

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economic Theories



Bachelor Thesis

Impact of Covid-19 crisis on economy of Kazakhstan

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BACHELOR THESIS ASSIGNMENT

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Business Administration

Thesis title

Impact of Covid 19 crisis on economy of Kazakhstan

Objectives of thesis

The bachelor thesis' objective is to analyse the impact of COVID-19 on Kazakhstan's economy. The thesis describes the economic situation in the country in the periods before and after the coronavirus pandemic. The economic situation and its development will be assessed mainly by using economic indicators – for instance unemployment rate, interest rates, change in gross domestic product (GDP), personal income and wages rate, etc. The thesis conducts a comparative analysis between them in order to identify the sectors of the economy affected by COVID-19 and the causes of the downturn.

Methodology

The thesis consists of a theoretical and a practical part.

The theoretical part will detail the economic concepts and definitions. It will describe the economic sectors and indicators of Kazakhstan. The following methods: synthesis, analysis, and statistics will be used here.

The practical part will provide a comparative analysis of selected economic sectors of Kazakhstan before and after COVID-19 pandemic. Also, using academic articles and reports, it will identify the main causes of the economic downturn. The practical part will be based mainly on statistics, quantitative data collection, and comparison.

The proposed extent of the thesis

30-40 pages

Keywords

Economy, Kazakhstan, Coronavirus, economic indicators, crisis, impact, economic sectors, correlation

Recommended information sources

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Declaration

I declare that I have worked on my bachelor thesis titled " Impact of Covid-19 crisis on economy of Kazakhstan " by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15.03.2024

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Impact of Covid-19 crisis on economy of Kazakhstan

Abstract

The purpose of the bachelor's thesis is to understand and analyse the impact of COVID-19 on the economy of Kazakhstan. The study consists of two parts - theoretical and practical part.

The theoretical part discusses in detail economic indicators, their types, and definitions. It presents considered world's indicators during the coronavirus pandemic. It also presents general information about the pandemic and the Kazakhstan's economy. Thus, the theoretical part is the basis for the analyses carried out in the practical part.

The practical part contains analyses of selected macroeconomic indicators of Kazakhstan in the periods before, during and after COVID-19. It presents indicators of other countries for comparative analysis. Also, using scientific articles and reports, it will identify the main causes of the economic downturn.

Keywords: Economy, Kazakhstan, Coronavirus, economic indicators, crisis, impact, economic sectors, correlation

Dopad krize Covid-19 na ekonomiku Kazachstánu

Abstrakt

Cílem bakalářské práce je porozumět a analyzovat dopad COVID-19 na ekonomiku Kazachstánu. Studium se skládá ze dvou částí - teoretické a praktické části.

Teoretická část podrobně pojednává o ekonomických ukazatelích, jejich typech a definicích. Představuje uvažované světové ukazatele během pandemie koronaviru. Poskytuje také obecné informace o pandemii a ekonomice Kazachstánu. Teoretická část je tedy základem pro analýzy provedené v praktické části.

Praktická část obsahuje analýzy vybraných makroekonomických ukazatelů Kazachstánu v období před, během a po COVID-19. Uvádí ukazatele jiných zemí pro srovnávací analýzu. Pomocí vědeckých článků a zpráv také určí hlavní příčiny hospodářského poklesu.

Klíčová slova: Ekonomika, Kazachstán, koronavirus, ekonomické ukazatele, krize, dopad, ekonomické sektory, korelace

Table of content

1	Introduction	11
2	Objectives and Methodology	12
2.1	Objectives	12
2.2	Methodology	12
3	Literature Review	13
3.1	The COVID-19 Pandemic	13
3.2	Macroeconomic indicators	14
3.3	Inflation	15
3.4	Gross Domestic Product	18
3.4.1	Nominal GDP	18
3.4.2	Real GDP	19
3.4.3	GDP per capita	21
3.4.4	Gross National Product (GNP)	22
3.5	Unemployment rate	23
3.5.1	Frictional Unemployment	23
3.5.2	Structural Unemployment	24
3.5.3	Cyclical Unemployment	24
3.6	Export / Import	25
3.7	Interest rates	27
3.8	Personal Income	29
3.9	General information about the Republic of Kazakhstan	30
3.10	Introduction to the economy of Kazakhstan	31
4	Practical Part	33
4.1	Inflation in Kazakhstan	33
4.2	Unemployment in Kazakhstan	35
4.3	International trade of Kazakhstan	38
4.4	Base interest rate of Kazakhstan	40
4.5	Change in personal income in Kazakhstan	41
4.6	Gross Domestic Product of Kazakhstan	43
5	Results and Discussion	47
6	Conclusion	49
7	References	51
8	Appendix	56

Table of figures, tables, and graphs

<i>Figure 1 Number of COVID-19 cases reported to WHO</i>	13
<i>Figure 2 Inflation rate</i>	17
<i>Figure 3 GDP growth</i>	20
<i>Figure 4 GDP per capita</i>	22
<i>Figure 5 Unemployment rate</i>	24
<i>Figure 6 Export, Import</i>	26
<i>Figure 7 Interest rate, USA</i>	28
<i>Figure 8 Personal income</i>	29
<i>Figure 9 Map of Kazakhstan</i>	30
Figure 10 Price index for consumer goods and services.....	33
Figure 11 Inflation (Consumer prices) - Kazakhstan, Russia, Kyrgyzstan, Uzbekistan.....	34
Figure 12 Unemployment rate in Kazakhstan.....	35
Figure 13 Quarterly unemployment figures of Kazakhstan.....	36
Figure 14 Unemployment rate in Kazakhstan, Russia, Belarus, Azerbaijan	37
Figure 15 Kazakhstan foreign trade	38
Figure 16 Kazakhstan trade growth v/s World growth.....	39
Figure 17 Kazakhstan Base Interest rate	40
Figure 18 Interest rates of Kazakhstan, Russian Federation, Kyrgyzstan, Belarus, and Uzbekistan.....	41
<i>Figure 19 Kazakhstan's Household Income per Capita</i>	42
<i>Figure 20 Household Income per Capita in Kazakhstan, Russia, Belarus, Kyrgyzstan, Uzbekistan</i>	43
<i>Figure 21 Kazakhstan Real GDP</i>	44
<i>Figure 22 Annual percent change of GDP - comparison</i>	45
<i>Figure 23 Kazakhstan GDP per capita</i>	45
<i>Figure 24 GNP of Kazakhstan</i>	46

1 Introduction

At the beginning of 2020, the world was shaken by a global pandemic caused by the spread of the COVID-19 virus. This virus not only claimed the lives of more than 7 million people, but also caused a global economic crisis. The consequences of this pandemic have somehow affected every country on the planet, including Kazakhstan.

This is an interesting topic because the coronavirus and its consequences have had a profound impact on the lives of people around the world. Even those people not affected by the disease itself have felt its impact primarily because of the deterrent, restrictive and social measures that have been put in place. The epidemic caused an increase in the unemployment rate, shut down most industries around the world and accelerated inflation.

This thesis is divided into 2 parts - theoretical and practical. The theoretical part will explain the basic economic concepts, as well as tell about the economic indicators that will be used in the practical part. Also, in this part of the work will be presented world indicators of selected indicators during COVID-19 to assess the impact of the global pandemic on them.

In the practical part, the indicators of Kazakhstan will be presented, as well as the indicators of some other countries in the region. On the basis of the obtained indicators, an analysis and comparative analysis will be carried out in order to assess the impact on the economy of Kazakhstan. The practical part will also present the possible causes and consequences of the obtained results.

2 Objectives and Methodology

2.1 Objectives

The bachelor thesis' objective is to analyse the impact of COVID-19 on Kazakhstan's economy. The thesis describes the economic situation in the country in the periods before and after the coronavirus pandemic. The economic situation and its development will be assessed mainly by using economic indicators - for instance unemployment rate, interest rates, change in gross domestic product (GDP), personal income and wages rate, etc. The thesis conducts a comparative analysis between them in order to identify the sectors of the economy affected by COVID-19 and the causes of the downturn.

2.2 Methodology

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The theoretical part will detail the economic concepts and definitions. It will describe the economic sectors and indicators of Kazakhstan. The following methods: synthesis, analysis, and statistics will be used here.

The practical part will provide a comparative analysis of selected economic sectors of Kazakhstan before and after COVID-19 pandemic. Also, using academic articles and reports, it will identify the main causes of the economic downturn. The practical part will be based mainly on statistics, quantitative data collection, and comparison.

3 Literature Review

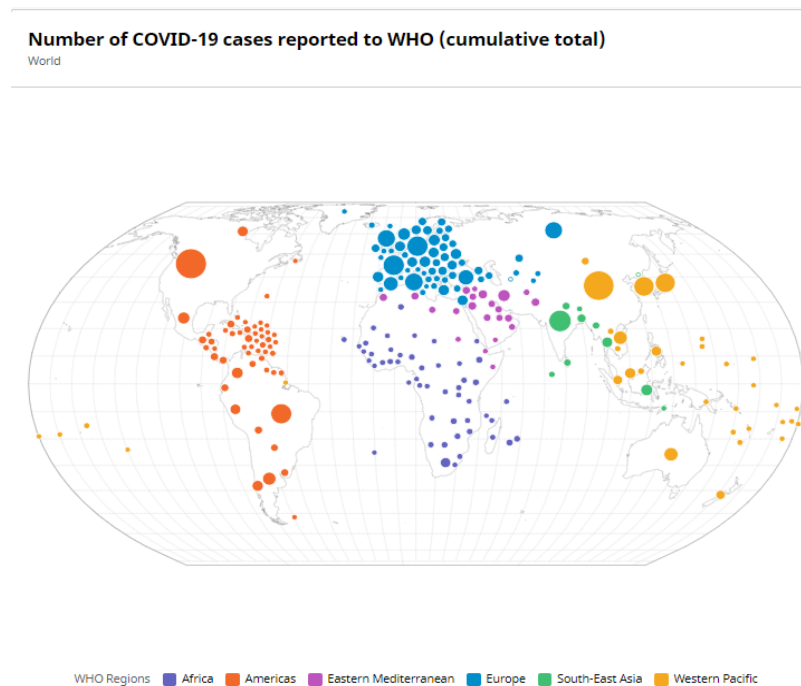
3.1 The COVID-19 Pandemic

«Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. » (Organization, Coronavirus disease (COVID-19), 2024) The first reported case of the disease occurred in Wuhan City, Huabei Province, China in December 2019. Soon after it, the fact that the disease is highly transmissible by airborne droplets became known, which in turn meant that it was only a matter of time before the virus spread further. (Organization, Coronavirus disease (COVID-19), 2024)

Two and a half months after the first case, millions of infections and thousands of deaths have already been recorded. On 12 March 2020, the World Health Organisation declared COVID-19 a worldwide pandemic. (Marco Ciotti, 2020)

Figure 1 shows the regions to where coronavirus infection has reached.

Figure 1 Number of COVID-19 cases reported to WHO



Source: (Organization, WHO COVID-19 dashboard, 2024)

It is seen that the pandemic has reached every continent and most countries. Knowing that the newly discovered virus is potentially dangerous for citizens, countries around the world started closing their borders to prevent further spread of the infection.

The first country that took measures to contain the coronavirus was China, but the infection «succeeded» to spread beyond its borders, which subsequently led most countries in the world to take protective/containment measures as well. These measures included:

- Closure of state borders - prohibition of entry and exit to the territory of the countries that have adopted these measures.
- Restrictions on movement - prohibition on mass events, restrictions on the work of many businesses and institutions.
- Social distance - recommendations on minimum social distance, on proper wearing of medical masks and respirators have been regularly updated and are still being updated by the World Health Organisation.

The global pandemic caused not only the loss of 7 million people, but also contributed to the introduction of the above-mentioned measures, which caused significant damage to the world economy and trade, as these measures were not only unexpected for the average person, but also implied a non-standard way of doing things and a complete revision of one's daily life. (Burdorf A, 2020) Thereby, the COVID-19 pandemic caused a shock to the world economy and led to the largest global economic crisis in more than a century. (Bank, The economic impacts of the COVID-19 crisis, 2024)

3.2 Macroeconomic indicators

In order to analyse the behaviour of a country's economy, macroeconomic indicators will be used. The absolute majority of countries all over the world operate macroeconomic indicators, as they are considered to be reliable to track the behaviour of economic development and are used when it comes to the economic condition of different countries. (Văduva, 2010) However, they can have limitations and a single indicator, even an important one, may not provide the full picture of the economic well-being.

