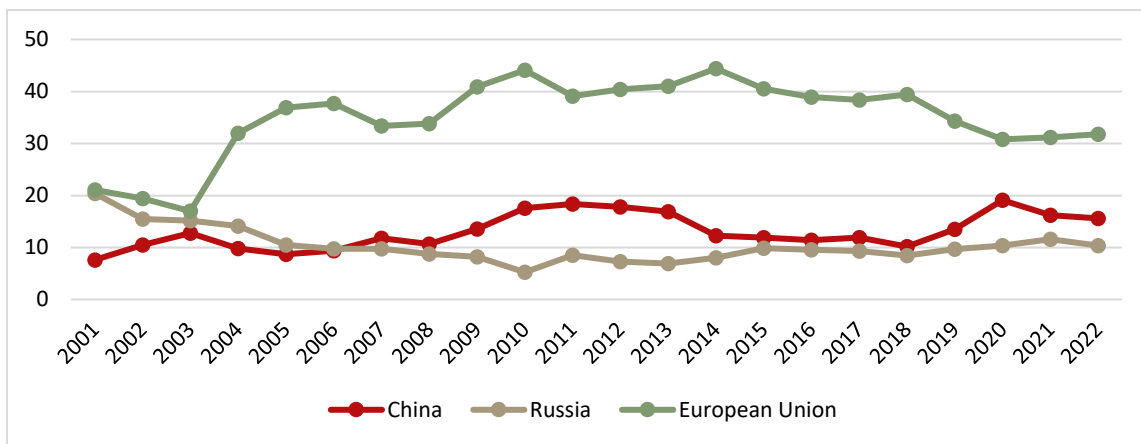
As can be seen from Figure 1, the highest values of foreign trade in the country were observed in the 2010s, and decreased significantly in the period 2014-2016, due to the destabilization of the region and the outbreak of hostilities between Russia and Ukraine. The same decline was observed in 2020, which was caused by the COVID-19 pandemic; in turn, trade volumes for 2022 increased significantly. The decline during the pandemic was, accordingly, caused by disruptions in supply chains, in migration movements, a reduction in demand and a drop in purchasing activity, and a decrease in prices for raw materials (at the beginning of the pandemic; it is worth noting that over time, prices, on the contrary, increased and reached their peak values). The increase in values during the start of Russia's full-scale invasion of Ukraine is also associated with changes in supply chains, in particular due to sanctions imposed on Russia (Hubeladze, 2024). In this context, it is important to assess the changing role of different countries in Kazakhstan's international trade, as shown in Figures 2 and 3.

Figure 2. Ratios of the share in imports of the main countries (associations) – partners of Kazakhstan in the period from 2001 to 2022, %



Source: compiled by the authors

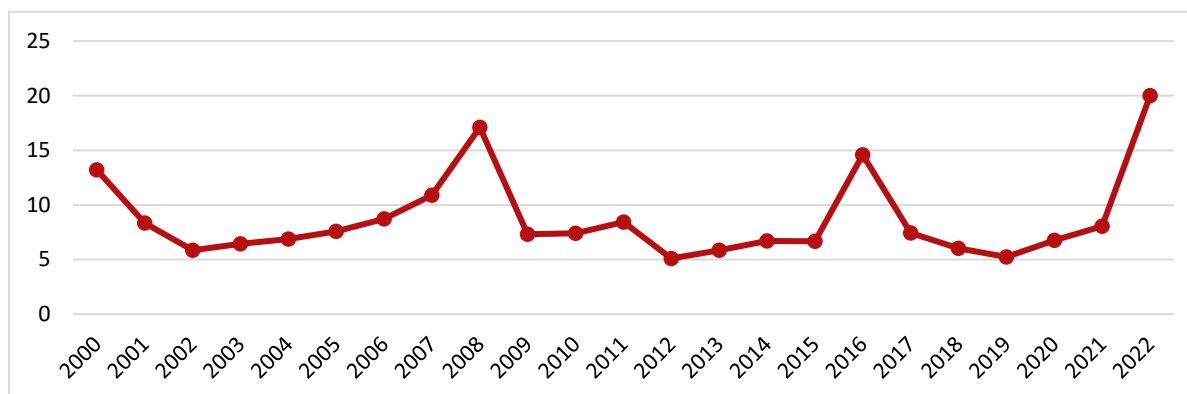
Figure 3. Ratios of the share in exports of the main countries (associations) – partners of Kazakhstan in the period from 2001 to 2022, %



