

Czech University of Life Sciences Prague

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Bachelor Thesis

**Impacts of the economic crisis on regional development in
selected regions of Kazakhstan.**

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Thesis title

Impacts of the economic crisis on regional development in selected regions of Kazakhstan

Objectives of thesis

The main objective of the thesis is to identify and compare the effects of the economic crisis of pandemic COVID-19 on regional development of two selected regions in the Republic of Kazakhstan. Karaganda region and Turkestan region are selected as a subject of study as an urban and rural areas respectively. Partial objective of the research is to conduct a comparative analysis between two aforementioned regions.

Methodology

The theoretical part of the research work will be based on analysis of information resources and available scientific data concerning the topic under study. The practical part of the thesis will be based on the outcome of the theoretical part and will consist of comparative and statistical analysis of obtained data.

Based on the official annual statistical data of Kazakhstan about both regions. The following data will be collected e. g.: average income; unemployment rate; demographical development; socio-cultural development etc.

The research is based on empirical approach as well as quantitative data.

The proposed extent of the thesis

40-50 pages

Keywords

Economic crisis, regional development, COVID-19, urban area, rural area, Kazakhstan.

Recommended information sources

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Declaration

I declare that I have worked on my bachelor thesis titled "Impact of economic crisis on regional development in selected regions 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 _____

Aliya Kenbayeva _____

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I would like to thank my family for supporting me throughout this journey and for all the provided opportunity. Also, I would like to thank my thesis supervisor Ing. Jiří Sálus for his advice and support. I appreciate the time he spent on correcting my work and directing my thoughts back on track.

Impacts of the economic crisis on regional development in selected regions of Kazakhstan

Abstract

The bachelor thesis is focused on analyzing the regional development of Kazakhstan during pandemic which was caused by COVID-19. The author describes the consequences of COVID-19 and what advantages and disadvantages it has possessed globally. Also, the author analyses different empirical research which are based on a qualitative character. Thus, the secondary research demonstrates the effect of COVID-19 on regions and what policies were implemented on a global scale to combat with the COVID-19.

In the empirical part, the author describes the regional development of Kazakhstan and illustrates the regions and their main economic activities which contribute to the national GDP. However, as a comparison, the author is mostly focused on two regions of Kazakhstan: Karaganda region and Turkestan region to analyze the economic effect while COVID-19 and its lockdown as well as the year after that (2021) which show how fast both regions managed to recover based on its economic activity. The author deeply analyzes the following indicators: The registered enterprises, the contribution ratio to the national GDP of Kazakhstan, actively working population, unemployed population and self-employed population, and the time is mainly taken from 3 consequent years 2019, 2020 and 2021. Additionally, the author considers the data of mortality rate, income deviation of each region from an average national income and urbanization rate.

Keywords: Economic crisis, regional development, COVID-19, urban area, rural area, Kazakhstan.

Dopad hospodářské krize na regionální rozvoj ve vybraných regionech Kazachstánu

Abstrakt

Bakalářská práce je zaměřena na analýzu regionálního vývoje Kazachstánu během pandemie, která byla způsobena COVID-19. Autor popisuje důsledky COVID-19 a jaké výhody a nevýhody má globálně. Autor také analyzuje různé empirické výzkumy, které jsou založeny na kvalitativním charakteru. Sekundární výzkum tedy prokazuje vliv COVID-19 na regiony a jaké politiky byly v celosvětovém měřítku zavedeny pro boj s COVID-19.

V empirické části autor popisuje regionální rozvoj Kazachstánu a ilustruje regiony a jejich hlavní ekonomické aktivity, které přispívají k národnímu HDP. Pro srovnání se však autor většinou zaměřuje na dva regiony Kazachstánu: region Karaganda a region Turkestán, aby analyzoval ekonomický efekt COVID-19 a jeho uzamčení a také rok poté (2021), které ukazují, jak rychle oba regiony se podařilo obnovit na základě své ekonomické aktivity. Autor hluboce analyzuje následující ukazatele: Registrované podniky, podíl příspěvku na národním HDP Kazachstánu, aktivně pracující obyvatelstvo, nezaměstnané obyvatelstvo a obyvatelstvo samostatně výdělečně činné, přičemž čas je převážně brán ze 3 po sobě jdoucích let 2019, 2020 a 2021. Dále se autor zabývá údaji o úmrtnosti, příjmové odchylce každého regionu od průměrného národního důchodu a míře urbanizace.

Klíčová slova: Hospodářská krize, regionální rozvoj, COVID-19, městská oblast, venkov, Kazachstán.

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1 Introduction

The recent crisis which happened due to a spread of COVID – 19 diseases, has brought a shocking damage to all states around the globe and unfortunately, Kazakhstan was not an exception. The first case was registered in April 25 and the country has reported 1775 causes of deaths by May 15th. The disease. However, officially, the pandemic has already stopped in Kazakhstan, the virus keeps mutating to new forms such as: Alpha, Beta, Gamma, Delta and Omicron, and unfortunately it has no restraints of mutating, thus threatening the humanity. The World Health Organization recommended to take comprehensive actions to stop the spread of the virus. By implementing those recommendations, the global supply chain has slowed down, which had a spillover effect on employment, state budget, income level and economic development overall.

The pandemic had caused many disruptions in different ways. It has caused a behavior of people and the social aspects. While ongoing pandemic, people tend to avoid public places, involvement in social activities, kept social distancing, work from home, as the health of people became a priority. However, many countries have stopped fighting back against COVID-19 and accepted its appearance in daily life.

Many researchers evaluate the impact of COVID-19 on regional development of a certain state as it is a longstanding issue in the literature of regional analysis and policy. This paper is focused on identifying the relation of COVID-19 and its consequences on two regional developments in Kazakhstan. Additionally, the author is focused on identifying and comparing those two regions. As a case study, the author takes: Karaganda region and Turkestan region. The regional development involves so many aspects as well as the attention of government on a certain region. Thus, it is highly important to dig deeper into those regions to fully understand the economic environment, demographical development, ethnical consistency and etc. The bachelor thesis is divided into two different parts, theoretical part, and practical part.

2 Objectives and Methodology

2.1 Objective

The main objective of the thesis is to identify and compare the effects of the economic crisis due to COVID-19, on regional development of two selected regions in the Republic of Kazakhstan. Karaganda region and Turkestan region are selected as a subject of study as an urban and rural areas respectively. Partial objective of the research is to conduct a comparative analysis between two aforementioned regions.

2.2 Methodology

The theoretical part of the research work will be based on analysis of information resources and available scientific data concerning the topic under study. The practical part of the thesis will be based on the outcome of the theoretical part and will consist of comparative and statistical analysis of obtained data. Based on results of the practical part, final conclusion will be formulated.

Based on the official statistical data of Kazakhstan, the author gathers the main economic determinants for both, regional and urban areas, where the following table will be analyzed:

- Average Income in the selected regions (annual data)
- Unemployment rate of selected regions and its development (annual data)
- Demographical development of selected regions (annual data)
- Cultural Development of selected regions. (Secondary source)

The author plans to compare all the data and see its development over the 20 years (from 2000 up to 2020). The research is based on empirical approach as well as quantitative data.

3 Theoretical Part

In this part, the author is focused on explaining different aspects of crisis, regional development, economic and demographic development etc. This part of the bachelor thesis is based on different research papers, theories of development, magazines, and academic articles.

3.1 The meaning of “Crisis”

The use of the word crisis has recently become very popular and quite frequent. To summarize a certain event for many people, however, there is no precise definition of its content and context. Few people think about what the word "crisis" actually means and then do not hesitate to use it for any situation that is not developing or looking good. If we look in the explanatory dictionary, it will give us the following explanation: "A situation in which the balance between the basic characteristics of the system on the one hand and the attitude of the surrounding environment on the other is significantly disturbed. People also encounter the word crisis in other fields such as history, medicine, literature, and philosophy.

(Bremmer, I., 2022) claims that people come across a label referring to the downward phase of the economic cycle, including general fluctuations in economic activities. Today, it is much more common to refer to this phase of the business cycle with a more modern term, namely recession, or depression due to its scope.

The term crisis rather characterizes sub-areas and sections of the economy, after which it is named, such as the mortgage crisis. Therefore, it does not take the characteristics of the overall economic development but focuses only on a certain part of the given economy. The popular “GFC crisis”^[1] is known as a financial crisis, which is also related to economic matters. Thus, it is quite clear, that crisis has taken its place in economic field (Stillwell, F., 2008). However, financial crisis is a quite broad term, and its definition is not uniform. The global financial crisis can be defined as a significant deterioration of majority financial indicators,

^[1] GFC or Global Financial Crisis of 2008 which happened due to the bursting United States housing bubble.

manifested by insufficient liquidity of the whole financial system, long-lasting insolvency of different institutions, an increase in the volatility of the yield rates of financial instruments, a significant decrease of financial assets and other assets as well. The burst of the bubble, which was caused by speculated real estate market, has left its mark on Europe as well. When EU states managed to ramp-up its economic development in 2006 and 2007, the growth of 2008 has sharply decreased. The unpleasant economic conditions and predictions of financial institutions for the year 2009, have caused a high unemployment rate, economic fluctuations and etc.