Therefore, in order to ensure the reliability of the results, several macroeconomic indicators will be used:

- 1) Inflation
- 2) Gross domestic product
- 3) Unemployment rate
- 4) Export / Import
- 5) Interest rates
- 6) Personal income

3.3 Inflation

Inflation is one of the most important variables taken into account when analysing the behaviour of the whole world's economy or a particular's country. It has a long-term effect and represents an increase in the price level of a good or service. If the price level of a good or service falls, it is called deflation. In other words, over time the same amount of money can buy less goods and services than before. As many studies and the experience of economists show, the purchasing power of money on graphs is never a horizontal straight line. In other words, the purchasing power of a certain amount of money is constantly changing, which means that at different points in time the same amount of money can buy different amounts of goods or services. (Muhammad Ali Musarat, 2021) Therefore, analysing price changes (inflation rate) is very important when considering the economic situation of a country.

Inflation is usually calculated using the following formula:

$$\text{Inflation} = \frac{\text{Current CPI} - \text{Prior CPI}}{\text{Prior CPI}} \times 100, \text{ (1)}, \text{ (Fernando, 2024)}$$

Current CPI is the current Consumer Price Index.

Prior CPI is the Consumer Price Index of the base year (if we consider the inflation rate for the last year, we substitute it by the CPI of the previous year).

As it is seen, the Consumer Price Index is used to calculate the inflation rate. CPI is the main indicator used to assess the inflation rate, as it most accurately describes the levels of price changes for a basket of consumer goods and services that are regularly purchased by households or just an average person. When calculating the CPI, data on the prices of consumer items are collected, and then these items are weighted according to their importance in the consumer basket. The CPI includes the most complete picture of price

changes, as it takes into account food, transport services, medical services, accommodation, and other basic items. The CPI is the most convenient to use, as in most countries it is calculated and published regularly.

CPI calculation formula:

$$CPI = \frac{\text{Value of basket in current year}}{\text{Value of basket in prior year}} \times 100, (2), (\text{Fernando, 2024})$$

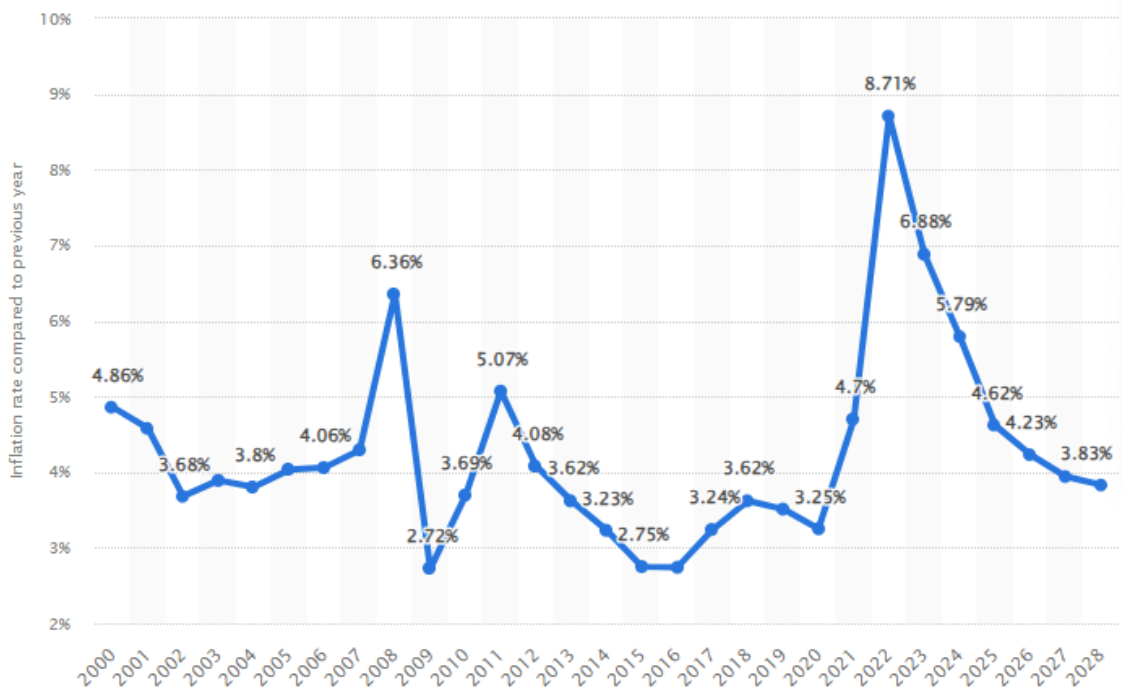
Changes in the inflation rate can indicate different processes that have occurred or are occurring in the economy, here are the most common causes of inflation growth:

- Increase in demand - when demand exceeds supply, producers of demanded good and/or may increase prices, which leads to a decrease in the purchasing power of money.
- Increased costs of production - rising prices of labour, raw materials, equipment, and other pricing factors, can increase the price for the final product.
- External factors - rising prices of imported goods (which in turn can be caused by factors such as changes in the exchange rate or changes in international housing prices) can also lead to higher inflation. (Fernando, 2024)

Let's take a look at the global inflation rate in recent years (the desired period is 2018-2022).

Data taken from the official website Statista.com

Figure 2 Inflation rate



Source: (Statista, 2024)

“Despite the economic impact of the coronavirus pandemic, the global inflation rate fell to 3.25 percent in the pandemic's first year, before rising to 4.7 percent in 2021. This increase came as the impact of supply chain delays began to take more of an effect on consumer prices, before the Russia-Ukraine war exacerbated this further.” (O'Neill, 2024)

The graph above shows that the inflation rate decreased in the first year of the pandemic. This decrease most likely occurs due to the following factors:

- Decrease in demand for goods and services
- Falling of oil prices
- Reduced costs for transport and tourism
- Economic stimulation and support measures – many governments have introduced population support measures, including unemployment payments, business subsidies and other support measures that could help to reduce pressure on prices and curb the widespread decline in demand.

3.4 Gross Domestic Product

Gross Domestic Product (GDP) is one of the main macroeconomic indicators used to track the dynamics of a country's economic growth. (Cross, 2016) It shows the total (summed) value of all services and goods produced within a country for a given period of time (most often a year or a quarter). For example: manufacturers' shipments, farmers' harvests, retail sales, construction spending. In essence, GDP narrows down the vastness of the national economy to a single value. (GERTNER, 2010)

It is important to realise that there are different ways of measuring GDP: Nominal GDP, Real GDP, GDP per capita, Gross National Product (GNP). They all indicate slightly different things and will help to analyse the economic situation of a country (Kazakhstan) from different angles. More about each of them below.

3.4.1 Nominal GDP

Nominal GDP shows the total value of goods produced and services rendered relative to current market prices. (OECD, Nominal GDP forecast, 2024) Thus, nominal GDP does not take into consideration inflation, which means that it will reflect the real situation in the economy only in small time intervals (for example, in quarters during the year).

To calculate the nominal GDP of a country, the following formula is often used (expenditure method):

Nominal GDP = $C + I + G + (X - M)$, (3), (Institute, 2024), in which:

C – Consumption (Consumer Spending) is the total amount of spending on goods and services by all individuals within the same country, over a selected period of time.

I – Business Investment – the amount that has been spent on business improvements and expansions, by all individuals and/or legal entities over the selected time period.

G - Government Spending – the amount of money spent by the government on final goods and services over a selected period of time.

X – the total value of exports of a particular country over a certain period of time.

M (also use the designation "I") - the total imports of a certain country over a certain period of time.

(X – M) - Net Exports - the amount of net exports of a certain country, over a certain period of time. (Institute, 2024)

3.4.2 Real GDP

Real GDP shows the total value of goods and services adjusted for inflation (or deflation) by expressing prices relative to a base year. Thus, real GDP allows us to estimate the real output of the economy. (Blair Fix, 2019)

To calculate the real GDP of a country, the following formula is usually used:

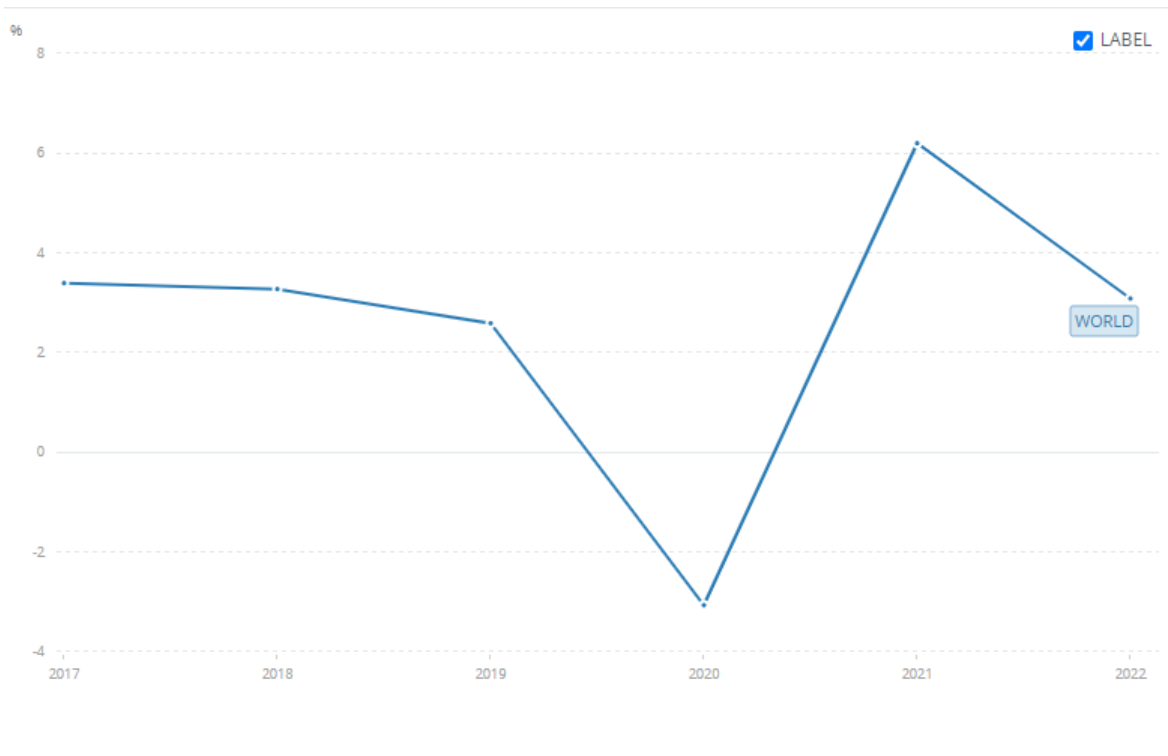
$$Real\ GDP = \frac{Nominal\ GDP}{GDP\ Deflator} \times 100, \text{ (4), (Banton, 2024), where:}$$

Nominal GDP – has already been discussed above

GDP Deflator – This index shows how much price levels in a particular country have changed over a certain period of time. (Banton, 2024)

Below is a graph of global real GDP. The data is taken from the official website of The World Bank.

Figure 3 GDP growth



Source: (Bank, GDP growth (annual %), 2024)

It can be seen that COVID-19 made a huge impact on the world annual GDP, downgrading it from 2,6 per cent to -3,1 per cent. The main reasons for this were the following factors:

- Impact on economic activity - as a result of lockdowns, restrictions on international travel and job cuts, economic activity has declined in many countries, leading to lower GDP.
- Decline in production and trade - many businesses found it difficult to maintain normal production activities due to shortages of labour and raw materials, leading to a decline in production and as a consequence, trade. (Eduardo Levy Yeyati, 2021)

The overall impact of COVID-19 on GDP depends on many factors, and it may vary from country to country and region to region depending on the measures taken to counteract the pandemic. (Eduardo Levy Yeyati, 2021)

It is also worth noting that the governments of various countries took mitigating measures such as unemployment payments, subsidies for businesses, credit incentives and stimulating

consumer demand. The result was not long in coming, with real GDP rising sharply to 6.2 per cent the following year (2021).