Source: compiled by the authors

As can be seen from Figures 2 and 3, the share of the main countries in exports differs significantly: the countries of the European Union are much more important in exports, while Russia and China are much more important in imports. From Figure 2, it is possible to see how Russia's role in the country's foreign trade has decreased, and how China and the EU have increased during the same period. This may be due to the desire to maintain European sanctions on the part of Kazakhstan and the gradual reorientation of its external relations away from Russia (Işık et al., 2025). It is worth noting that the decline in the country's role turned out to be quite significant, namely 8 percentage points, or about 20%, which is a fairly high figure. In general, from such an increase in trade activity, which was observed in 2022 and can be expected in 2023, the country can even benefit economically for itself if it is able to take advantage of this opportunity. Another important macroeconomic indicator for analysis is the inflation rate. The data in its context are shown in Figure 4.

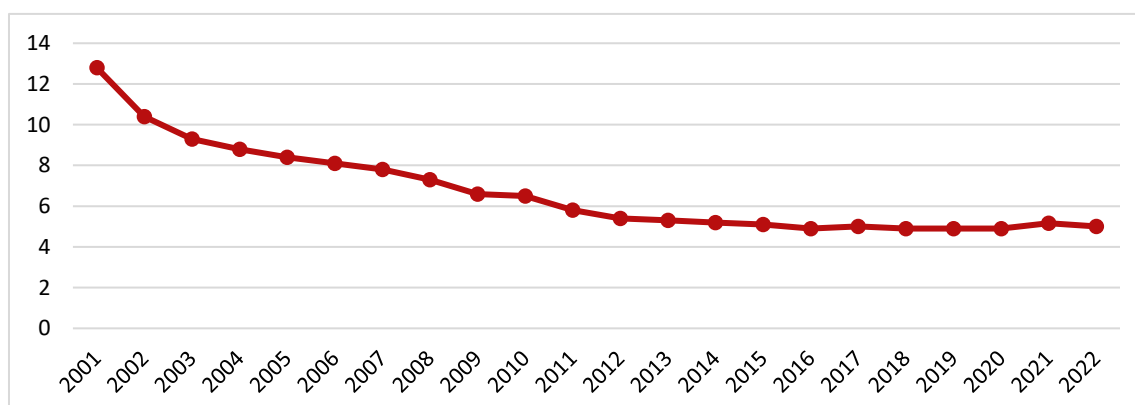
Figure 4. Dynamics of the inflation rate in Kazakhstan from 2000 to 2022, %



Source: compiled by the authors

As can be seen from Figure 4, the dynamics of the inflation rate in the country is also unstable, increasing sharply during periods of crisis and gradually decreasing between them. In 2022, one can notice a particularly high level of inflation, which turned out to be even higher than in 2008 and 2016. This is primarily due to the war between Ukraine and Russia. Geopolitical instability generally multiplies the risks of investing in a country, which is why investors often want to exit the market, which leads to capital outflows (Smagulova et al., 2018; An et al., 2024). In addition, supply disruptions and general macroeconomic difficulties due to the war also lead to rising prices within the state. Data in terms of changes in the unemployment rate can be seen in Figure 5.