The economic fluctuations of any state, when impacted by any type of crisis, has its negative impact on the whole national economy, with all geographical locations, within a certain state. The upward “Tide” or benefits are generated by economic activity which are performed in different locations of a state and yet are unbalanced (Richardson, H.W., 1973). Oppositely, the downward trend of economic activity entails costs which impact the economy of regions across the country (Stillwell, F., 2008). The ups and down of those trends spread benefits and costs in different geographical locations of a certain economy, thus, some locals in urban areas might suffer long-term, whereas rural areas don’t feel any difference.

There are many literatures that have investigated the impact of financial crisis on European countries and regions (De Groot et al., 2011). (Donaldson, L. J., Rutter, P. D., Ellis, B. M., Greaves, F. E. C., Mytton, O. T., Pebody, R. G., Yardley, I. E., 2009) the overall conclusion of those analysis is the variation of sectoral concepts which contributed to the crisis of 2008 and impacted both, country and regional level across countries of EU. Unfortunately, due to lack of the data in some countries, the research hasn’t demonstrated precise impact.

Other scientists investigated the real estate impact and mortgages market crisis on cities and local economy, the crisis of 2008 as mentioned earlier, begun due to real estate market. However, Aalbers (2009) argues that the housing bubble and changes in regulation in financial sector have taken its consequences further, around the globe, where he concludes that, geography is an essential element to which analysis an economic crisis, shows its direction and regional impacts.

Another variable which received a lot of attention by (Martin, 2011) was an unemployment rate, which demonstrated the loss of jobs, within OECD countries due to recession of economy. Mussida and Pastore (2012) analyzed regional unemployment in Italy and concluded that regional unemployment rate is determined by structural change. Fingleton et al (2012) has investigated the regional unemployment in UK, during a period of 1971 – 2010, and provided evidence that different regions tend to reach to recessions absolutely different, some regions might actually benefit from it, and some might have negative consequences.

Patuelli et al (2012) applied a spatial filtering technique to show a geographical distribution of crisis in relation to unemployment shocks. Fortunately, the Republic of Kazakhstan, has received an attention in assessing the impact of financial crisis to its regional development. During the crisis of 2008, the main trading commodity of Kazakhstan has been influenced in a negative way, which is oil and gas. It mainly happened due to, contraction in global demand and overall trade, which eventually effected exports, tourism, and remittances. It mainly affected sectors with a formal employees and self-employed people, which was seen thru manufacturing, construction, transportation, and communication sectors. The informal sector of economy has been also impacted by deterioration of the whole economy which went across, reduced income, value assets reduction, food prices increase, inflation (National Bank of Kazakhstan, 2008) and higher unemployment rate, social discomfort ability, due to adults working long hours in one occupation, which results in excessive stress. These shocks, together with investment outflow, have put much more pressure on government to devalue the national currency (TNG) by 20%, In February 2008. However, the budget reserve, mainly accrued from oil earnings (especially in 2008) were useful to cover the governmental spendings for social pays and assistance (Mikhalev, 2006).

3.2 The meaning of „Pandemic“

The chapter provides an information and history of pandemic and how it affected different economies of states. An epidemic might turn into a pandemic when it spreads over a large area. Last (2001) has described the pandemic as “an epidemic which crosses international boundaries which eventually has got a negative effect on people, undermines the health conditions of society, increases expenditures of government and many more. However, pandemics share the following key points, such as:

- Expansion to another geographical range which is usually announced by WHO, whenever the disease expands to more than two regions of WHO^[2].
- Pandemic imply unanticipated spread between geographical spaces. A disease can be transmitted either directly (person to person) or indirectly (person to vector to person) (Morens et al., 2009), which he calls as “Disease transmission”. However, he also hints on seasonal timeframe, let’s say, its autumn till mid-winter, people are more prone to get a flu (influenza) which are not linked to pandemic, however, also considered to have a negative impact on health.
- Novelty usually assumes that a mutation of a previous disease might actually be described as pandemic (Qiu et al., 2017).
- Severity is also the point, which increases fatality ratio and falls into the pandemic term (et al., 2009).
- Explosiveness and high attack rate. Disease is not classified as the pandemic if it has a low rate of transmission. Qiu et al., (2017) gives an example of the “West Nile virus” which started with a slow transmission and kept of spreading to the Middle East, Russia and Western Hemisphere.

[2] WHO member states are grouped into a total of six regions: the African Region, the Eastern Mediterranean Region, the European Region, The South-East Asia Region, the Western Pacific Region, and the Region of the Americas (WHO, 2010).

- Low immunity level of population. Non – infectious diseases that are well-known and its spreading is based on social movements, such as obesity, are most often known as pandemic, but not transmissible (Qiu et al., 2017).

3.2.1 Pandemic in relation to economics

The pandemic certainly influences the economics of each state, and it is classified into three categories: direct costs, indirect costs and long-term burden. The direct cost impacts the public spending, especially on hospitals, staff and medical equipment in case if a country has a shortage of it. Those costs can be quite significant. For example, Ebola's outbreak in 2015 cost over 6 billion USD (medication, staff and hospitals) (Gostin and Frenk, 2015). The estimation which was concluded by Global Health Risk Framework for the future (GHRF) stated that infections disease outbreaks cost around 60 billion USD, on a global scale, which are allocated directly to the healthcare sector (Maurice, 2016). The lost earnings of those who die is the long-term burdens, which was caused by the disease outbreak. For example, Prager et al (2016) has calculated that 75 % of economy losses in case of a pandemic in the USA, which is linked with a global supply chain, thus, impacting all economies around the world to suffer.

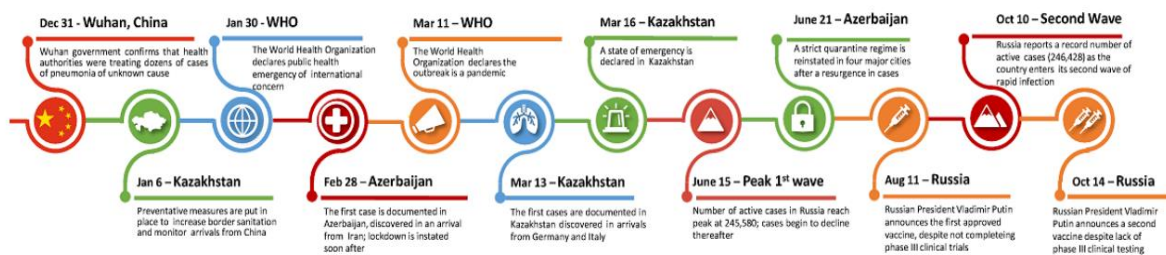
Indirect costs are significant as well, as their consistency, is a major part of GDP, which eventually leads to its decline. For example, the case of SARS – 2003, has caused the decline of GDP in China, by 1 percent and 0.5 % in South Korea (MacKeller, 2007). Whereas, Fun (2003) has also concluded the income decline in the Southeast and East Asia regions, his estimation varied between 12.3 – 27 billion USD. Besides the economic consequences, he also put an attention on consumption decline, lowered production and effect of social behavior, in some countries. The Ebola pandemic has shaken the political instability in West Africa, in 2015, with the cause of public services as education, transport facility and overall reduced the quality of life in society and families, which were pressured to be isolated (Nabarro & Wannous, 2016).

3.2.2 The pandemic due to coronavirus

In this chapter, the author shortly describes the disease of SARS-CoV-2 and touches such relevant topics as: supply and demand shocks which affected the world economy. However, the chapter is also focused on describing the types of policies, which were implemented to tackle the “consequences” of coronavirus around the world.

The virus originated in Mainland China, and it has exponentially spread across Asia to the Middle East, Europe, America, Africa and Australia. It is easily transferred due to its droplets, when an individual speaks or eats, thus, the social – distancing was the main recommendation around the world, at least two meters away from each other, regular hand – washing, with a self – isolation. Even though, all the stated recommendations were implemented, the virus still spreaded from one continent to another, and eventually, it created waves of spreading, where population had to be cautious. The time line of the virus is seen in Figure – 1.

Figure 1: Timeline of the COVID-19 pandemic in Central Asia.



Source: Lori – Ann Post, (2021).

3.2.2.1 Economic Impact

The heaviest impact of COVID-19 which hit the following sectors of transportation, entertainment, retail and tourism. The closure of borders, social distancing, world quarantine and other measures have even made it worst for those sectors. Most of the competitive sport leagues, such as Olympic Games in Tokyo, were canceled for the first time in history.

Even though, the world economy became more digitized and complex, there is still a need of human factor, which needed to be involved directly, in some parts of above-mentioned

sectors. Assylova (2021) claims that *“Nowadays, you can certainly go online, and book a room thru booking.com, however, there is no such thing as self-check-in process, still, there is a human factor, that need to check your personal ID, put it into the system and make sure that your stay is comfortable”*. Based on IMF assumption, the 2020 global growth is estimated at -3,4 percent, a decrease is close to 6 percentage points, which was relatively made in 2019, the economic consequences is even worse than during financial crisis of 2008.

The decline is predicted to be -6.1 percent for the group of advanced economies, considering United States (-5.6 percent), Japan (5.2 percent), United Kingdom (-6.5 percent), Germany (-7 percent), France (-7.2 percent), Italy (-9 percent) and Spain (-8 percent). However, the projection which was made in relation to Emerging Asia^[3], was exceptional, 1 percent growth in 2020. The next paragraphs are concentrated an overview of how the global shocks in supply and demand have affected world’s economy and what policy measures were implemented to overcome these shocks.