3.4.3 GDP per capita

The name speaks for itself, this macroeconomic indicator is used to calculate the average level of economic prosperity of an average person (citizen) of a certain country and is calculated using the following formula:

$$GDP \text{ per capita} = \frac{\text{Total GDP}}{\text{Population}}, \text{ (5), in which}$$

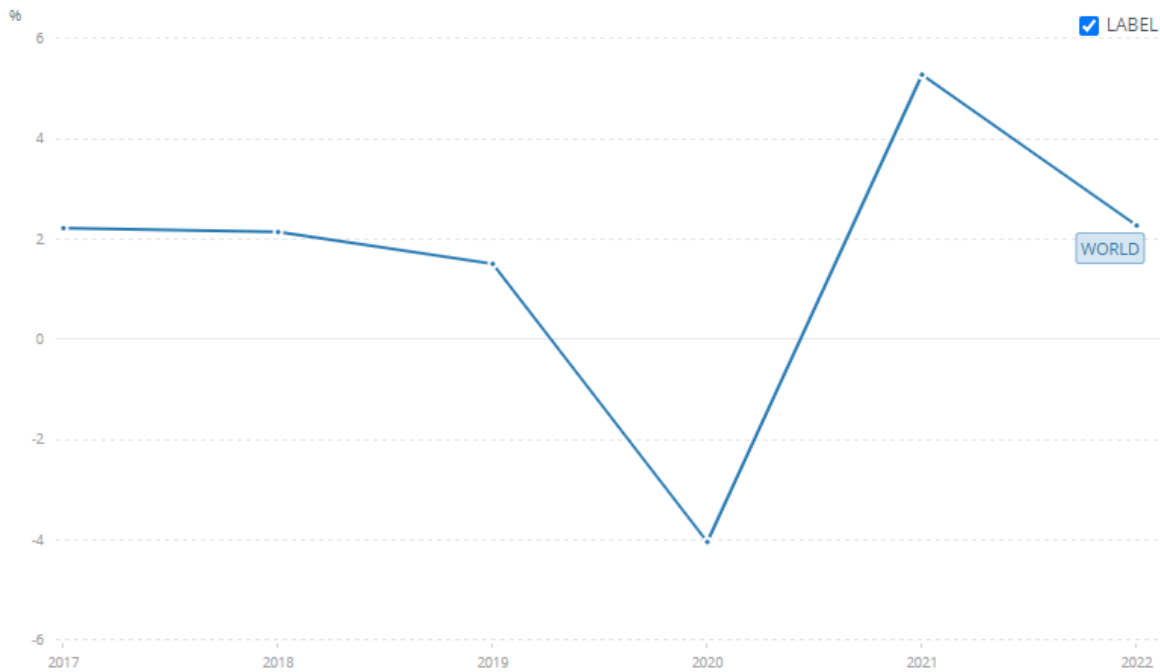
Population - the number of people (citizens) living in the territory of the study area. For example: region, city, country, or the whole world. (Canada, 2024)

Total GDP - this indicator can refer to different types of GDP: both nominal and real. In the case of nominal GDP, GDP per capita will show the average level of economic prosperity (well-being) of a person, in current prices, which directly follows from the definition of nominal GDP.

If real GDP is used in the calculations, the result will be the average level of economic well-being of one person, but taking into account price changes, inflation (or deflation). The use of real GDP in the formula allows comparing the levels of economic well-being of people from different countries, cities, regions and so on. Real GDP indicators are mainly used for calculations.

As it has been shown earlier, the pandemic had a significant impact on real world GDP. Let us see this again by looking at world GDP per capita.

Figure 4 GDP per capita



Source: (Bank, GDP per capita growth (annual %), 2024)

It can be seen that the situation is almost identical (since the real GDP figures are used in calculating GDP per capita) and influenced by the same factors (factors described when considering World Real GDP).

3.4.4 Gross National Product (GNP)

Whereas Gross Domestic Product (GDP) estimates the total value of all goods and services within a country, regardless of whether these services and goods are produced locally or not, Gross National Product (GNP) estimates only the value of transactions made by a particular nation or state, regardless of where they are produced. (Team, Gross National Product, 2024) For example, if a resident of country “A” owns a business or branch in country “B”, then all services/goods produced by this business will not be counted in calculating the GDP of country “A” but will be counted in calculating its GNP.

To calculate the GNP of a state, the following formula is used:

$$GNP = GDP + \text{Factor payments from abroad} - \text{Factor payments to abroad} \text{(6)}$$

(Team, Gross National Product, 2024)

In other words, the GNP of a country is the GDP of the country plus the sum of transactions made by its residents abroad minus the sum of transactions made by foreigners within that country.

3.5 Unemployment rate

The unemployment rate is another important macroeconomic indicator of a country that is often used to compare living standards. However, this indicator is not only used for this purpose, but also suitable for assessing the economic damage caused to a country by the coronavirus. Since an increase in the unemployment rate reduces the total GDP of a country.

The unemployment rate is calculated according to the following formula:

$$\text{Unemployment rate} = \frac{\text{unemployed people}}{\text{labor force}} \times 100, \text{ (7), where:}$$

Unemployed people refers to the number of people who are unemployed during the time period under study but are actively looking for a job.

Labour force is defined as the number of people who have a job plus the number of people who do not have a job but are actively looking for one.

In a result, we get the unemployment rate of the country's population in percentages.

There are different types of unemployment in the market: natural unemployment, which includes frictional and structural unemployment, and seasonal/cyclical unemployment. (G. Kenzhetayeva, 2022)

3.5.1 Frictional Unemployment

Frictional unemployment is unemployment related to the time spent looking for work. It is voluntary unemployment and occurs when people move between jobs or enter the labour market. The movement of workers is an integral part of the economy, as it contributes to the flexibility of the labour market, which in turn helps to achieve the most efficient distribution of the labour force. It is also worth noting that frictional unemployment occurs at all stages of the business cycle and does not affect wages or inflation. (Australia, 2024)

3.5.2 Structural Unemployment

Structural unemployment is a form of involuntary unemployment caused by a mismatch between the qualifications of a potential worker and the skills required for the job. It occurs most often when technological progress (e.g. robotisation) replaces human labour, displacing jobs. Structural unemployment tends to last longer than other types of unemployment. The reason for this is that workers need time to learn new skills or move to another region to find work. (Australia, 2024)

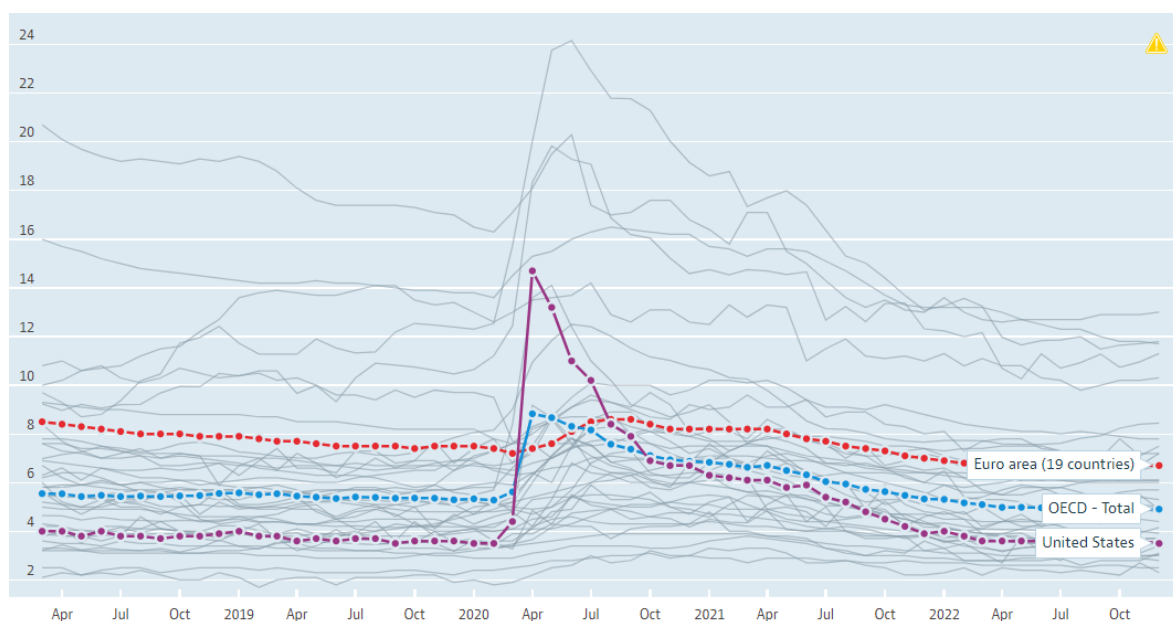
3.5.3 Cyclical Unemployment

Cyclical unemployment is also considered to be involuntary unemployment. It tends to occur during periods of economic downturn in a country. During an economic downturn, the demand for goods decreases, so businesses experiencing weaker demand may offer fewer jobs or lay off employees altogether. (Australia, 2024)

As it can be seen, unemployment can be different and the ability to distinguish its types is very important, as some types of unemployment are natural and do not have a big impact on the country's economy, while others are unforeseen and can lead to long-lasting consequences.

The graph below shows global unemployment rates during the pandemic period.

Figure 5 Unemployment rate



Source: (OECD, Unemployment rate, 2024)

The data is taken from the official source - OECD. The coordinate system is presented, where the Y axis is the % of labour force, and X is the time period from the beginning of 2018 to the end of 2022, divided into months. To examine and more accurately understand the change in unemployment - we took the unemployment rates of the USA, EU countries, as well as the global (world) unemployment rate from OCED, which are represented by graphs of different colours.

Unemployment rates around the world remained at roughly the same level, and then at the end of March 2020, there is an extreme increase of 4-5% globally. This can be attributed to the fact that this time period coincides with the beginning of the period when countries began to take measures to contain the pandemic. Unemployment rates remained at high levels until the end of 2020 but did not fully normalise until the first quarter of 2022. This long-term effect can be explained by the fact that career change is not a short-term process and requires time to find a new job or retrain. It is also worth considering the psychological component, as dismissal or redundancy from a previous job can aggravate the emotional component and lead to apathy or, in some cases, even depression.

3.6 Export / Import

Export is an indicator used to assess the amount of goods and services sold by a country outside its borders. It is also used in analysing the behaviour of the economy, as it reliably reflects its growth rate and shows the competitiveness of the country's economy in the world market. (Team, Net Export, 2024) It should also be noted that exports have a direct impact on a country's GDP.

To calculate a country's net exports, the following formula is used:

Net Exports = Value of exports – Value of imports, (8), (Team, Net Export, 2024)

Value of exports – a collective value expressing the total amount of money received by a country for its goods and services from other countries.

Value of imports – the total amount of money spent by a country on foreign services and goods. (Team, Net Export, 2024)

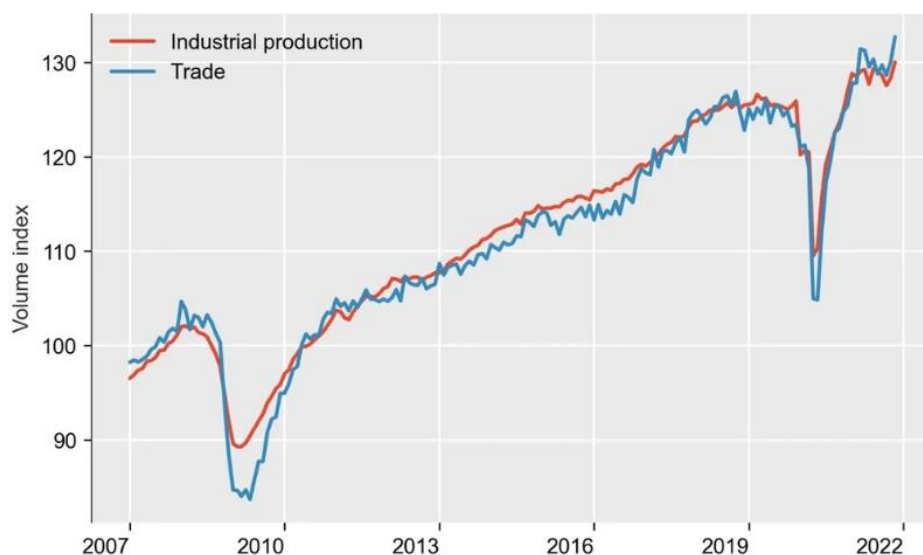
As mentioned above, imports are the total amount of money spent by a country on foreign services and goods. To calculate net imports, the same formula is used as for exports, but with reversed signs.

$Net\ imports = Value\ of\ imports - Value\ of\ exports$, (9), (Team, Net Export, 2024)

Import figures are just as important in assessing the impact of a coronavirus pandemic on a country's economy.

The graph below shows how COVID-19 has affected world export and import figures. In the graph below, world exports and imports are combined into one - "Trade".

Figure 6 Export, Import



Source: ((COVID-19), 2024)

Since the beginning of 2020, COVID-19 has had a huge impact on imports and exports. The import and export trade of all countries has decreased significantly. The reasons for this are the restraining measures taken by countries as well as people's unpreparedness for unexpected changes in supply chains. (Wang & Mo, 2022)

The chart shows that world trade falls sharply in 2020, which corresponds to the first half of the lockdown period. «The changes in the trade structure caused by the COVID-19 pandemic in a single year was of a similar magnitude to changes otherwise typically seen over 4-5 years.» ((COVID-19), 2024) Even by the end of 2021, not all of the losses from the previous

sharp decline had been recovered, leading to significant mismatches between trading partners and products. However, many governments paid subsidies to the hardest-hit industries, provided simplified loans, and granted tax incentives to mitigate the effects of the sharp drop in exports and imports.