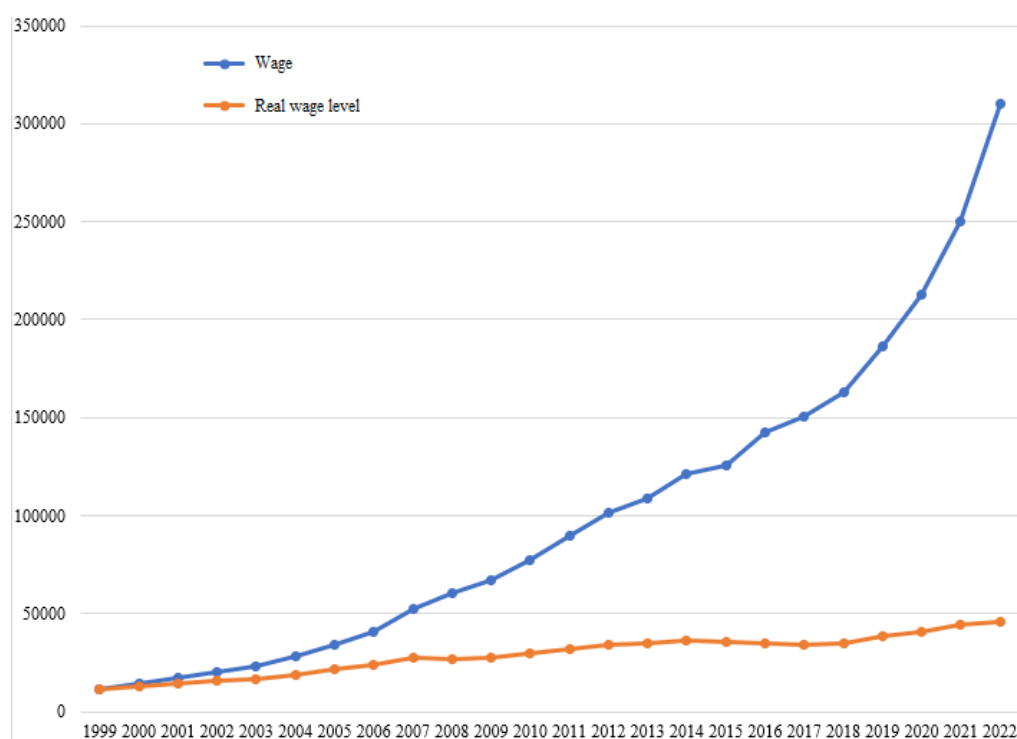
Figure 5. Unemployment rate in Kazakhstan from 2001 to 2022, %



Source: compiled by the authors

As can be seen from Figure 5, the country's unemployment rate is gradually decreasing over time, while reacting minimally to any crisis shocks. This in turn demonstrates the peculiar resilience of the country in this context regarding vulnerability to external negative events (Parker et al., 2020; Matias and Cardoso, 2023). As of 2020 and 2022, the unemployment rate is at about the same level of 5%. It is also worth assessing the level of wages shown in Figure 6.

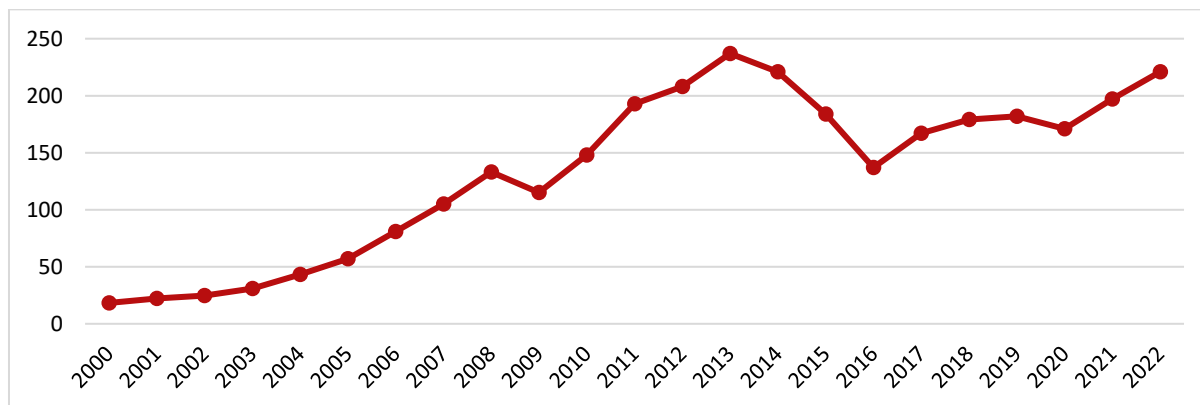
Figure 6. Level of average monthly wages in Kazakhstan, taking into account and excluding inflation in the period from 1999 to 2022 (in 1999 prices), tenge



Source: compiled by the authors

As can be seen from Figure 6, wages in Kazakhstan have increased significantly not only in nominal terms, but also in real terms (that is, taking into account the inflation rate in the country, which was shown in Figure 4). Thus, real wages increased by 387% compared to 1999, which is a very good indicator. If looking at the graph between 2020 and 2022, it is possible to understand that even in real terms, the level of wages only increased, which suggests that the country's population was only beginning to live better on average (not taking into account social difficulties due to the pandemic, such as restrictions on movement around the country, and problems with physical and psychological health caused by COVID-19). However, local businesses still experienced significant difficulties associated with the pandemic. In particular, this has been attributed to global instability, decreased demand, reduced investment, changes in government policies, and logistical challenges (Abdalla et al., 2021; Fasth et al., 2022). Thus, although government authorities, along with entrepreneurs, created conditions in which the average wages of local workers did not decrease significantly, economic conditions within the country became much more difficult than before. Finally, let's look at the level of GDP in the country and its dynamics. This is shown in Figure 7.