3.2.2.2 Supply shocks

The importance of China on the global arena and trade in general, has grown significantly for the past twenty years. The country has been focusing on high – tech components, global commodities, industrial commodities, and an attractive consumer marketplace. Especially, Wuhan, which played an important role in supply chain, where the pandemic started. The essential industries are developed in Wuhan, such as: pharmaceuticals, bioengineering, opto-electronic technology, and modern manufacturing, such as automotive, steel and iron manufacturing. Over 200 organizations, which are listed in Fortune Global firms are presented directly. Further, Wuhan and Hubei province lockdown have stopped the logistics within China. Chinese government has prolonged the Chinese New Year’s holidays and even after the end of the national holidays, only about 70 % of factories have reopened and at sub-optimal capacities (Deloitte, 2020). The supply shock is an influential thing and has its spillover effect on the other nations. According to the Chinese production, it is associated with a major

^[3] According to IMF’s categorization, Emerging Asia consists of the following countries: China, India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam (IMF, 2019)

contradiction of international trade flows. The export of China has dropped by 17 percent in January and February, and at the same time, the countries import has decreased by 4 percent in comparison to the previous year. Such a sharp decline in export of Chinese products and services was unprecedented, even in comparison to the impacts of financial crisis of 2008 and SARS outbreak of 2002-2003. The impact had a severe implication for producers and consumers around the globe. For example, Germany manufacturing and production is heavily dependent on Chinese export, 10 percent of their inputs is originated in China, especially, electronic devices, computing and textile. Further, the decrease of international trade is caused by decline in production and among the countries with a large number of COVID – 19 confirmed diseases, and inefficiency of custom procedures, especially administrative. Some countries have imposed massive restrictions on trade, depending on its regions. The consequences of those decisions aren't positive. Based on the worst-case scenario, the WTO predicts a decline which of -31,6 percent in world merchandise trade, due to the COVID-19 pandemic (Al - Ubaydli 2020) and (WTO, 2020).

Another important factor of COVID-19 pandemic on economy is its burden on a labor group and its supply. Many workers were forced to stay at home with their children, due to closures of school. Those people, who got infected with the disease are not able to work for a longer period of time, due to experiencing different symptoms. A survey which was conducted by (Zhang et al, 2020) In China, have revealed that, 25 percent of labor force stopped working, 38 percent worked from home and 27 percent continued working from the office.

3.2.2.3 Demand shocks

Weder di Mauro (2020) mentioned two aspects that worth distinguishing the demand shocks: practical and psychological. The practical part deals with a consumer behavior, especially their tendency to reduce their risks of contracting the disease and mainly decrease of demand for products and services, which might involve a close contact with others. The psychological demand shock, some people might still act the same as if during the crisis of 2008 – 2009. The uncertainty about future economy has led people and firms to adopt to a new strategy “wait and see”, where each side tended to postpone their purchases and decisions. The behavior started to ingrain into society on a global scale. However, the case of a COVID-19

pandemic, the magnitude of this shock might be even higher. Baldwin Weder di Mauro (2020) suggested that the psychological factor might be undermined unintentionally throughout the world by the international media and personal communication channels.

The biggest negative demand shocks already left its footprints on various sectors such as: hospitality industry, entertainment, and travel industry. The mentioned decrease in those sectors has a spillover effect on other industries, such as, an aviation industry experienced a lower demand and as a result oil prices have drastically dropped down. The aviation industry has experienced a massive loss of 61 billion USD due to coronavirus related, and the cause of jobs endangered is estimated for 25 billion USD (Al-Ubaydli, 2020).

3.2.3 Policy measures

All states around the world implement policy measures to limit the health and economic impacts of the COVID-19 pandemic. These measures are implemented among societies, and they try to stop a containment and a spread of the virus by avoiding social gatherings, keeping social distancing measures, school closures, local and national lockdowns, border closures amongst others. The biggest issue in connection to pandemic is extreme pressure it imposes on the national healthcare system and the above-mentioned containment policies aid in slowing the spread of the virus. On the other hand, it relieves a massive pressure from hospitals and other medical group, with its burden.

It is clear to realize how the preventive measures have affected the daily life of people around the world, and economy. A big portion of businesses and organizations have stopped their operation due to governmental restrictions and due to infections, itself. Thus, the government have provided with incentives and dotation to all the organizations, to prevent the massive shot-down of businesses, and freeze the economy, so it will recover faster after pandemic. Specific sectors of economy expect to experience the shock and acute fallout. That's why, it is very important for a government to target fiscal, monetary and financial measures to implement by the policymakers in order to help the most affected business which are directly working with governmental orders, and households to keep them efficient (IMF, 2020b).

3.2.4 Monetary measures

There are two primary objectives of monetary policies, related to the coronavirus pandemic. First, it prevents the liquidation of crisis, where policymakers try to enhance the supply of credit required by businesses because if not, the businesses revenue would sharply decline and might be forced to default on their financial obligations. Secondly, the objective is more related to Keynesian theory, where the stimulation of economy is encouraged by spending on investments and high consumption, which basically means, that even when the economy is at the edge of risk, different agents of economy should spend more money into it (Al – Abaydli, 2020).

Firstly, the commonly adopted policy is to lower an interest rate to almost zero, an effort to encourage borrowings and spendings. For example, United States Federal Reserve has reduced its interest rates by 0.50 percent and 1.75 percent to 1.25 percent at the beginning of March, followed by another reduction to 0.25 percent, two weeks later (Al – Abaydli, 2020).

Monetary policy is considered to be far easier than the fiscal policies and its importance takes the second place in comparison to fiscal policies, in terms of supporting the economy during pandemic (Al – Ubaydli, 2020). Guerrieri et al. (2020) claims that effectiveness of the monetary policy could be lowered down due to the government's ability to increase spending only in some sectors of the economy.

3.2.5 Fiscal Policy

The implementation of fiscal policy by government eventually provides a secure cushion for businesses and households against the coronavirus slow down, saving economic relationship for the post – pandemic era, especially reducing the firm's shut downs. Tax burden, social fees, mortgages, rental payment and other fees have been waived, to reduce an overall burden for owners of enterprises and hence their employees. However, those measures are most likely will not speed-up the economic recovery (Al – Ubaydli, 2020; IMF, 2020b).

There are amounts of fiscal policies which might significantly help the population, when performed properly. To demonstrate the importance of those policies, they will be listed below in sub-chapters:

- Paycheck protection and Health Care Enhancement (practiced in USA), which forgave the loans of small businesses taken from banks and eventually prevents the employment from higher peaks. Small business grants, the USA have granted 67 billion USD to hospitals.
- Economic Aid and Relief and Economy Security (CARES) system which included only one time deduction of tax from individuals, unemployment benefits, 24 billion allocated for a food safety net for the vulnerable sectors. Emergency lending to enterprises to prevent bankruptcy. Transfers to state and local government, 49.9 billion for international assistance (IMF ,2020a).

An effectiveness of fiscal policies would eventually help with stabilization of world economy, however, if implemented properly (Bayer et. al., 2020). For example, the CARES system stabilized the consumption output by 50 percentage, the money was paid out directly to unemployed and quarantined households.

3.3 Classifications of regions and its development

3.3.1 Region and its definition

According to Diderot encyclopedia describes the regions simply by a part of a landscape with some features on it (Diderot's Encyclopaedia, 1997). However, the term region has got many different explanations and meanings. However, (Paasi, A., 2003) insisted on the definition of a region as a certain dynamic process which includes (social, natural, economic, cultural and political matters in one place) which might be affected by spatial structures over time. There are many regions around the scientific meaning and the usage of it should be adequate, especially in science, for a certain purpose or research. With all concluded, the term is exactly what should be memorized when working in the practical/empirical part of this thesis.

3.3.2 Types of regions

A wide range of aspects might actually divide the term regions into several meanings. The aspects such as: economic potentials, local government, administrative division, geographical area or supranationalism^[4]. Since the aim of the thesis is to evaluate the crisis of COVID-19 and its impact on the regional development, it is rather useful to consider the administrative institutions, as it rules the law within a region. However, it is also important to consider that the state is the basic unit of a political region and is the strongest subject of political activities that dictate the relationship of regions around and supranational political regions. There are however, three main types of regions which are divided in the following way:

- Formal region – has got its boundary that everyone agrees upon. Formal recognition is also known as a fact of formal region, usually represented by a nation-state.
- Functional region – is concentrated on a certain area (city) or a local manufacture which employs most of the city and town.
- Perceptual region – is oriented on people's feelings and how they view a certain area around the globe (A. Pike., A. Rodriguez-Pose, & J. Tomaney, 2016).

3.3.3 Regional development

After the WW2, the regional development has been constantly studied by the researchers and economists, however, the spatial aspects rose an interest first, due to economic growth and after this, tons of economic articles, approaches and theories have been created. The principles of those theories differ from each and have its own proposal on the regional development. Individual theories differ not only in its directions but also in definitions of main actors and steps for improvement. Additionally, every theory has got its own regional policy – making. It is important to consider that up to now, there are several directions that a regional development is driven by, and there is not any general accepted paradigm in regards of regional development

^[4] Supranationalism is the idea or practice of separate national governments coming together to form institutions and/or create policies that have authority or jurisdiction over the member nations.