3.7 Interest rates

“Interest rate is the amount charged over and above the principal amount by the lender from the borrower.” (Times, 2024) Interest rates provide information on the cost of borrowed capital in the economy, which can serve as an indicator of the current state of a country's economy and the direction of its macroeconomic policy. (Times, 2024) An increase or decrease in the interest rates of the main bank (the main interest rate of a country, which essentially determines the minimum interest rate at which loans will be granted) can be caused by various reasons, the main ones being as follows:

- Inflation. In order to slow inflation, the central bank can set higher interest rates. High interest rates make borrowing more expensive, which restrains spending and thus slows inflation. (Kazbekova L, 2022)
- Unemployment. As it is known, a high level of unemployment is undesirable for a prosperous economy. However, it can cause lower interest rates across the country, which in turn stimulates economic activity, bringing more investment and increasing consumer demand. (G. Kenzhetayeva, 2022)
- Economic growth. Changes in interest rates can indicate an increase or decrease in economic growth. (G. Kenzhetayeva, 2022)

As can be seen, the determination of the interest rate is influenced by various factors that are inextricably linked and dependent on each other. For example, economic growth contributes to an increase in inflation. Therefore, the central bank is responsible for setting the country's main (base) interest rate.

Based on the above information, it can be seen that raising or lowering rates reflects the direction of monetary policy and will therefore help to track the economic "moods" in a country during a pandemic period. (Mr. Natan, 2014)

There is no specific formula used by the central bank to calculate the interest rate, but it takes into account a combination of all the factors mentioned above and even more.

It is worth distinguishing among nominal, real and effective interest rates.

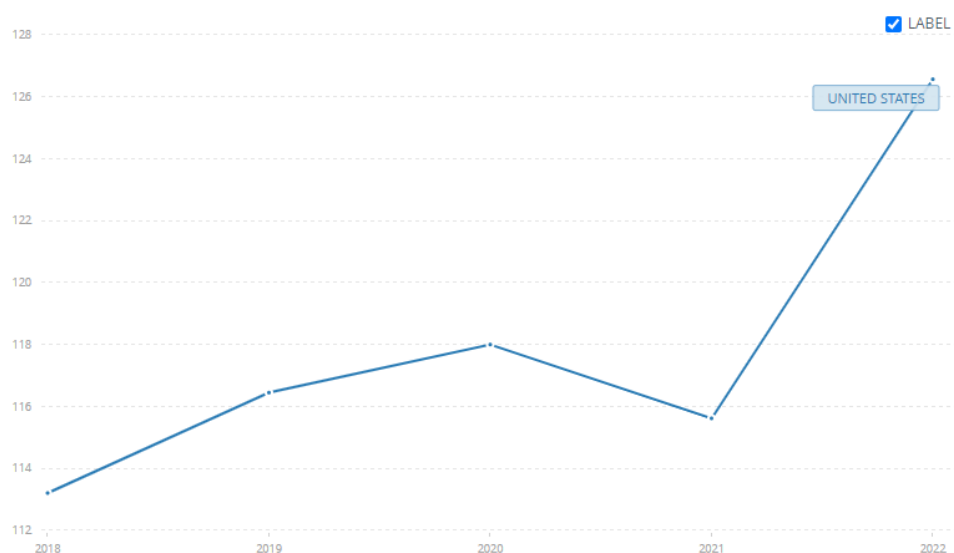
As with GDP, the nominal rate does not take into account inflation, while the real rate takes into account its changes (Kazbekova L, 2022), and is calculated by the following formula:

$$\text{Real interest rate} = \text{Nominal interest rate} - \text{Inflation rate}, \text{ (10)}, \text{ (Kenton, 2024)}$$

The effective interest rate takes into account all additional costs and factors. It represents a more comprehensive cost for the use of capital.

The graph shows the real effective interest rate of the United States (as it was not possible to find relevant information about the whole planet).

Figure 7 Interest rate, USA



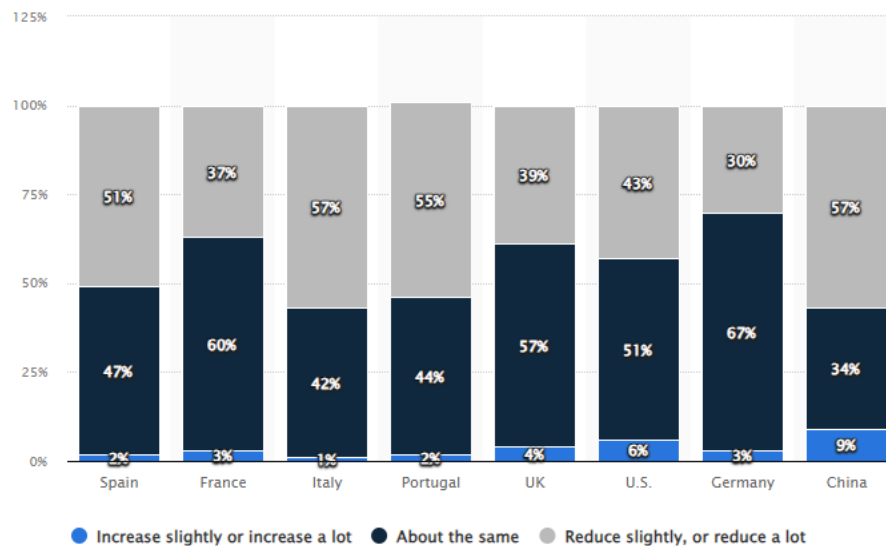
Source: (Bank, Real effective exchange rate index (2010 = 100) - United States, 2024)

It is important to note that the effects of the pandemic quickly manifested themselves in the financial markets. In consideration of all the new measures and the expected downturn in global trade, investors dumped risky assets. Recognising the increased risks of bankruptcy for start-up Micro and Small Enterprises, national banks around the world began to raise interest rates to offset the potential risk. (Lett, 2021) As a result, already by 2022, the real effective interest rate in the US had increased by 11 points, relative to the previous year.

3.8 Personal Income

The use of personal income indicators in assessing the impact of the Coronavirus on the economy can also be useful, as it directly affects demand and consumer spending, and at the same time shows the financial situation of the population. The personal income calculation uses not only wages, but also investments, property rental and other factors to help see the real picture of what is happening. Different indicators can be used to track changes in personal earnings.

Figure 8 Personal income



Source: (Dyvik, 2024)

This bar chart shows most of the leading economies and even here, there is a significant decline in wages for an average of 46% of the whole populations of these countries. The reasons for this are rising unemployment, due to layoffs and job cuts, as well as the problem of new jobs (some workers who lost their previous jobs had to look for new positions in which they were not as competent, which also leads to lower wages). (Jeehoon Han, 2020)

All considered economic indicators will be used to assess the impact of COVID-19 on the economy of Kazakhstan. And now, let's get acquainted with the basic information about Kazakhstan.

3.9 General information about the Republic of Kazakhstan

The Republic of Kazakhstan, a country located in central Asia, ranks 9th in the list of the largest countries and is the largest country in the world without access to the open ocean. Despite its impressive territory (2,724,900 km²), It has only 20 million people, so the population density is not high. (GOV.KZ, 2024) The city of Astana was chosen as the capital of the Republic of Kazakhstan in 1977. The very name of the city "Astana" was chosen for a reason, this word means "capital" in Kazakh, the state language of the country. (консулдығы, 2024)

Figure 9 Map of Kazakhstan



Source: (Sultangaliyeva, 2016)

The figure above shows that Kazakhstan borders 5 countries: Russia to the north and west, China to the east, Kyrgyzstan, Uzbekistan, and Turkmenistan to the south. In addition, the country borders with Russia, Azerbaijan, and Iran through the Caspian Sea. (Sultangaliyeva, 2016)

3.10 Introduction to the economy of Kazakhstan

Kazakhstan has a large number of natural resources. A large number of oil and gas deposits are concentrated in the western regions, which allows the country to be in 9th place in the world in terms of explored reserves of these fossil fuels. Kazakhstan also ranks 8th in coal reserves and 2nd in uranium reserves.

At the same time, Kazakhstan has a large mineral resource base with leading reserves of zinc, borites, silver, lead, chromites, copper, fluorites, molybdenum, and gold with a projected value of tens of trillions of dollars for all deposits.

Due to its area and climate, the agricultural sector of Kazakhstan's economy is also at a high level. In the north, the main grown crops are pezenitsa, barley and millet, while in the south, rice, cotton, and tobacco are cultivated.

With such impressive natural deposits, an agricultural climate suitable for agriculture, and a relatively small population, Kazakhstan has become a major exporter in such sectors as: metallurgy, fuel and energy, mining, and chemical industry, as well as the grain industry. (GOV.KZ, 2024)

It is also worth noting the favourable location of the country on the world map. Kazakhstan is located in the central Eurasia and serves as an important transit corridor for goods between Asia and Europe. Thus, the country's transport system is one of the key pillars of its economy. (Аубакирова, 2020)

Kazakhstan belongs to economically developing countries and ranks 39th among all countries in the Index of Economic Freedom. In terms of economic development, Kazakhstan is relevantly compared to such countries as Russia, Uzbekistan, Kyrgyzstan, Turkmenistan, Ukraine, Tajikistan, and Belarus. Kazakhstan was part of the USSR and was the penultimate country to secede from it, declaring independence on 26 December 1991. (Mattich, 2020) The country is a member of the UN, WTO, CTU, CIS, SCO, Eurasian Economic Union, CSTO, OSCE, OIC and TURKSOY.

Kazakhstan's SMEs are also worth noting. It accounts for approximately 20% of the country's total GDP. During the pandemic, small businesses in Kazakhstan were severely tested. Due to the restrictive measures taken, businesses in the service sector began to close

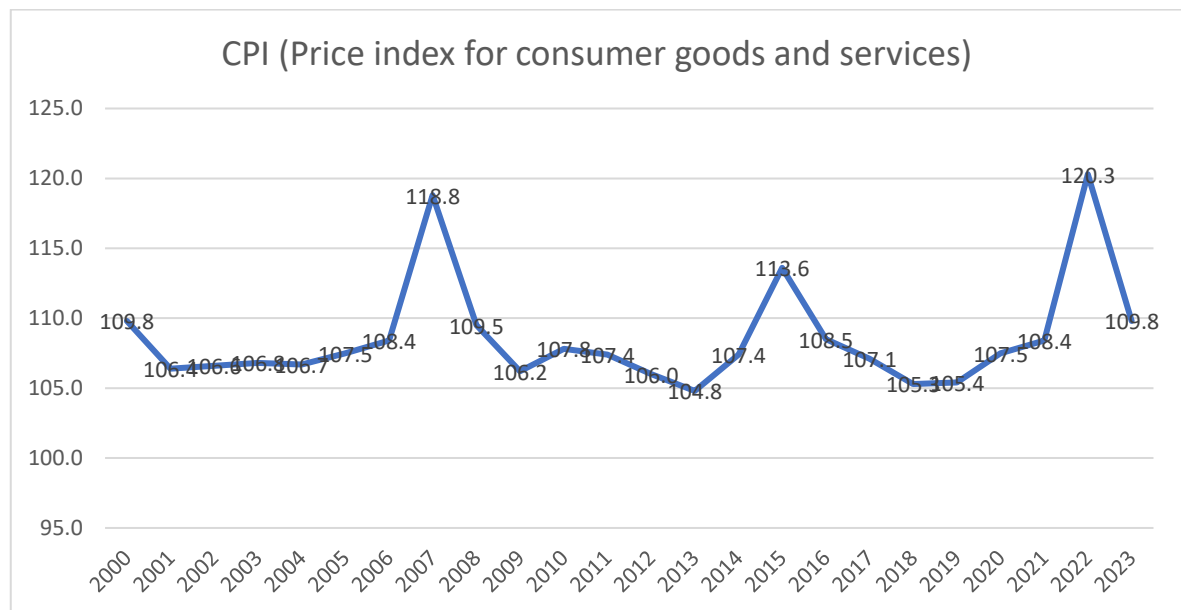
and declare bankruptcy. According to the International Monetary Fund, about 300,000 small and medium-sized enterprises closed in Kazakhstan during the pandemic period.

4 Practical Part

As it was proved earlier, the coronavirus has had a significant impact on the world economy, including key macroeconomic indicators. Now, consider their indicators in Kazakhstan. To assess inflation, one of its most important indicators - Consumer Price Index - will be used.