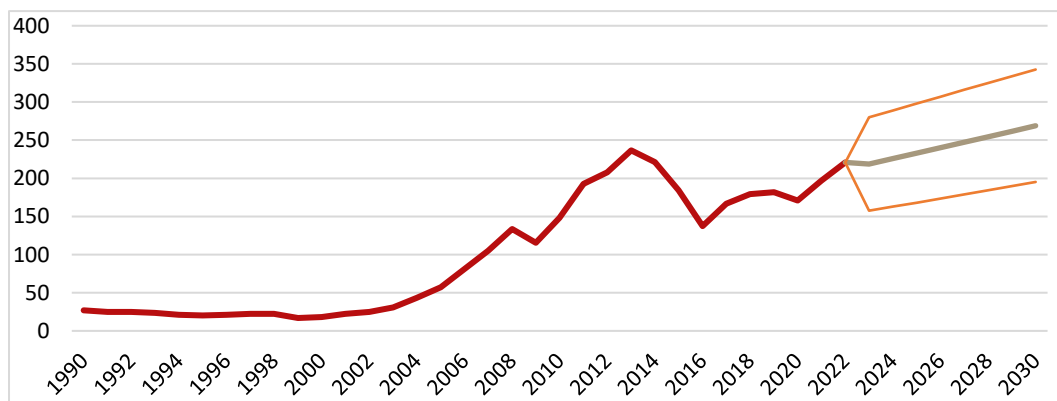
Figure 7. The GDP level in Kazakhstan from 2000 to 2022, billion dollars



Source: compiled by the authors

As can be seen from Figure 7, the highest level of GDP in the country was observed in 2013 and began to decline in 2014, which, again, is associated with the confrontation between Russia and Ukraine, as well as the destabilization of the region. A certain decline was observed in 2020, while in 2022 the level of gross domestic product increased, which, as in the situation with trade, is associated with sanctions imposed on Russia and the reorientation of international flows of goods to Kazakhstan (Stanca and Tarbujaru, 2022; Sharma et al., 2022). In Figure 8, it is possible to see the predicted value of Kazakhstan's GDP level.

Figure 8. Kazakhstan's GDP data from 1990 to 2022 and forecasting of this indicator until 2030, billion dollars



Source: compiled by the authors

As it can be seen from Figure 8, taking into account the current development data of Kazakhstan, it is worth expecting quite positive indicators of changes in the level of GDP of the country in the future. Nevertheless, the current crises have already shown that nothing can be completely certain, because each time there is a possibility of an event that no one could have expected. Therefore, it is still relevant to develop methods of crisis management that would allow better counteracting such events. It has already been described above that the problems of crisis management can be divided into 4 groups, related respectively to crisis prediction, structuring of the company's (state's) activity, forecasting process and their resolution. Taking into account the crises of recent years, it can be realized that crisis prediction is a rather inefficient activity. N.N. Taleb (2010) in his book described the probability of occurrence of events, consonant with the title of the book, which cannot be predicted. Thus, for example, a full-scale invasion of Ukraine by

Russia before the beginning seemed unlikely, but the occurrence of this event could still be foreseen and prepared for. In turn, it was impossible to be prepared for a pandemic or its occurrence, as such an event had not happened in recent history. It is not surprising, therefore, that each country had its own particular public policy to counteract the pandemic and its spread: no single effective recipe was known yet. Thus, the best option of anti-crisis policy is to be prepared for any probable negative consequences and to be able to adjust to them in case of need.