(Kutscherauer, A., 2006). Mc Call depicts the evolution of regional development and claims that in the 1950s, the economic growth was the main aspects of regional development of any state. The performance of such development resulted in the economic indicator of GDP, profit, employment or growth. However, with the time, the idea of regional development has slightly been affected by non – economic indicators. In 21st century, the regional development is affected by human and social aspects, innovation and its dynamics. The brief overview of theories in regards of regional development is mentioned in Table – 1.

Table 1: Stages of regional development and theories

Main Approach	Theories of regional development	Policies suggested
Neoclassic (1920–1940)	Convergence theory (neoclassical models)	Tools increasing the mobility of workers.
Liberal (1950 – 1975)	Divergence theories (theory of cumulative causation, growth poles theory)	Tools supporting public and private investments in complex regions
Neo – Marxist (1970 – 1985)	Divergence theory (unequal exchange theory)	Some countries have achieved success with Neo – Marxism, (Czechoslovakia), however, it endangered the economic activity and competitiveness of the country.
Neoliberal (1975 -)	Both convergence and divergence theory (theory of new growth)	Supporting local initiatives, SMEs, decentralization of competencies.
Institutional (1980 -)	Divergence theory (theory of industrial districts, learning regions).	Cooperation and innovation, supporting the SMEs, networking, PhD development of local institutions based on learning and sharing experience.

Source: (A. Pike., A. Rodriguez-Pose, & J. Tomaney, 2016).

3.4 Effect of Covid-19 on regions and regional development

In this chapter, the author is more focused on the side effect of COVID-19 on regions and regional development and comparison of rural and urban areas. Eventually, the chapter will help to distinguish the effect on selected regions of Kazakhstan Republic.

The spread of the virus massively begun to capture small and big cities, regions, and states and due to that, many economies have implemented the social distancing, which was mentioned above, however, not the case for those people who work on factories and heavy engineering sectors, who should have been working on their positions, and an option of WFH, was not an option. It obviously led to an idea of lowering the demand for small cafes, hospitality businesses, transportation etc. Better high-speed internet coverage has done the thing of helping big cities and regions to shift to an online work, education and even grocery shopping, however, in some parts of the globe, where infrastructure is not well developed, it left a painful mark on the above-mentioned sectors. Cities with a little access to the digital infrastructure, have not been able to substitute the virtual for physical contacts, which led to more infections and overall spread of the virus. Based on the study of (Farrell et. al., 2020) he assumed that rural areas, with a lower density rate, would probably experience a lower risk transmission and controversially.

As per his study, the urban areas which with a densely population experienced the hardest hit, such as (USA, France, Germany) particularly, in August 2020. More overly, these urban areas were mostly populated by elderly people, which effected the death mortality, as these types of people were more vulnerable to it. Unfortunately, rural hospitals were not able to handle the patient flow and help everyone, due to lack of specialists and technology capacity, In Kazakhstan for example, intensive care unit (ICU) beds per capita) OECD (2020).

However, some big cities, managed to bring the initial outbreak of Covid-19 under control with a low level of incidents, infections and deaths. For example, Australia, Japan and South Korea, drastically prevented the spread of the virus down, such cities Seoul, Sydney and Tokyo have emphasized the anticipation level and preparedness of those state. Hance, a density itself doesn't seem to be as a determining factor, especially the reaction of strong policy (Hamidi and Sabouri and Ewing, 2020).

However, in some rural areas the production level has actually increased due to decline in luxury goods. Rural areas which were specialized in agriculture and food processing have boosted its production and sales:

- Lee diversified economy.
- A large share of workers in essential sectors of economy (Agriculture, food processing).
- Lower incomes and lower savings have kept people in their working positions/occupations, and less visiting the hospitals, especially whilst main peaks of Covid-19.
- Supply chain has immensely affected the rural businesses, especially food market for rural food business.

Basically, there are other impacts of COVID-19, besides economic, such as **social** and **environmental**. Whereas **social impact** has compounded with existing socio – economic vulnerabilities and disproportionality affected vulnerable population. The workers, with a low paycheck, have probably fewer savings and less likely to be able to telework, were drastically hit by social distancing. Based on OECD (2021) homeless people estimated to be 1.9 million across OECD countries, who barely get-by and don't have any means of protecting themselves from the disease. For elderly people, who usually receive the support from their family members, friends, Covid-19 restrictions has impacted on the level of loneliness and other psychological impacts and additionally higher risk of complication in case of disease. In Bristol (UK) the covid crisis have exacerbated dynamics of social-economic inequalities. The study of BSWN^[5], provided support for Black, Asian and Minority group ethics (BAME) businesses, communities and organizations, through advice and monitoring the crisis impact. The survey demonstrated the sectors of food industry, retailers, cultural events, taxi drivers and other low – income sectors jobs, including self-employed people, was the hardest hit overall.

Environmental impact was the positive impact on the global scale, as the CO₂ emission fall down by 8 % in 2020, based on International Energy Agency. Based on the report, New-York City (US) has seen a reduction of 38 % of CO₂, in comparison to pre – pandemic level.

^[5] Bristol – Based Black Southwest Network (BSWN)

Basically, the emission was reduced due to less transportation mobility (cars, motorcycles) by 87 %. Pollution level has drastically decreased in favor of nature. The city of Madrid (Spain) registered a 14 % decrease in hour traffic congestion in major cities. Eventually, the (OECD, 2021) report for Agricultural business showed the quality increase in production of potatoes, tomatoes, and lemon, due to fewer containment of fertile soil.

4 Practical Part

4.1 Overview of Kazakhstan

The chapter is focused on explaining a short overview and background of Kazakhstan and its main economic determinants such as (population, GDP per capita, size of territory, import and export) As a comparison, the author took the data from 2000 to 2021.

Kazakhstan is located in the Central Asia and Eastern Europe. It is neighboring with China, Kyrgyzstan, Russia, Turkmenistan, and Uzbekistan. The territory and its landscape extend from West to East, from Caspian Sea to the Altay Mountains and north to south from the Western Siberia to the deserts of Central Asia. Governmental system is republic with the authoritarian presidential rule, the head of the government is the prime minister. Kazakhstan has a mixed economic system with the private freedom. Kazakhstan is being a member of the Eurasian Economic Union (EAEU) and a part of Commonwealth of Independent States (CIS), WTO, CSTO, its capital city is Astana, currency is tenge (KZT), languages spoken are Kazakh (official) 83,1 % understand and speak the language, and trilingual (Kazakh, Russian, English) 22.3 %. Russian, however, is used in everyday business. Its ethnic groups are (Kazakh – 68 %, Russian – 19.3 %, Uzbek – 3.2 %, Ukrainian – 1.5 %, Uighur – 1.5 %, Tatar – 1.1 %, Germany – 1%, other – 4.4 %). The territory of Kazakhstan is 2 794 900 km² and its population is close to 18.5 million people. The density is 7 person per square km. (SCSK, 2017). It makes the country 9th largest country in the world geographically, however, the density level is considered as low. Which puts a massive pressure on urban areas with a higher concentration of people around, leaving most of the Kazakh land, uninhabited, creating large distancing from large cities to small villages. The country is divided into 14 regions and 2 cities of special importance – Almaty and Astana. Before we dig into the economic aspect of Kazakhstan, it is relevant to understand the regional development and its focused, which is seen on the **Figure – 2**, Map of Kazakhstan and its economic focus. There are four main distinguishers of regions: oil – rich regions, non – oil industry regions, administrative regions, and agriculture regions.

Figure 2: Economic Regions of Kazakhstan



Source: USAID, 2006.

The Western part of the Kazakhstan is more involved in oil and gas industry – dark grey colored, producing – 99 % of crude oil in the country. The non – oil industry is represented in blue, mostly in the central and eastern of Kazakhstan, the focus of blue regions are mainly mining for coal and ferrous and non – ferrous metals. The administrative regions in red are Astana and Almaty city. Lastly, the green regions are focused on agricultural aspects, which are split into northern and southern regions. The agricultural sector consists of 20 % of the added value in these regions. Looking at the city scope, the mostly populated cities are located in the southeast and northeast parts of the country. There are four main cities which are mostly populated: Alma - Ata, Astana, Shymkent and Karaganda. Unfortunately, the distance between the cities ranges from 400 000 km up to 700 000 km. The lack of the right infrastructure creates many problems on the regional level. As an example, the Atyrau province is located far from

Astana city, around 2 000 km (OECD, 2016). In the Table – 2, there are main economic determinants given from the period of 2000 up to 2020.

Table 2: Economic determinants of Kazakhstan Republic

State	Republic of Kazakhstan	
	2000	2020
Territory	2 724 500 km square	2 724 500 km square
Population	14,88 million	18,75 million
GDP	18,29 billion of USD	169,8 billion of USD
GDP per Capita	1 229 USD	10 369 USD
Real growth of GDP		928 %
EX	8, 679 million of USD	46,949 million of USD
IMP	4, 987 million of USD	38, 081 million of USD
Global Share of Export	0,2 %	0,8 %
Global Share of Import	1,2 %	2 %

Source: IMF (2020).

For the past 20 years, the Republic of Kazakhstan has actually improved some its main economic determinants. With the help of the natural reserves such as oil & gas, which are mostly extracted from Western Kazakhstan. However, the Kazakhstan’s future economic development is highly dependent on the prices of oil and gas on the global market. Kazakhstan is able to become an attractive place for multinational companies, looking to expand their businesses on its territory.