4.1 Inflation in Kazakhstan

Figure 10 Price index for consumer goods and services



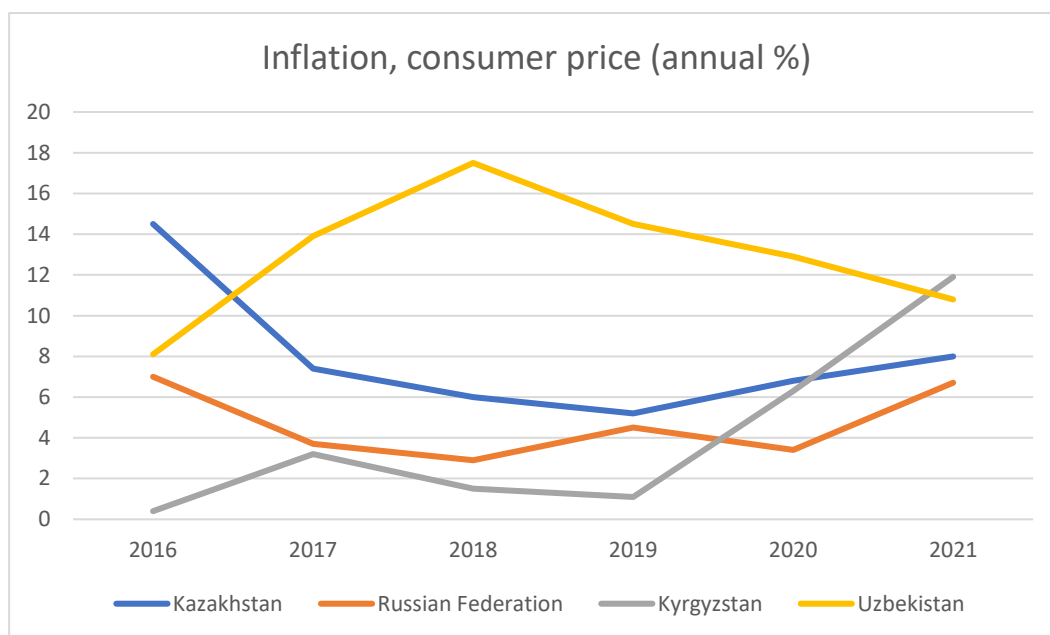
Source: Own processing based on (QAZ STAT, 2024)

Figure 10 shows how the level of CPI in Kazakhstan changed between 2000 and 2023. Starting in 2000, CPI levels remained at roughly the same level until 2006. Immediately after, in 2007, a significant rise of 10,4 per cent relative to 2006 can be seen. The main reason for this was the sharp increase in world market prices for a number of food commodities such as wheat and vegetable oils in August 2007. This affected the production costs and, as a consequence, the prices for bread, flour, sunflower oil, and other basic foodstuffs increased as well. (Kazakhstan N. B., 2007) The second significant rise of 8,8% can be seen in 2013-2015. The main reason for this was the weakening of the national currency (tenge), as well as the beginning of turbulent relations between Ukraine and Russia. During the coronavirus outbreak (2020-2021) CPI rose by 3%, which is relatively small compared to previous rises. This 3% rise can be explained by the temporary suspension of exports and imports of goods, as well as higher prices of imported goods due to more complex and revised supply chains.

Also, the cost of imported goods increased because those importers of Kazakhstan, as well as Kazakhstan itself temporarily suspended production, which caused the cost to rise. However, CPI was much more affected by the outbreak of war in Ukraine and the temporary depreciation of the national currency in 2022. (Florence Ertel, 2023)

The impact of COVID on Kazakhstan's CPI was 2,8-3%, which is not much, relative to other developments since the beginning of the 21st century. In order to better understand the behaviour of inflation, let us compare Kazakhstan's performance with other FSU countries.

Figure 11 Inflation (Consumer prices) - Kazakhstan, Russia, Kyrgyzstan, Uzbekistan

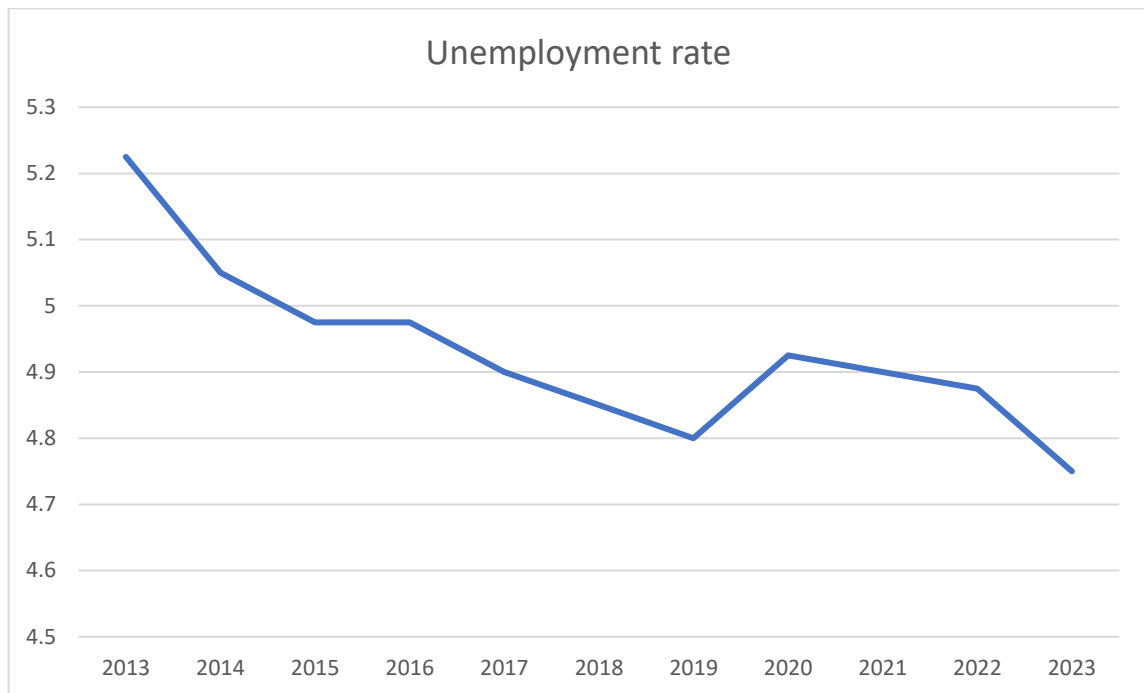


Own processing based on "The World Bank" data

The chart above shows that for the first 2 years of the pandemic (2019-2021), Kazakhstan's inflation rate was 2,8%. While Russia had 2,2%, Kyrgyzstan had 5,2% and Uzbekistan had 3,7%. Although Uzbekistan experienced deflation during this period, the pandemic also had an impact - slowing the deflation rate from 3 to 1,6% in the first year of the pandemic. Overall, the graph shows that Kazakhstan has weathered the effects of the pandemic more easily than Kyrgyzstan and is more on par with Russia.

4.2 Unemployment in Kazakhstan

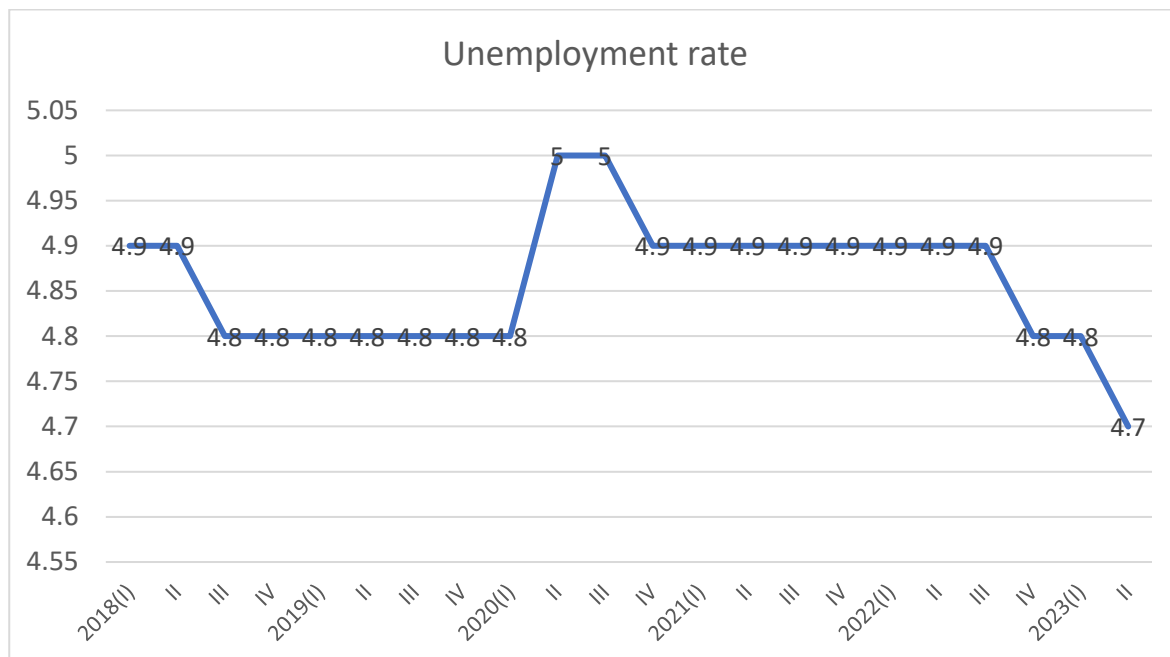
Figure 12 Unemployment rate in Kazakhstan



Authors own processing based on (Kazakhstan N. b., 2023)

The graph shows that the unemployment rate has been steadily decreasing since 2013. From the end of 2019 to the end of 2020, a rise of 0,125% can be seen. The reason for this was primarily due to job cuts from employers and firms. However, immediately after that, the rise stopped and by the end of 2021, the full year totals had already started to decline. This suggests that people who have been laid off/fired are finding new jobs. The reason for such a short-term effect could also be due to government measures, as well as the fact that many employers quickly orientated themselves to the new conditions and adapted to online work and offered jobs to former employees again. (Kazakhstan N. b., 2023) To better understand the rate of increase in the unemployed population, let's look at a quarterly chart of unemployment from early 2018 to mid-2023.

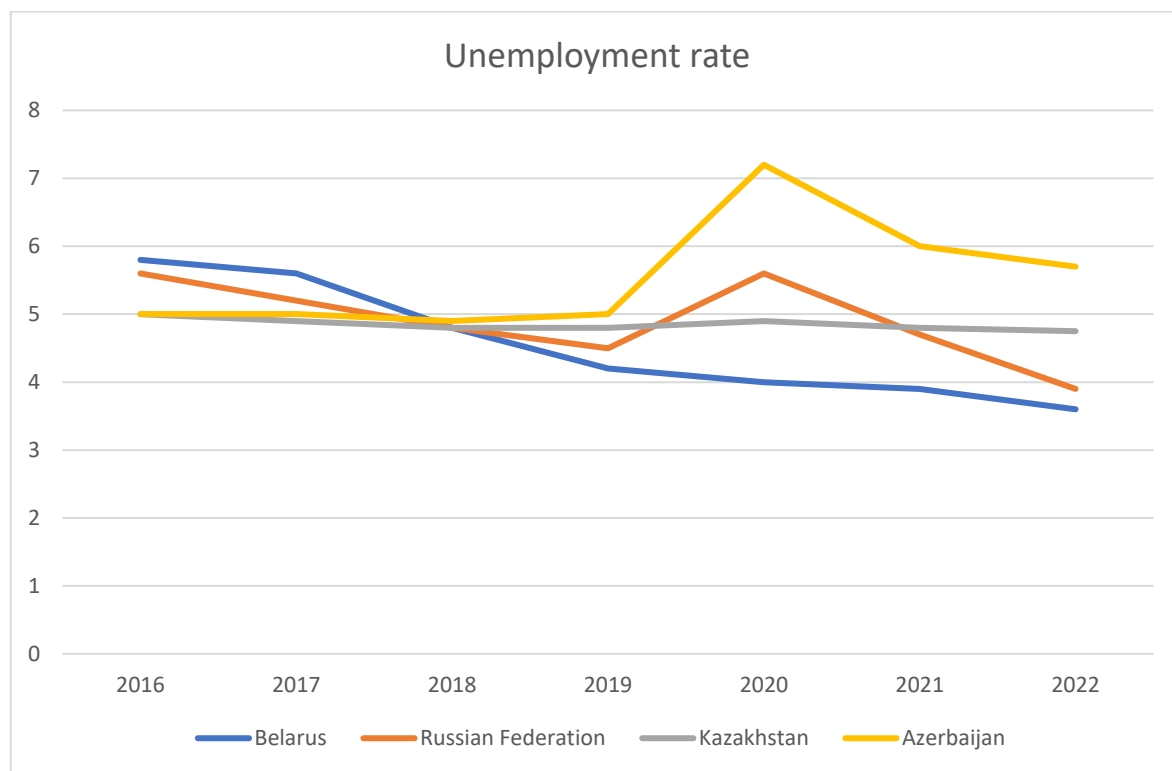
Figure 13 Quarterly unemployment figures of Kazakhstan



Author own processing based on (Kazakhstan N. b., 2023)