The second factor is the structuring of the company's (state's) operations. This refers to the way in which the entity operates at its normal pace, i.e., not in times of crisis. The most effective principle seems to be the one where the objectives of the activity are preparation for possible crisis events, but the formation of such conditions of functioning of the company, when it will be able to have stable financial indicators (liquidity, debts) and at the same time the optimal level of profitability, at which it will be able to bring profit to the owners (shareholders) and have a good competitive position in the market. And although it is difficult to achieve such a thing, but managers should strive for it when managing the company's activities. A similar situation to the first is also relevant for the third problem, predicting crises (the way they go). It is possible to predict this for a crisis that has already occurred in the past. Moreover, the opportunity of such an outcome is indeed possible because the public authorities have already developed effective methods to prevent them or to reduce their negative consequences. Nevertheless, there is always the possibility that a crisis will take place in a different scenario than predicted (even if such a crisis has already occurred in the past). Finally, the essence of the fourth is the shaping of the behaviour of the enterprise during the crisis. As much as it generally follows from the third pillar, it also plays a major role in this issue. However, the public authorities (or enterprises) must also choose the right policy during such a crisis, and it can vary greatly depending on the very characteristics of such an event. For example, for enterprises during COVID-19, it was relevant to reconsider budget expenditures and minimize them, to switch to remote working principles (both internally and with contractors) and to adhere to all pandemic restrictions as much as possible. Thus, it is important that the implementation of development strategies in times of crises be supervised by sufficiently competent individuals who are able to adjust to the variable external environment.

4 Discussion

As part of her work, V. Vasickova (2020) conducted a literature review of crisis management approaches. The scholar developed a Proactive Crisis Management Process Model (PCMP), which highlighted steps and functions to prevent and effectively manage crises. The model emphasized sequential vulnerability analysis, identification of warning signals, crisis management mechanisms, crisis assessment and learning, integration of strategic management and feedback. A similar study was conducted by Y.M.H. Hazaa et al. (2021). Researchers concluded that additional research is required to analyse the possibilities of applying the latest technologies on crisis management issues, in particular – big data.

The negative impact of the COVID-19 crisis on the development of the economy as a whole was studied by W. Kamkiew (2022). The scholar noted that Covid-19 in Thailand had far-reaching effects on health, economy, society, and nation. Bangkok, which was severely affected by the crisis, experienced difficulties due to inadequate government efforts to manage the crisis, resulting in public health and

economic problems. Late government mechanisms to prevent the spread of the virus, ineffective communication by the leadership, and problems with vaccine procurement and distribution undermined public confidence (Tkach *et al.*, 2021). Problems also arose from inconsistent measures, illegal immigration and the exploitative behaviour of some politicians (Kubiczek & Tuskiewicz, 2022; Ilyassova *et al.*, 2025). To address these problems, leaders should have demonstrated effective crisis management through vaccine distribution, prevention strategies and action against illegal activities, but this did not happen because the politicians themselves did not really understand which policies would be effective and which would not. In order to prevent this from happening in the future, the scientist suggests that decision-making should be more decentralized. And although this should indeed bear fruit, it is quite costly and difficult to maintain. In addition, in such a case, the risk of individual ineffective decisions on the part of individual representatives of power at the places of governance increases (Vojtyk, 2023). In other words, this efficiency measure should be analysed before implementation to see if it is actually applicable in the given situation.

The shortcomings of the existing field of crisis management in relation to the COVID-19 crisis were studied by A. Thiry *et al.* (2022). They showed that the crisis revealed significant weaknesses in the existing crisis management system, namely the system failed to identify pandemic signals despite prior information and scientific articles. Consequently, many governments had to improvise their response to the crisis due to inadequate systems (Yu & Xiao, 2023). This shows that the current system is primarily focused on dealing with understandable risks, while ignoring the occurrence of negative events with a seemingly small probability of occurrence. To address these problems, a more vigilant and proactive approach is needed, both at the governmental level and at the entrepreneurial level (Li *et al.*, 2022). In general, it is worth agreeing that active government action in such a case significantly reduces the negative effects of a crisis event. Nevertheless, it is worth remembering that the government's actions themselves may not be sufficiently effective, which is why an important role is played by regular professional development of the authorities, updating the methods of analysis and work, and developing the ability to adapt to the frequently changing conditions of the external environment (Zayats, 2024).