The OECD Policy Framework for investment, for example, covers 12 different policy domains such as taxation, competition, trade, finance, proper business conduct and public governance.

However, OECD (2020) describes that Kazakhstan doesn’t particularly focus on effective policies, but rather on diversification of specific sectors and region’s “**endowments**” such as stock of financial, physical, human capital, which is exactly the problem of Kazakhstan, as it varies in those criteria from region to region.

4.1.1 Age distribution across regions

The Table - 2 presents the group of people who are aged (63+) for men and (59+) for females represent around 11 % of the entire population on average. The most of elderly people are registered in Northern and Eastern regions, North – Kazakhstan (18 %), Kostanay (17 %), East – Kazakhstan (17 %) Pavlodar (15 %) and Akmola (15 %). Whereas, the working population covers around 11 million people, which is 71 % of the whole population. However, with the consideration of unemployment rate, the number is slightly overvalued.

Table 3: Age - group distribution across regions, Kazakhstan (2020)

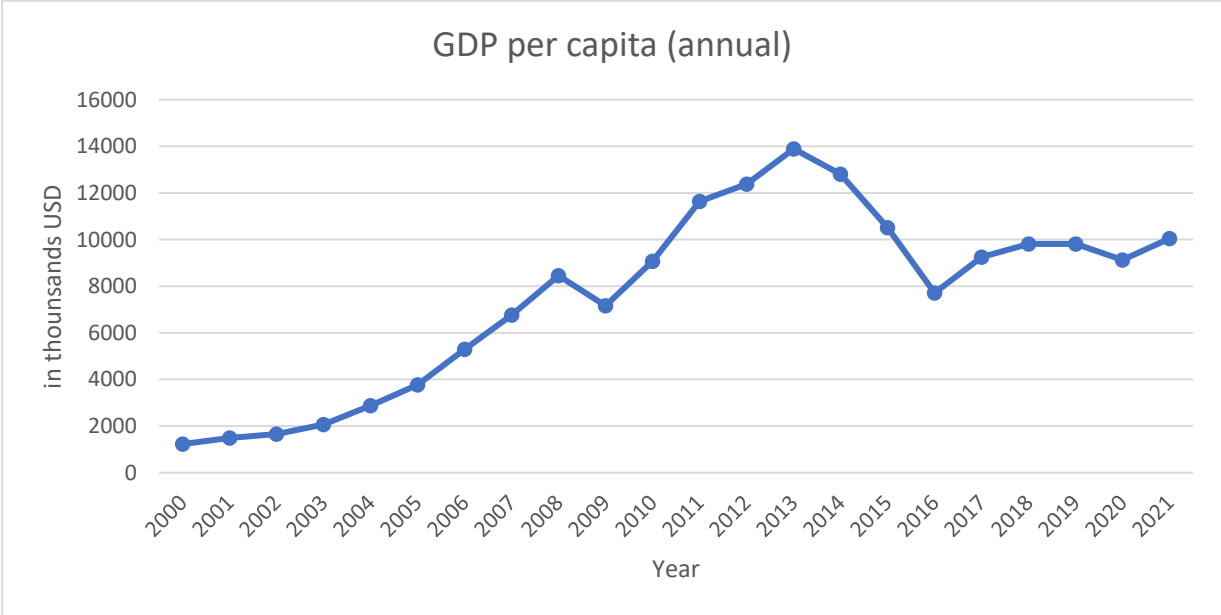
<u>Region</u>	<u>Total</u>		<u>0 – 15</u>	<u>R</u>	<u>16 – 62</u>		<u>63 + (59)</u>	<u>Share of 63 + (59)</u>
Kazakhstan (Total)	18 631 779		5 636 761		10 874 656		2 120 362	11%
Akmola	736 735	4%	186 927	3%	442 158	4%	107 650	15%
Aktobe	881 651	5%	268 474	5%	522 184	5%	90 933	10%
Almaty	2 055 724	11 %	677 809	12 %	1 159 969	11 %	217 946	11%
Atyrau	645 280	3%	227 571	4%	364 028	3%	53 681	8%
West - Kazakhstan	656 844	4%	182 586	3%	390 026	4%	84 232	13%
Dzhambul	1 130 099	6%	399 884	7%	618 759	6%	111 456	10%
Karaganda	1 376 882	7%	347 006	6%	825 820	8%	204 056	15%
Kostanay	868 549	5%	186 332	3%	538 489	5%	143 728	17%
Kyzyl – Orda	803 531	4%	283 057	5%	452 602	4%	67 872	8%
Mangystau	698 796	4%	259 177	5%	389 117	4%	50 502	7%
Pavlodar	752 169	4%	182 016	3%	454 768	4%	115 385	15%
North-Kazakhstan	548 755	3%	121 546	2%	326 461	3%	100 748	18%
Turkestan	2 016 037	11 %	799 717	14 %	1 068 281	10 %	148 039	7%
East - Kazakhstan	1 369 597	7%	333 409	6%	694 254	6%	89 977	17%
Astana	1 136 156	6%	351 925	6%	694 254	6%	89 977	8%
Almaty	1 916 822	10 %	463 505	8%	1 226 014	11 %	227 303	12%
Shymkent	1 038 152	6%	365 820	6%	593 404	5%	78 928	8%

Source: Committee of Statistics, Ministry of National Economy of Kazakhstan.

4.2.1 Economic perspective and current challenges

Kazakhstan is a country that needs to diversify its economy in all its spheres. The country is considered to fall into upper-middle group. The country is very strong in mining, metallurgy, chemical industry, mechanical and agricultural sectors. Exports of minerals account for 80 % of total export of the country. Hence, diversification of economy is needed as well as reducing the dependency level of the economy on natural resources and its main activities, which are extracted in the Western part of Kazakhstan, See, Figure – 2. Kazakhstan struggles to achieve a more sustainable growth across regions and hence it needs to establish a proper public policy to build a strong knowledge on the regional level. With 16 “Akimats”^[6] where, one is assigned to each region. On the Graph – 1, there consequences of global financial crisis which are seen in comparison with 2008 and 2009 and also the slight decrease of GDP per capita in the period of 2018 and 2019. In the Table – 4, there is a year – to – year change, which is presented in percentage.

Graph 1: Annual GDP per capita



Source: Worldbank, 2022.

^[6] Akimats – is an administrative local executive body of state power in the head of Kazakhstan and Kyrgyzstan. Akim is the representative of the President of the country.

Most of the country’s GDP is oriented in the administrative cities such as Astana and Almaty, and main extracting-oil cities in Western part of Kazakhstan (Atyrau). The most industrial city of all is Karaganda and South Kazakhstan, all of these regions contribute to the GDP for about 55 %. Table – 4 depicts the global oil price change in 2016, when prices per barrel of crude oil have drastically decreased and hence, led to the decrease of GDP per capita, which demonstrates the dependency of economy on the natural resources as relatively high.

Table 4: Annual change in GDP per capita.

Year	2015	2016	2017	2018	2019	2020	2021
Y-o-Y		-26,60%	19,87%	6,11%	0,00%	-7,04%	10,08%
GDP per capita	10510,77	7714,842	9247,581	9812,626	9812,596	9121,637	10041,49

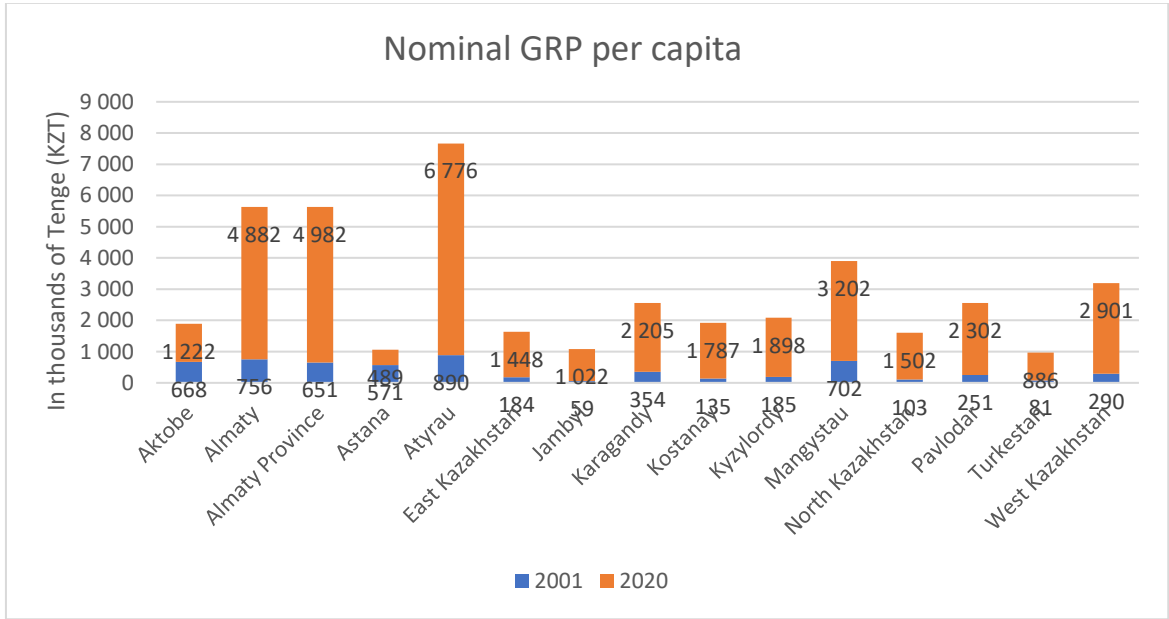
Source: Own calculation.