From Q3 2018 to Q1 (January, February, and March) 2020, the unemployment rate in Kazakhstan remained at the same level of 4,8% (it can be seen that there is no or almost no seasonal unemployment in Kazakhstan, one of the reasons may be the fact that jobs in Kazakhstan are available all year round, because there is no seasonal influx of tourists and seasonal jobs). By the end of Q2 2020, the unemployment rate had risen by 0,2 per cent. Q2 covers April, May, and June - which corresponds to the start of the global lockdown and follows immediately after the WHO declaration of a global pandemic on 12 March 2020. The rates remained at this level until the end of Q3. This may be due to the fact that changing careers or going online is not a quick process and takes time both to find a new job and to overcome the emotional fallout of losing a previous job. By early 2021, the unemployment rate had dropped to 4,9% and remained at that level for 2 years, after which it began to fall significantly, and performed better than before the pandemic began. In summary, it can be seen that Kazakhstan was able to cope with the unemployment caused by COVID-19, although it took two and a half years. The reason for this was the timely introduction of a state programme called "Дорожная карта занятости". The total cost was 1 trillion 700 billion tenge from a bonded loan (off-budget funds) and 300 billion tenge from the national budget. This anti-crisis programme was aimed at providing employment and preventing an increase in unemployment, creating additional jobs and income, as well as creating conditions for the development of infrastructure in settlements. (Forbes, 2020)

Figure 14 Unemployment rate in Kazakhstan, Russia, Belarus, Azerbaijan

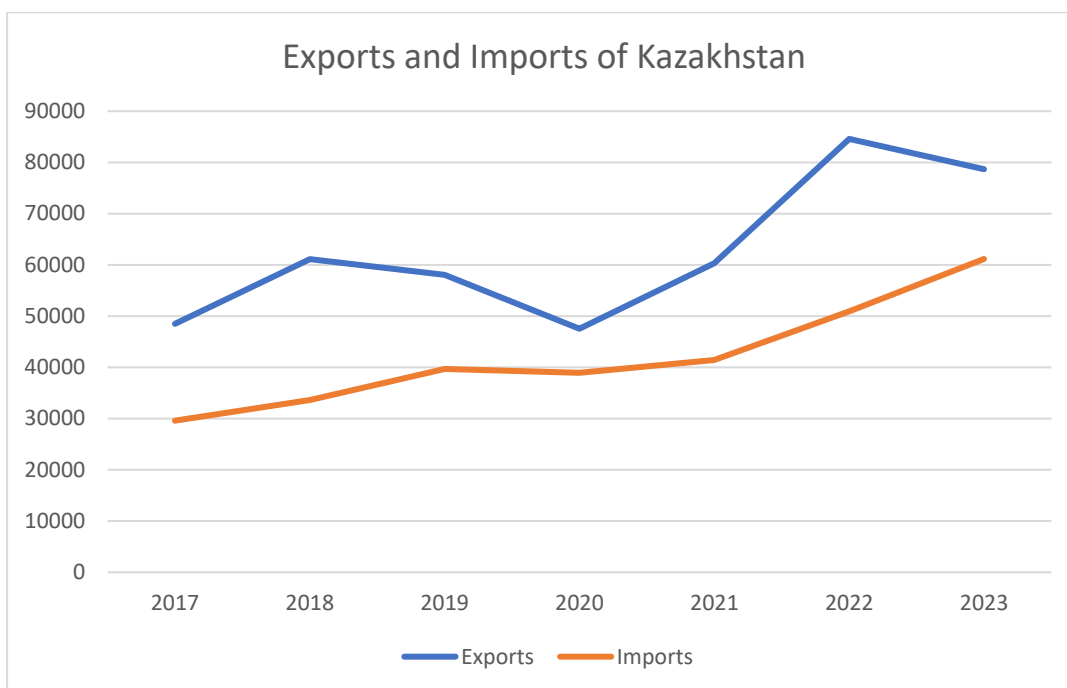


Own processing based on “The World Bank”

Figure 14 shows unemployment rates in some CIS states to compare Kazakhstan's unemployment rates during the pandemic with other countries in the region. By comparing the data, we can say that Kazakhstan's rates remained quite low both before and after the coronavirus. In the year of the pandemic, Kazakhstan's scores rose by only 0,2 points. While Russia and Azerbaijan experienced increases of 1,1 per cent and 2,2 per cent respectively. Kazakhstan's relatively low unemployment rate can be explained by various factors, including the implementation of programmes to stimulate employment growth, and increased public sector employment. Belarus had an easier time with the pandemic (when compared to unemployment), as it also took effective mitigation measures and introduced a moratorium on refunds from foreign companies as soon as the global economic impact of the pandemic became apparent.

4.3 International trade of Kazakhstan

Figure 15 Kazakhstan foreign trade



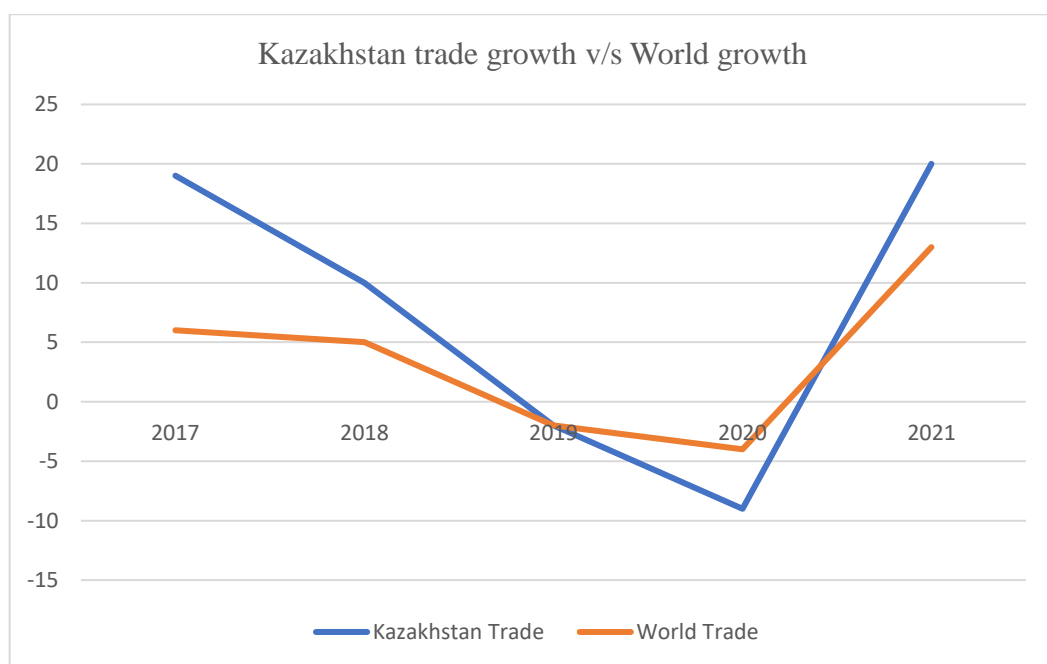
Own processing based on (QAZSTAT, QAZSTAT, 2024)

Figure 15 shows that Kazakhstan's exports and imports were also affected by the global pandemic. Exports fell particularly sharply in the first year of the coronavirus, dropping from 58065,6 million united states dollars in 2019 to 47540,8 in 2020, a decline of 18,13%. Imports, on the other hand, fell less dramatically, by just 1,96%.

The main countries to which Kazakhstan has exported and is exporting its products and services are Italy, China, Russia, the Netherlands, and the Republic of Korea. China is known to be a hotbed of infection and has taken emergency measures to contain the coronavirus, reducing its imports and consequently reducing Kazakhstan's exports to China. Russia eventually also introduced antiviral measures, temporarily suspending most shipments from and to Kazakhstan. However, the revision of supply chain systems did not last long and soon the main volume returned to previous values, which can be seen in the graph, it is also worth noting the fact that both globally and in Kazakhstan in the very first months of the pandemic stopped production of many large firms and enterprises, and this in turn led to a decrease in exports, as the country had nothing to export for some time. (QAZSTAT, Foreign trade turnover of the Republic of Kazakhstan, 2023)

The slight decrease in imports is also due to several factors in combination. The main reason was that due to the temporarily suspended production, Kazakhstan lacked its own products, so although it reduced the volume of imports, it did not reduce it completely. These goods are wheat, flour, millet, various medicines and so on. Also due to suspended production in the countries from which Kazakhstan imported goods, these countries could raise the total cost of goods and services, which led to a slight decrease in the total amount of total imports. Now, compare Kazakhstan's International trade with the average trade indicators in the world.

Figure 16 Kazakhstan trade growth v/s World growth

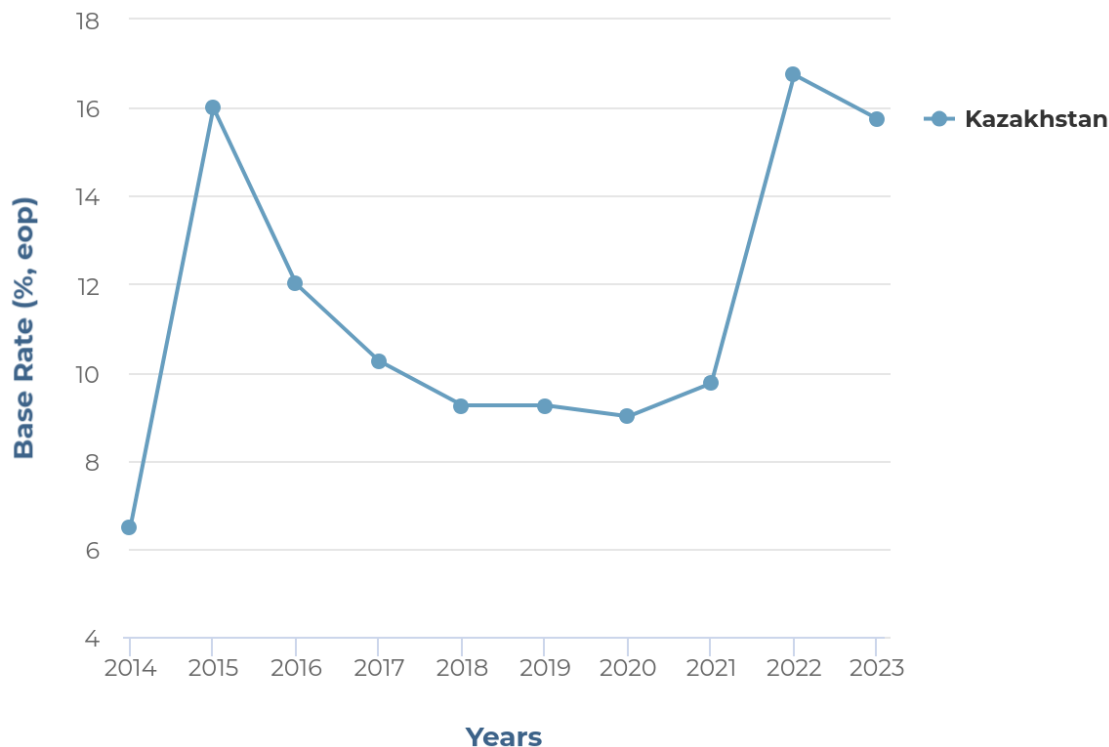


(Trade, 2022)

Kazakhstan's trade in 2020 fell by 6 points relative to 2019, while world trade fell by only 2. This suggests that Kazakhstan experienced a larger decline in trade than the global average. Kazakhstan's GDP figures are in green. Judging from the similar behaviour, taking into account elasticities, we can conclude that exports and imports account for approximately 28,7% of the country's total GDP. (Trade, 2022) This information will later provide a clearer understanding of the behaviour of the GDP of the Republic of Kazakhstan.