Measures taken to control the spread of COVID-19 and their impact on the effectiveness and anxiety of crisis resolution populations were evaluated by J.E. Lee and S.E. Kwon (2021). The work showed that, when dealing with pandemic-like crises, the role of the central government is crucial. In the case of COVID-19, this is due to the widespread nature of the disease, which requires efficient organization of resource allocation. Thus, in such crises, the Government should strengthen its role in dealing with non-compliance and in communication to reduce anxiety among the public. P.K. Ametepe and U.C. Onokala (2023) formed their focus on the learning system and the impact of the crisis on it based on data from Singapore. Researchers suggested analysing experiences and mistakes in order to identify weaknesses in the education system, as well as to improve the existing government strategy for the development of the sphere. This approach in general can be applied to any sphere of activity of the state, as well as enterprises: assessing

weaknesses and changing their policies to strengthen them in any case will be effective in the long term. Nevertheless, it is worth remembering the peculiarities of each individual sphere and taking them into account when creating strategic development schemes.

K.A. Mottaleb et al. (2022) studied the potential impact of the Ukrainian-Russian armed conflict on the world economy, in particular on its food component. The study concludes that the ongoing armed conflict between Russia and Ukraine could have serious implications for global food security, especially in countries that are highly dependent on wheat imports. The conflict could lead to a decline in per capita wheat consumption, caloric intake and protein intake from wheat, exacerbating food and nutrition security (Yevseiev et al., 2022). The study emphasizes the need for international donor agencies to provide alternative sources of affordable wheat for import-dependent and resource-poor countries, and advocates for stable public funding for research to improve agronomic management and genetic advantages in wheat production. This situation shows that any crisis in modern conditions, even a seemingly localized one, can have quite extensive consequences, affecting all countries of the world in one way or another. For Kazakhstan, which has quite large opportunities for the development of the agricultural sector, this creates new opportunities to increase exports of its own products.

An interesting study was conducted by O. Oscarsson (2022). The scholar proposes a 'crisis as practice' approach that complements traditional crisis management research by emphasizing the common and scattered practices associated with crisis management. This perspective shifts the focus from crisis management as a specialized field to something that depends on the everyday work of organizations. The scholar described those practitioners use routine work, localized knowledge and professional skills to manage crises. This approach bridges the gap between theory and practice by providing insight into practitioners' experiences and logic, making theory more relevant and practical. In other words, the scholar writes that it is possible to be prepared for crises through the normal daily operations of a company if they are conducted according to all the principles that allow the company to function effectively. In general, this judgement can be considered true: similar conclusions were formed above, while analysing the situation in Kazakhstan. This becomes relevant because it is impossible to foresee all possible crises and be ready for everything at the same time. Thus, the usual increase in the efficiency of the functioning of the enterprise and the formation of the main variables responsible for its financial stability.

Public authorities and enterprises can prepare for crisis situations in different ways. In the end, actors may not have any strategy about it at all and feel quite successful in the conditions of economic competition. Nevertheless, such models are most often not successful in the long term. Therefore, it is still important to pay attention to key financial indicators, ensure that they are optimal and have ways to insure against crisis situations.

5 Conclusions

The consequences of any crisis are somehow reflected on the macroeconomic indicators of the country. It was analysed above how COVID-19 and the war in Ukraine affected the specifics of Kazakhstan's development. Notably, the country's adaptability has led to changes in the composition of its trading partners, which may indicate a strategic change in the direction of the country's development. Similarly, inflation rates, unemployment rates, wage levels and GDP trajectories provide insights into the country's resilience, responsiveness and economic health. Yet, public authorities must remain capable of dealing with any other such crises in the future.

Predicting crises so far remains a challenge for authorities and businesses, as events such as a pandemic fall into the category of unforeseen events ("black swans"). While historical analyses can provide some insight into such events, the actual impact and course of a crisis can vary significantly. In view of this, the ideal approach to crisis preparation is to maximize the efficiency of the enterprise's functioning, preserving its ability to adapt. The structuring of normal business activities should be aimed at achieving stable financial performance while maintaining optimum profitability. This requires alignment of objectives to anticipate potential crises and their consequences.

Thus, successful crisis management involves a dynamic interaction of understanding pre-crisis performance, forming proactive strategies, anticipating different scenarios and flexible decision-making. Kazakhstan's economic experience illustrates the importance of preparedness, adaptability and prudent management during crises. As the future remains uncertain, the ability to overcome unforeseen challenges and capitalize on opportunities will continue to define effective crisis management strategies. Relevant for future research is a more detailed assessment of foreign experiences in coping with the effects of the COVID-19 crisis and various types of military conflicts, such as Russia's war with Ukraine. In addition, it is also relevant to follow up on the search for opportunities to counteract these negative consequences in Kazakhstan, both on the part of government authorities and enterprises.

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