At this point, the republic of Kazakhstan has the following challenges:

- Disparities in the gross domestic product per capita across regions
- Income and Poverty disparities
- High dependency on natural resources in Western part of Kazakhstan.

Limited access to Investments for some regions.

Graph 2: Disparities of Gross Regional Product per capita



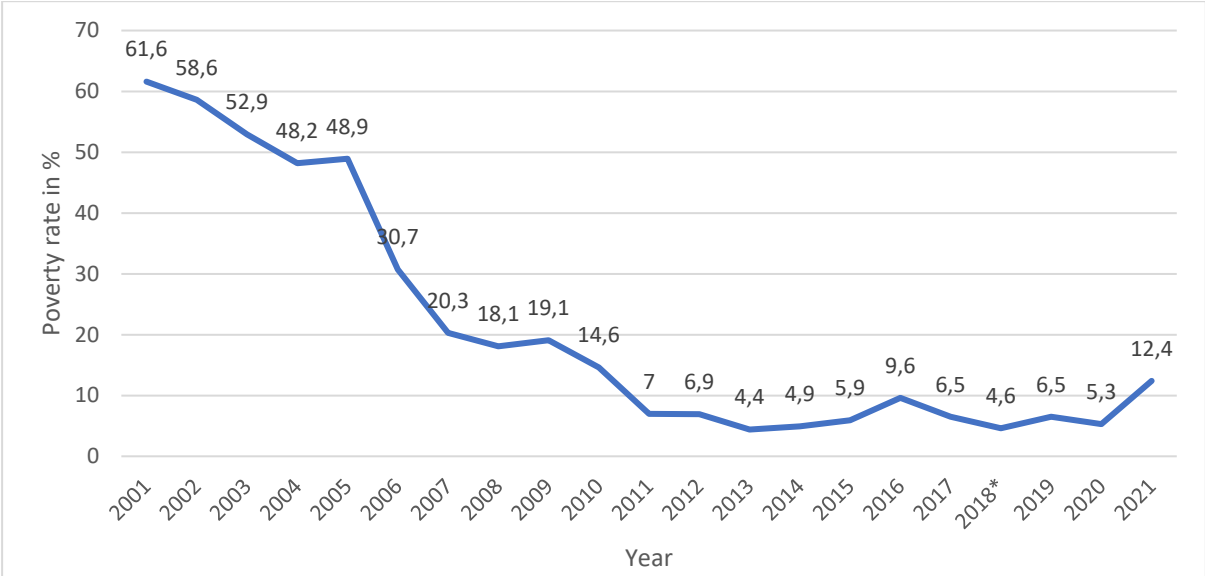
Source: Adopted from Statistical Data Agency of Kazakhstan (2022).

From the Graph – 2, we can see the change of Gross Regional Product per capita for the period of 21 year. The selected regions which author analyzes (Karaganda and Turkestan) have clearly developed for the past 20 years, there are increases by 84 % for Karaganda and 91 % for Turkestan region. However, the disparities of those regions are clear from the beginning, where in Karaganda region the GPR equaled to 354 tenge per capita in 2001, in the same year, the Turkestan accounted for only 81 tenge per capita, which is a drastic change.

4.2.2 Poverty rate

The poverty rate in Kazakhstan until 2011, was quite stable, however, after that period, the poverty rate has become slightly volatile and unpredictable. Based on the work of Turgunbaev and Diener (2018). They suggest that the reason of such a rapture in the dynamics of poverty rate is linked with a traditional economy which was mainly focused on natural resources, after the collapse of USSR. The Soviets have led the population as well as settlement distribution system, which were not a part of a plan for geo-economy of Kazakhstan. The final reason was the competition level on the global arena, Kazakhstan is still quite dependent on its neighbors such as (China, Russian Federation, Azerbaijan, Kyrgyzstan and Uzbekistan). Their research finds that GPR and employment converged over a time period of 2006 to 2017. The poverty rate has been considered from 2001 up to 2021, See, Graph – 3. The considered crisis of COVID – 19 is not seen on the Graph, however, the partial consequences of COVID-19 are seen in the year of 2021. The long-term impact is still present, and the economy is not able to recover that fast as it did between 2008 and 2009. The regional poverty level will be mentioned in the following chapter for each region. The main tool of poverty reduction in the system of Kazakhstan also to use a fiscal redistribution among regions, to a certain degree (Agrawal, 2008). The poverty level was constantly decreasing all over the country as it is seen on the Graph – 3. Based on the Survey of Household Budget Survey of (2022) the composition level, despite the poverty level was stable, its variation was dependent on a number of members per one household.

Graph 3: Poverty rate in Kazakhstan.



Source: Adopted from Statistical Data Agency of Kazakhstan (2022).

4.2.3 Karaganda region.

In this chapter, the author focuses on the selected region of Karaganda, its main economic indicators, economy development, its dynamics, and policies. The region of Karaganda contributes with a 6.7 % to the total GDP of Kazakhstan. The region is mainly focused on medium-size enterprises with its main activity in the mining and manufacturing industry. The population is mainly focused on the largest industrial cities of Karaganda and Temirtau. The migration rate has increased for the past 3 years; hence the cities indicate a positive trend in the consumption level and consumer market. Karaganda region covers big, medium, and small cities which will be shown and listed in the **Table – 6**. The author has taken the three economic indicators of employment, and those are: Economically active population, self-employed population, unemployed population. The urbanization level of Karaganda region has been slightly increasing with the years, approximately between 0.7 % up to 1.39 % a year. The Urban population prevails than the rural population, See, **Table – 5**. However, the trends are positive in both. The recent impact of COVID-19 is obvious, and it didn't only hit the growth but also the mortality rate which will be covered in the following chapters.

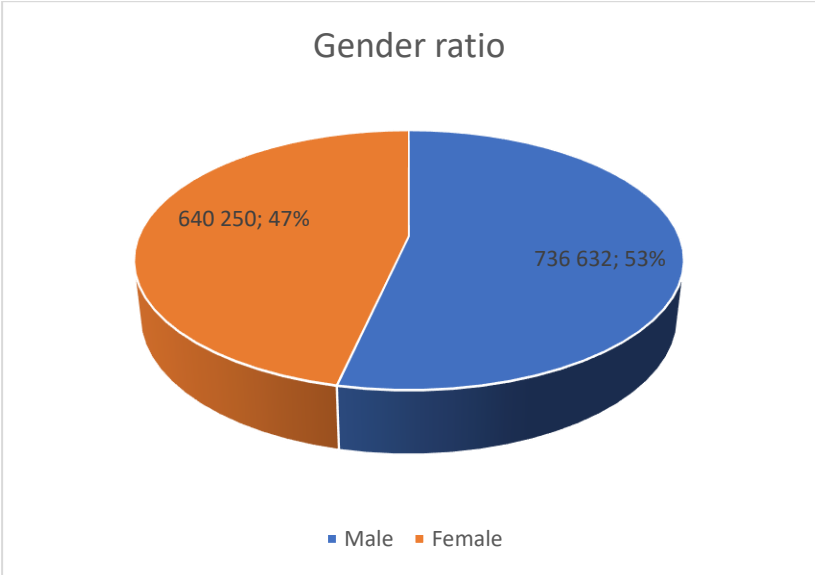
Table 5: Urbanization rate of Karaganda Region.

Year	2 018	Ratio	2 019	Ratio	2 020	Ratio	2 021	Ratio
Total Regional Population	1 336 707		1 355 305		1 366 715		1 376 882	
Urban Total	1 072 505	80,23%	1 087 901	80,27%	1 097 007	80,27%	1 099 807	79,88%
Rural	264 202	19,77%	267 404	19,73%	269 708	19,73%	277 075	20,12%
Y-o-Y change		1,39%		0,84%		0,74%		

Source: Bureau of National Statistics of Kazakhstan (2022).

However, the development of population is smooth. The data demonstrates that increase rate of 1,39 % between 2018 and 2019, nevertheless, after the 2019, the development has a positive trend of 0.84 % and 0.74 % respectively. The is a high increase in urban population between 2020 and 2021. The gender ration of Karaganda region is seen in **Figure – 3**. The gender of males prevails by 1.3 % than females.

Figure 3: Gender ratio of Karaganda region



Source: Bureau of National Statistics of Kazakhstan (2022).

Table 6: The economically active population.