4.4 Base interest rate of Kazakhstan

Figure 17 Kazakhstan Base Interest rate

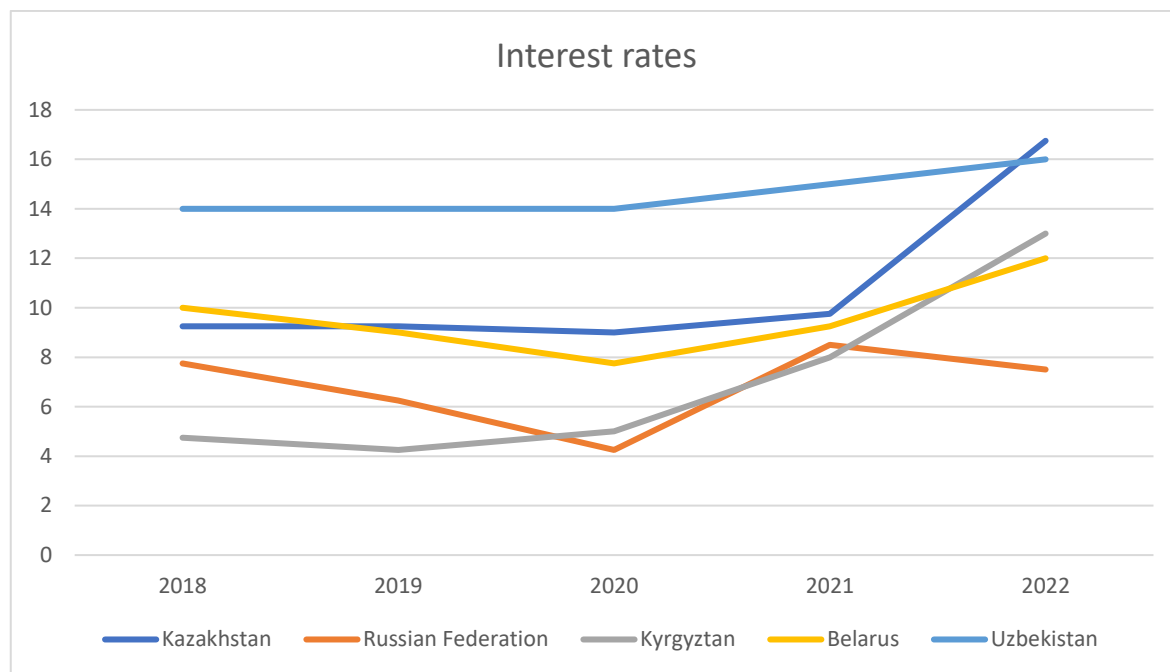


(Economics, 2023)

Figure 17 shows the change in Kazakhstan's base interest rate over recent years. In this graph, the dots indicate the values published at the beginning of these years. During 2014, there was a significant increase in the interest rate. The main factor was the global fall in oil prices, and the National Bank of Kazakhstan responded by raising interest rates to curb inflation and maintain financial stability. In subsequent years, the interest rate decreased as the difficult phase was passed and inflation declined. For 2019, it fell by 0,25 per cent and for 2020, it went up by 0,75 per cent. Kazakhstan had to raise the benchmark interest rate, in order to control inflation. But on the other hand, the interest rate was not raised much to prevent large-scale consequences for small and medium-sized businesses. After all, if the interest rate was too high, the availability of credit for households and businesses would decrease, and this could not be allowed, because small businesses were already closing down and on the verge of bankruptcy due to lockdown and anti-social measures. However, the interest rate was much more affected by the outbreak of hostilities in Ukraine. As previously discussed, inflation increased rapidly during this period, as the Tenge exchange rate is

dependent on the ruble. In order to stabilise the steadily rising inflation, Kazakhstan had to raise the interest rate significantly.

Figure 18 Interest rates of Kazakhstan, Russian Federation, Kyrgyzstan, Belarus, and Uzbekistan



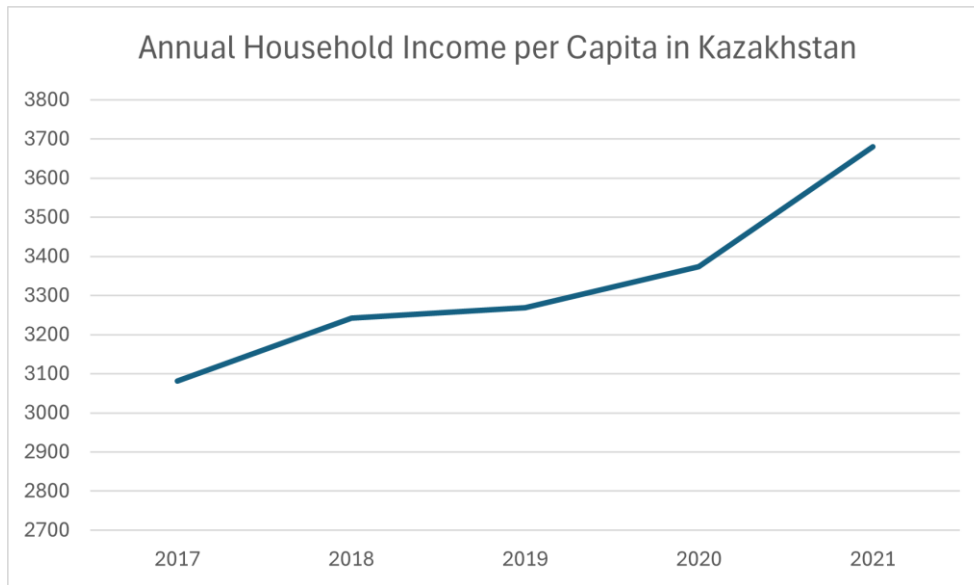
Own processing based on Focus Economics data

The graph shows the base interest rates of such countries as Kazakhstan, Russian Federation, Kyrgyzstan, Belarus, and Uzbekistan. It can be seen that in recent years Kazakhstan has one of the highest interest rates among the countries in its region, with the exception of Uzbekistan. In the first year of the pandemic, the interest rate in Russia increased by 4,2%, in Kyrgyzstan by 3%, in Belarus by 2%, in Uzbekistan by 1%, while in Kazakhstan by 0,75%. Thus, Kazakhstan's rates remained among the most stable of all countries represented. However, it showed the largest increase of 7% in 2022 due to rising inflation.

4.5 Change in personal income in Kazakhstan

Household Income per Capita will be used to calculate personal income. The graph shows the average annual salary for the whole of Kazakhstan in US dollars.

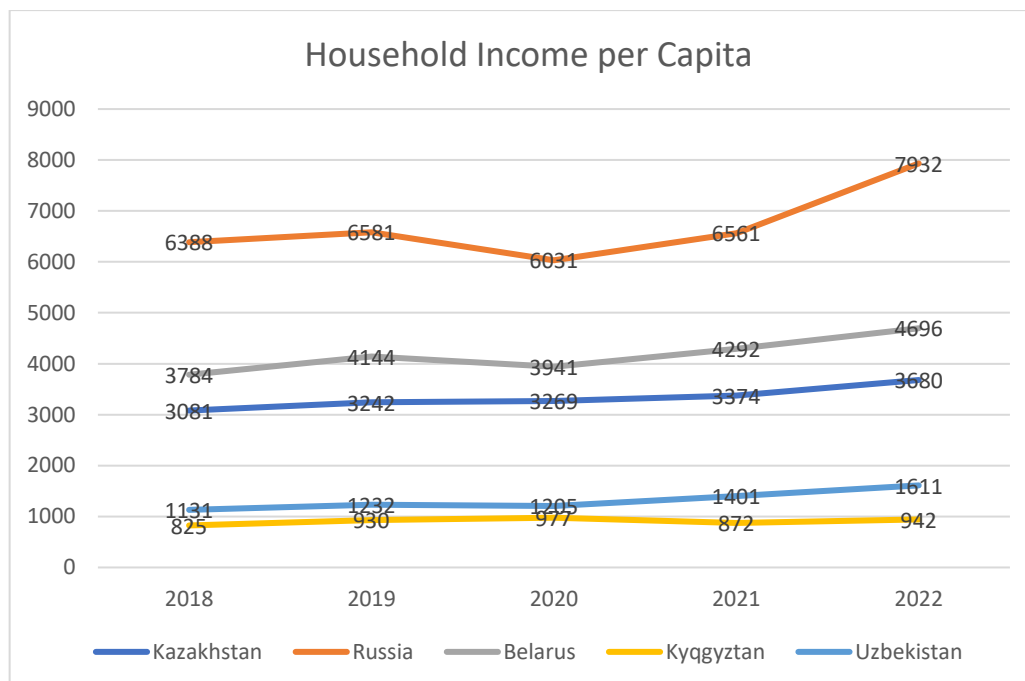
Figure 19 Kazakhstan's Household Income per Capita



(Data, 2022)

As can be seen, there was no drop in average wages, even on the contrary, the average income increased by 3,11%. Kazakhstan is an economically growing country, slowly but surely improving living standards and increasing wages. Although the coronavirus weakened the rate of income growth, it did not stop it. Besides, as it was discussed earlier, the unemployment rate in Kazakhstan increased only by 0,125%, which is relatively small. It is also worth considering that during this period inflation in Kazakhstan was at a fairly low level. The combination of these factors helped Kazakhstan not to lose the average level of wages. However, it should be realised that these are average values and in reality, some Kazakhstani people still felt the impact of the covid on their wages. Let's compare Household Income per Capita of Kazakhstan with other countries.

Figure 20 Household Income per Capita in Kazakhstan, Russia, Belarus, Kyrgyzstan, Uzbekistan



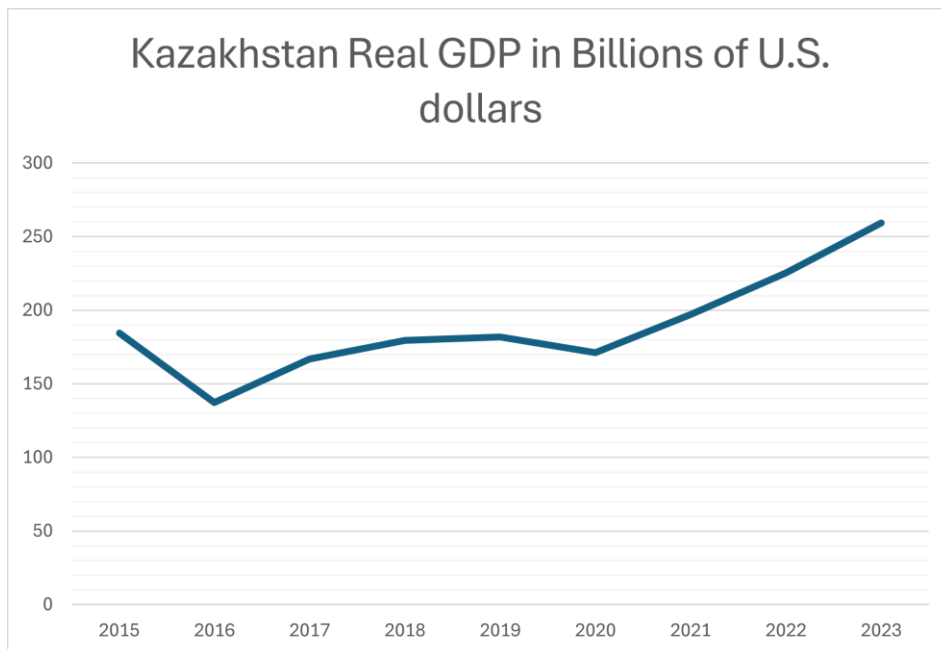
Author own processing based on (CEIC, Household Income per Capita, 2022)

The graph shows that people from different countries experienced different levels of wage reductions, but it is worth considering that the figures may vary due to different levels of unemployment caused by the coronavirus. In the first year of the pandemic, Russia's average income fell by 550 USD, Belarus by 203 USD, and Uzbekistan by 27 USD. While Kazakhstan and Kyrgyzstan saw increases of 27 and 47 USD, respectively. Kazakhstan's wage indicators weathered the global pandemic with dignity and continued to grow at only a slightly weaker pace.

4.6 Gross Domestic Product of Kazakhstan

The graph below shows the real GDP of Kazakhstan from 2015 to 2023. The decline in real GDP by 2016 can be attributed to low oil prices during this time period, and since Kazakhstan is a large exporter of oil, the decline in its value had a strong impact on the overall GDP figure. After 2016, the figures started to increase and reached 181,67 billion U.S. dollars. In the first year of the pandemic, the figures fell by 5,83% to 171,08 billion U.S. dollars. However, by the end of 2021, GDP started to rise again.

Figure 21 Kazakhstan Real GDP



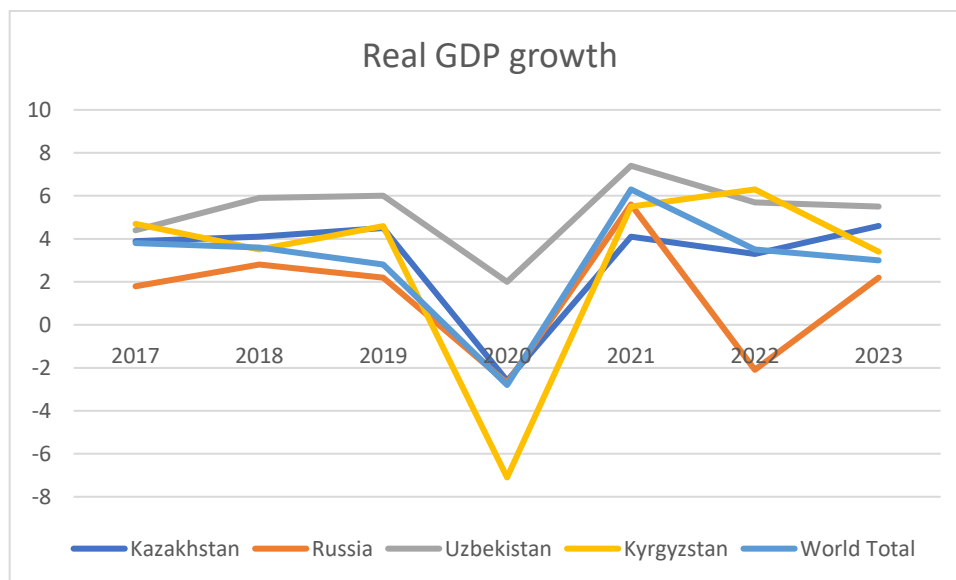
(Fund, GDP of Kazakhstan current prices, 2023)

The fall of Kazakhstan's GDP in the first year of the pandemic has many reasons. First of all, due to the closure of many enterprises and firms, the total volume of goods and services produced in the country has fallen dramatically, as well as the demand for them. The increase in unemployment also means a decrease in the quantity of goods produced. Also, due to the imposed restrictions on movement around the world (ban on travelling abroad, restrictions on movement within the city), oil suddenly became abundant, which led to an inevitable fall in its prices, which could also reduce the total annual GDP of the country, as Kazakhstan is a major exporter of oil. In addition, lower demand in the international market and disruptions in global supply chains, as discussed earlier, reduced Kazakhstan's export volumes, which also affected GDP.

However, the government of Kazakhstan has quite fairly effective measures to combat the crisis and stimulate the economy. These measures included financial support for businesses, subsidies, and benefits to the population, as well as the country's base interest rate increased slightly, making loans more affordable and easing the situation for small businesses. Also, don't forget that temporary unemployment went down, as people found new jobs over time. All this really helped the country to avoid large-scale consequences, and as a result, by the

end of 2021, the real GDP of Kazakhstan, again continued to grow and grew by 13.21%. Now, let's compare Real GDP growth of Kazakhstan with other neighbouring countries.

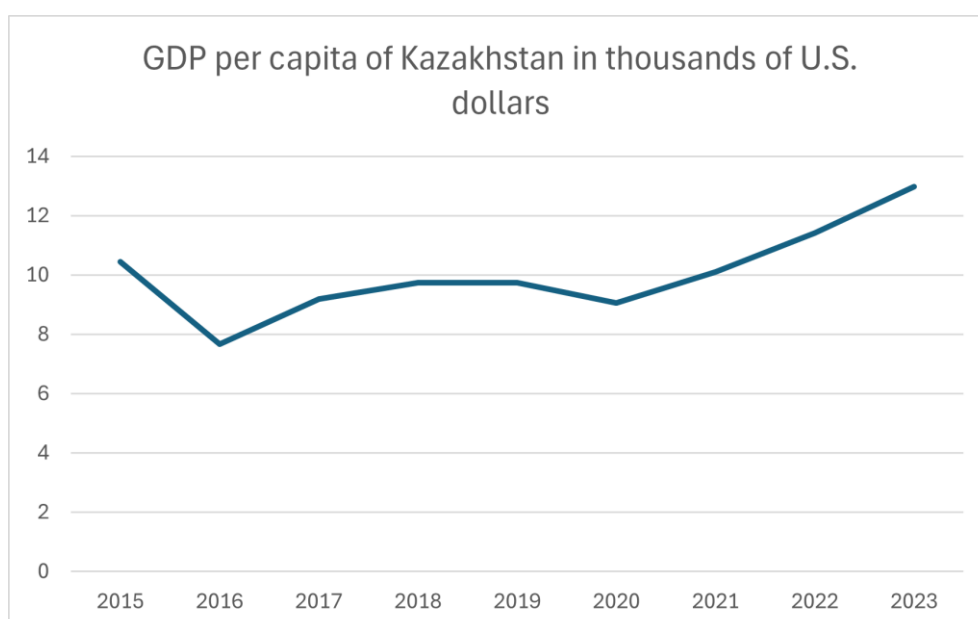
Figure 22 Annual percent change of GDP - comparison



Author own processing based on International Monetary Fund data

Figure 22 shows the Annual percent change in GDP of Kazakhstan, Russia, Uzbekistan, Kyrgyzstan, and the world as a whole. In the year of the pandemic, the Annual percent decrease in Kazakhstan was 7,1%, in Russia 4,9%, in Uzbekistan 2%, in Kyrgyzstan 11,7%, and 5,6% worldwide on average. Thus, Kyrgyzstan experienced the most significant decline in GDP, with Kazakhstan in 2nd place. Based on the graph, we can conclude that Kazakhstan experienced a stronger decline in GDP than the world average.

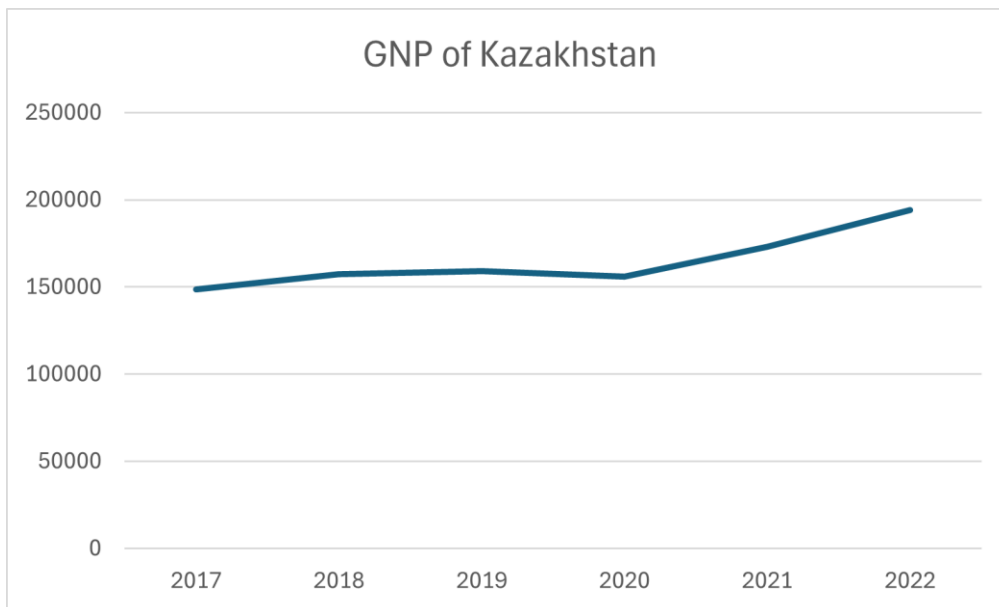
Figure 23 Kazakhstan GDP per capita



(Fund, GDP per capita of Kazakhstan, 2023)

The graph shows GDP per capita for the period from 2015 to 2023. The data were obtained by dividing Total GDP (Real) by the population of Kazakhstan, taking into account the population growth rates over the years presented. Therefore, the GDP Per Capita graph is similar to the previous Real GDP graph. In the first year of the pandemic the indicators decreased by 7,8%. Thus, the amount produced by one average person per year in Kazakhstan fell from 9,75 to 9,06 thousand U.S. dollars. 2021 showed an increase of 10,39%, thus exceeding the pre-pandemic figures and largely offsetting the 2020 decline. In closing, it is useful to review Kazakhstan's GNP.

Figure 24 GNP of Kazakhstan



(CEIC, Kazakhstan Gross National Product (GNP), 2023)

Gross National Product of Kazakhstan is presented in Chart 24. In 2018 and 2019, the figures are almost unchanged, equaling USD 157,278 billion and USD 158,974 billion, respectively. In 2020, the figures dropped to USD 156,009 billion, respectively. Thus, the impact of the pandemic on Kazakhstan's NAV in the first year was less than 0,05 per cent, and afterwards the figures continued to grow at an average annual rate of 10,3 per cent.

5 Results and Discussion

Having studied the relevant literature and analysed some economic indicators of Kazakhstan, we can conclude that COVID-19 had a significant impact on the economic situation in Kazakhstan. The inflation rate in Kazakhstan during the pandemic period increased by 2.8%. First of all, this was facilitated by the introduction of restrictive measures, many enterprises had to be temporarily closed because of which, demand exceeded supply, mainly for such goods as basic foodstuffs and various medical products: masks, respirators, disinfectants. The supply chains that had been in place for years were also disrupted, which caused an increase in the prices of imported goods and services.

The closure of industries and the bankruptcy of many small and medium-sized businesses caused the country's unemployment rate to rise by 0,2 per cent in the first 3 months of the pandemic. The unemployment rate remained at elevated levels until Q3 2022 when it fell below pre-pandemic levels. It is worth noting that the results obtained, as well as the comparative analysis performed, showed that the jump in unemployment due to the coronavirus in Kazakhstan was relatively small and is below the average unemployment rate among countries in its region.

Kazakhstan's international trade also declined in 2020. Exports suffered more severely, falling from 58065,6 million united states dollars in 2019 to 47540,8 in 2020, a drop of 18,13%. As mentioned above, during the first months of the global lockdown, Kazakhstan, like most countries in the world, suspended production of many goods, including exports. This could lead to a decrease in exports of those goods produced in the country. Since no one knew how long the pandemic would last, it would have been imprudent to export the same amount of goods, so many planned shipments were cancelled or postponed. It is also worth noting that one of Kazakhstan's main exporters is China, which is known to be a hotbed of the virus and has imposed some of the most severe restrictive measures, including reducing its imports and, as a consequence, Kazakhstan's exports to it. It should not be forgotten that Kazakhstan is a major exporter of oil, and the fall in oil prices during this period of time has also reduced the total amount of exports.

As for interest rates in the country, they remained at a fairly low level throughout the pandemic, until the outbreak of hostilities in Ukraine. The increase to the benchmark interest rate was only 0,75 per cent, while the average increase among the countries in the region

was 2,19 per cent. Thus, the observed increase in the interest rate in Kazakhstan is relatively small. Kazakhstan had to raise the benchmark interest rate in order to control inflation, but the interest rate was raised modestly in order to prevent large-scale effects on SMEs and to increase the availability of credit.

As for the level of personal income, Household Income per Capita showed an increase of 3,11%. Despite the increase in unemployment, the rate of growth of income of Kazakhstanis, although weakened, but still continued to grow, which is a very good indicator, because the average personal income indicators in neighbouring countries showed negative growth. A big role in this was played by government programmes aimed at reducing unemployment. One such programme was the Employment Roadmap programme, which had an impressive investment of 2 trillion tenge. It was aimed at preventing the unemployment rate from rising, creating additional jobs, and providing income.

In 2020, the annual percentage change in GDP in Kazakhstan was -7,1%. The fall in GDP was influenced by a combination of factors. Mainly, the fall in GDP is due to the introduction of restraining measures, which led to the closure of most industries and an increase in unemployment. In general, the service sector in Kazakhstan was the hardest hit: cafes, restaurants, air travel, rail travel from city to city were all suspended, which led to a decline in the total value of goods and services produced by the country in the first year of COVID-19. Thus, Kazakhstan's GDP showed negative dynamics for the first time since 1991 (the collapse of the USSR) and fell more than the world average.

6 Conclusion

The purpose of the thesis was to analyse the impact of COVID-19 on the economy of Kazakhstan. The pandemic caused clear negative consequences for the economy of not only Kazakhstan, but also the world as a whole, the evidence of this was found in the theoretical part of the thesis. However, it is worth noting the fact that in the past, the country's economic indicators have shown greater variability during periods of global crises. In the case of COVID-19, the studied indicators recovered much faster (however, this cannot be said about inflation, because its indicators changed a lot due to the outbreak of hostilities between Russia and Ukraine in 2022. Therefore, it is difficult to trace the net effect of COVID-19 on inflation).

As for Kazakhstan in particular, restraining, and restrictive measures caused a temporary suspension of production of most products, reducing the country's exports. Also, due to the closure of enterprises, as well as the bankruptcy of many small and medium-sized businesses, there was an increase in unemployment and, as a consequence, a decrease in the country's GDP in the first year of COVID-19. It is worth noting that the indicators of personal income, base interest rate and unemployment rate, although affected, performed better than the average of neighbouring countries. Inflation has also accelerated, but the National Bank's determination of the base interest rate has controlled its growth. Thus, the coronavirus caused a smaller increase in inflation than other events since 2000. Thus, COVID-19 caused a severe downturn in Kazakhstan's economy, which was reflected in every indicator studied. As a consequence, the country's overall GDP performance in 2020 fell more sharply than the global average.

However, the government of Kazakhstan has taken measures to reduce unemployment, create new jobs and provide income. Also, the competent determination of the level of the base interest rate in the country prevented the rapid growth of inflation. At the same time, it allowed to keep it at a fairly low level, as a result of which the affected small and medium-sized businesses had access to low credit rates, which contributed to the recovery of this sector of the economy.

As a result, by 2021, the country's macroeconomic indicators had already stabilised, indicating that Kazakhstan had taken fairly effective measures to address the impact of the global pandemic. The country showed good results in terms of the speed of economic

recovery and coped with the epidemic much better than before. Sources such as The World Bank, CEIC, International Monetary Fund forecast growth in GDP, wages, exports and imports for the coming years.

7 References

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8 Appendix