Indicator	Economically active			Self-employed			Unemployed		
	2 019	2 020	2 021	2 019	2 020	2 021	2 019	2 020	2 021
Abai	27 445	12 533	37 391	677	405	612	11 501	12 980	1 009
Balhash	17 016	7 699	8 911	771	221	671	20 015	16 317	624
Zheskazgan	59 501	38 046	41 515	713	412	771	13 200	37 085	621
Karaganda	576 343	546 071	679 300	77 192	67 082	65 671	31 206	152 789	40 206
Karazhal	1 647	21 485	19 341	1 771	1 351	1 235	6 275	19 137	7 002
Karkaralinsk	35 130	29 542	25 123	1 356	1 641	1 412	6 021	12 887	4 500
Priozersk	7 794	6 893	41 221	868	776	456	5 213	10 998	3 031
Saran	8 453	28 646	55 612	2 351	2 351	2 461	4 083	15 089	3 889
Satpaev	13 174	6 000	11 232	3 214	2 354	2 212	7 901	13 874	2 165
Temirtau	330 437	191 572	278 902	33 122	23 464	20 123	23 501	61 705	7 052
Shahtinsk	20 858	6 712	7 601	887	612	345	5 670	17 987	4 665

Source: Bureau of National Statistics of Kazakhstan (2022).

Most of the Karaganda region's population is concentrated on two main cities with the highest output per GPR, are Temirtau and Karaganda cities, due to the fact of a large industrial output of these cities. The population of Karaganda region is mostly characterized in urban areas, as it is seen from the **Table – 5**. The largest number of economically active population is Karaganda city, however, there is a decline of economically active population between the years of 2019 and 2020, and a quick recovery is seen in 2021, where unemployment rate has slightly been stabilized, however, the stabilization process hasn't applied for all regions, because those regions with a small concentration of population such as: Balhash, Shahtinsk, Karkalinsk still try to recover from the downturn of economy in the mid of 2019 and 2020. Probably, the most of a burden was reflected on the self-employed people and also unemployment rate, which drastically increased in Karaganda region between 2019 and 2020, almost by 500 % increase of unemployment, however, it also quickly recovered in 2021. The self-employment group of people has been very sensitive to the COVID-19, especially in Temirtau city, where over 10.000 thousand of self-employed people have stopped their activities between 2019 and 2020. Also, a high decrease is seen in the Karaganda city. However, due to the fast recovery which was

mainly reestablished because of high attractiveness of foreign direct investments in the Karaganda region, especially in the mining industry as well as its potential in natural resources with its presence of mineral deposits. The region is considered to take the third place in terms of monetary income of the population (after Almaty and Astana). However, from the consumer perspective, it is actually ranked on a second place in terms of a retail – trade. However, the dynamics of the registered companies has been constantly growing until the 2020. The recent trends show a negative impact of COVID-19 on small and medium enterprises.

Table 7: Registered enterprises of the Karaganda region in the period of 2019 up to 2021.

Year	2 019	Ratio	2 020	Ratio	2 021	Ratio
Small Enterprises	24 040	100%	22 608	100%	21 078	100%
Wholesale and retail trade, car and motorcycle repair	12 778	53,15%	10 449	46,22%	10 554	50,07%
Construction	4 871	20,26%	4 001	17,70%	3 497	16,59%
Manufacturing industry	2 340	9,73%	1 040	4,60%	988	4,69%
Operations with real estate	2 178	9,06%	1 507	6,67%	291	1,38%
Provision of other types of services	1 406	5,85%	897	3,97%	2 001	9,49%
Medium enterprises	480	100%	391	100%	422	100%
Education	227	47,29%	200	51%	206,00	48,82%
Manufacturing industry	55	11,46%	15	4%	31,00	7,35%
Construction	51	10,63%	15	4%	27,00	6,40%
Health and Social Services	42	8,75%	73	19%	70,00	16,59%
Public administrations and institutions	88	18,33%	88	23%	88,00	20,85%
Large enterprises	186	100%	148	100%	159	100%
Health and Social	48	25,81%	51	34%	56,00	35%
Manufacturing industry	29	15,59%	11	7%	24,00	15%
Mining and quarrying	41	22,04%	14	9%	38,00	24%
Wholesale and retail trade, car and motorcycle repair	22	11,83%	10	7%	18,00	11%

Source: Bureau of National Statistics of Kazakhstan (2022).

The **Table – 7**, demonstrates the dynamics of registered companies for the period of 2019 up to 2021. The table demonstrates three different dimensions of companies: small, medium and large enterprise. As stated above, Karaganda region is heavily focused on mining,

quarrying and manufacturing industry, however after announcement of lockdown, the number of small enterprises which were focused on wholesales and retailing, have reduced by 2000 units per year and didn't recover to its initial numbers even in 2021. Construction industry have also drastically reduced in 2019, however, its recovery is surely but slowly have regained. The number of health and social services have increased by 30% between 2019 and 2020 and also kept increasing in 2021. Apparently, the due to decreased in the number of registered enterprises, the GDP per capita and GPR have slightly decreased in Karaganda region. The large number of companies are registered in the regional capital of the city. The **Table – 8**, demonstrates the contribution of Karaganda region to the total GDP of Kazakhstan. The ratio has decreased in between 2019 and 2020.

Table 8: Karaganda region and its contribution to total GDP, annual.

Currency	billions USD		billions USD		billions USD		billions USD	
Year	2018	% ratio	2019	% ratio	2020	% ratio	2021	% ratio
Total GDP	179,3		181,7		171,1		190,8	
Karaganda	11,83	6,60%	13,63	7,50%	10,27	6,0%	12,40	6,5%

Source: Bureau of National Statistics of Kazakhstan (2022).

The business environment of Karaganda region is considered to be one of the competitive regions across Kazakhstan, due to its potential in natural resources. The average income level is considered to be quite high, after (Almaty and Astana cities) however, if compared with an annual Income in KZT on annual basis, the income is considered to be even higher across the other regions of Kazakhstan.

Table 9: Average Income in Karaganda region, annual.

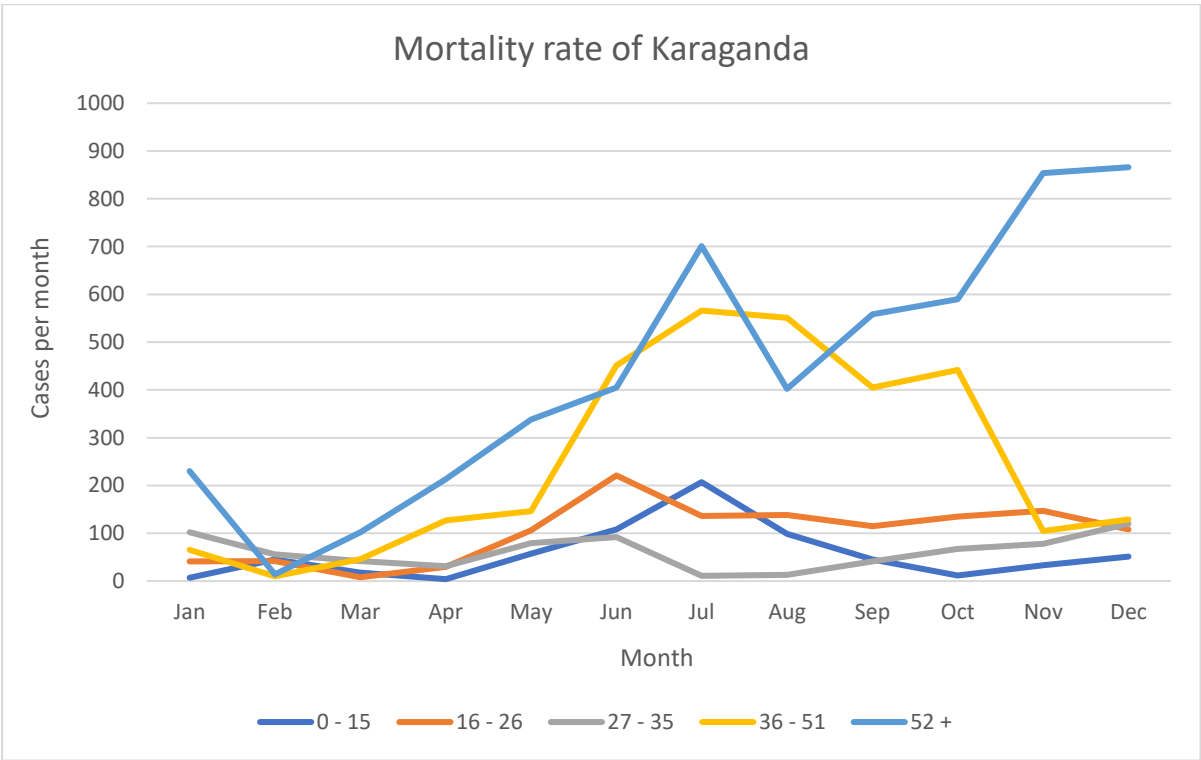
Year	2 017	2 018	2 019	2 020	2 021
Average KZT in Karaganda Region	172 724,08	198 540,42	209 310,50	211 455,25	223 068
Average KZT in Kazakhstan	180 000	184 100	187 850	190 275	192 650
Deviation of salary	-7 275,92	14 440,42	21 460,50	21 180,25	30 418,00

Source: Bureau of National Statistics of Kazakhstan (2022).

The COVID-19 and its pandemic consequences haven't actually changed much from the perspective of the monetary payouts. The average income was still high in comparison with an average salary for the whole Kazakhstan, even though the unemployment rate has increased across the cities of Karaganda region, See, **Table – 6**.

Lastly, the author considers covering a mortality rate, which was high in during a 2020, the author hasn't found the particular data for the whole Karaganda region, but partly found the data for big city of Karaganda. The data shown below depicts the development of mortality rate at the peak of COVID-19 and while Kazakhstan was on a lockdown. Based on the Graph – 4, it is certainly seen that the population aged of 36 – 51 and 51 +, have suffered the most, because of the COVID-19. Hence, this is directly correlated with the unemployment, because this age group is considered as an active population for economy.

Graph 4: Mortality rate of Karaganda, for 2020.



Source: Bureau of National Statistics of Kazakhstan (2022).

4.2.3 Turkestan region

Turkestan region is the most agrarian region of Kazakhstan because of its favorable climate conditions and geographic location. It is considered that its fort GRP is agriculture, however, its contribution to the national GDP is around 2.90 % in total. The labor productivity was the lowest for the past 2 years due to covid-19. Consequently, the stagnation of supply has led the region an extreme poverty. Nevertheless, its region is more populated that Karaganda region, its main city is “Shymkent” where most of the working class is allocated. However, its advantageous position is its location. The Shymkent is being as an economic corridor between Tashkent and Tajikistan. However, its main problem is being urbanization, especially in Turkestan region, where most its population are scattered among rural areas. The **Table – 10**, illustrates the population rate among rural and urban areas.

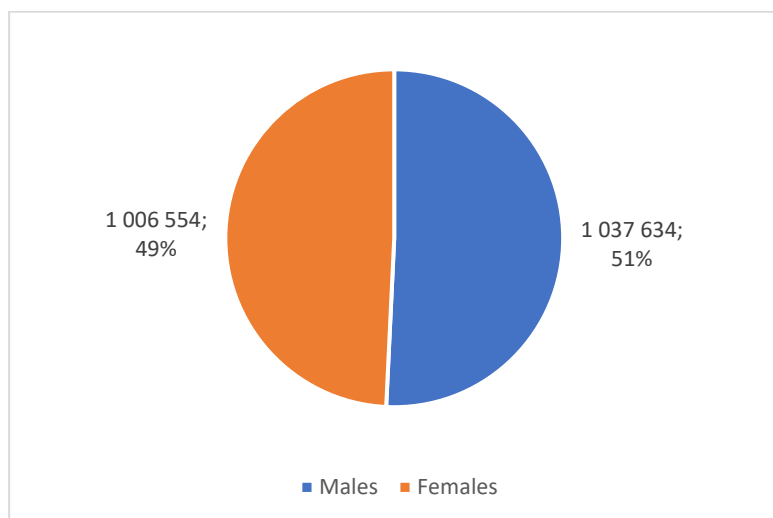
Table 10: Urbanization rate of Turkestan region.

Year	2018	Ratio	2019	Ratio	2020	Ratio	2021	Ratio
Total Regional Population	2 032 998		2 034 977		2 035 767		2 044 188	
Urban	425 101	20,91%	425 980	20,93%	426 201	20,94%	429 616	21,02%
Rural	1 607 897	79,09%	1 608 997	79,07%	1 609 566	79,06%	1 614 572	78,98%
Y-o-Y change		0,10%		0,039%		0,414%		

Source: Own calculations based on the data of Bureau of National Statistics of Kazakhstan (2022).

The demographic development of Turkestan region is also smooth as in case of Karaganda region. There was a slight increase between 2018 and 2019 of over 0.10 % which is not a lot, however still positive. The rate between 2019 and 2020 was still positive, despite the covid-19 consequences and finally in 2021, there is an increase of almost 0.4 %, which demonstrates a quick recovery in the Turkestan region. The gender ratios are shown in the **Figure – 4**. There is a prevalence of males by 1 % more than females.

Figure 4: Gender ratio of Turkestan region



Source: Bureau of National Statistics of Kazakhstan (2022).

Table 11: The economically active population

Indicator	Economically active			Self-employed			Unemployed		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Turkestan	166 844	118 908	130 992	20 132	15 680	14 790	16 006	60 879	55 506
Shymkent	1 410 089	1 332 809	1 402 698	145 099	128 779	125 515	65 041	130 187	129 601
Ariz	78 904	48 987	40 512	6 507	5 099	8 902	5 024	45 662	40 612
Kentau	51 982	34 515	32 184	6 550	4 984	9 402	4 056	18 974	15 064
Zhetisay	75 838	38 974	31 009	2 482	2 361	3 200	5 702	4 727	4 201

Source: Bureau of National Statistics of Kazakhstan (2022).

Most of the Turkestan region’s population is concentrated on two main cities with the highest output per GPR, are Shymkent and Turkestan cities. The Shymkent’s location plays a significant role in trading in goods and services hence, it is clear to expect a higher employment for Shymkent city. The population of Turkestan city is mostly characterized in rural areas, as it is seen from the **Table – 10**. The largest number of economically active population is Shymkent city, however, there is a drastic decline of economically active population between the years of 2019 and 2020, in the city of Shymkent, Turkestan, Ariz, Kentau and Zhetisu, where

unemployment rate hasn't stabilized in the following year of 2021, however, in fact the stabilization process hasn't applied for any city. The self-employment group of people has been very sensitive to the COVID-19, especially in Shymkent city, where over 17 000 thousand of self-employed people have stopped their activities between 2019 and 2020. Also, a high decrease is seen in the Turkestan city as well. In comparison to Karaganda region, the Turkestan region kept experiencing difficulties to recover from the consequences of the COVID-19. The closure of borders with the neighboring countries have certainly left a mark on employment reduction, however, this will indicate the economic activity of Turkestan in the following chapter. It's clearly that Turkestan region has the lowest shares of the extractive materials and as a result there are not many industries which would produce a higher GRP, in contrast to the Karaganda region, which is wealthy with natural resources. Hence, the author might assume the necessity of government to pay more attention to Turkestan region and probably invest more money into agricultural sector to make sure that, Turkestan fully uses its potential conditions in its own favor. Another effect that might influence a slow recovery of Turkestan region is the concentration of population on big cities within its region. As it is seen in the **Table – 10**, the rural population is big, and most of it, are involved into the agricultural sector.

The unemployment rates have massively increased in Turkestan and Shymkent cities.

Table 12: Registered enterprises of the Turkestan region in the period of 2019 up to 2021.

Year	2019	Ratio	2020	Ratio	2021	Ratio
Small Enterprises	41 220		25 001		26 805	
Wholesale and retail trade, car and motorcycle repair	21 520	52,21%	9 902	39,61%	10 702	39,93%
Agricultural	14 002	33,97%	13 396	53,58%	13 881	51,79%
Manufacturing industry	1280	2,93%	945	3,78%	1 207	4,50%
Operations with real estate	1 392	3,38%	196	0,78%	307	1,15%
Provision of other types of services	901	2,19%	562	2,25%	708	2,64%

Medium enterprises	12 08		706		1 164	
Education	307	25,41%	217	30,74%	251	21,56%
Manufacturing industry	264	85,99%	201	1,06%	280	24,05%
Agricultural	408	132,90%	378	1,99%	401	34,45%
Construction	84	27,36%	41	0,22%	43	3,69%
Health and Social Services	70	22,80%	103	0,54%	112	9,62%
Public administrations and institutions	75	24,43%	77	0,41%	77	6,62%
Large enterprises	404		245		344	
Health and Social	78	19,31%	61	24,90%	68	19,77%
Manufacturing industry	102	25,25%	24	9,80%	69	20,06%
Agricultural	202	50,00%	149	60,82%	175	50,87%
Wholesale and retail trade, car and motorcycle repair	22	5,45%	11	4,49%	32	9,30%

Source: Bureau of National Statistics of Kazakhstan (2022).

The **Table – 12**, illustrates the development dynamic of the registered companies in the whole Turkestan region. From the table, it is seen that agricultural institutions take majority of the enterprises across Turkestan region. However, the decline in its amount is also very high, in between 2019 and 2020, the number of agricultural institutions has reduced by 25 % in large sector of enterprises, medium enterprises have reduced by 50 % and small enterprises have reduced by 4 %. However, as it has been mentioned, another profitable sector of Turkestan region which involves a high rate of employment is the “Wholesale and retail trade”. From the above table, it is clear to see how small enterprises have reduced its operations in Turkestan region for the period of 2019 and 2020. Even though, Turkestan region is considered to be a one of the agrarian sectors, there are small manufacturing industries that are involved in the production of dairy products (milk, curd, sausages and etc.). However, its numbers have also declined in 2020, however a quick recovery is seen in 2021. Real estate industry has undergone the massive shutdowns together with a construction industry which have closed due to a lockdown, when people had to keep a social distancing.

Table 13: Turkestan region and its contribution to total GDP, annual.

Currency	billions USD		billions USD		billions USD		billions USD	
Year	2018	% ratio	2019	% ratio	2020	% ratio	2021	% ratio
Total GDP	179,3		181,7		171,1		190,8	
Turkestan	5,92	3,30%	6,27	3,45%	3,94	2,30%	6,68	3,5%

Source: Own calculations based on the data of Bureau of National Statistics of Kazakhstan (2022).

The GDP of Turkestan is shown in the **Table – 13**, where annually, the development has increased by 4.55 % between 2018 and 2019, however, there is no indication of an increase between the period of 2019 and 2020. The number demonstrates the negative development by 50 %. Due to high unemployment in the region and a massive shutdown of agricultural farms and enterprises, the region experienced the decline in GDP contribution. Still, the main region of Shymkent could recover that fast and its unemployment rate keeps on a same level in 2021, as it was it 2020.

The business environment of Turkestan region is considered to be one of the poorest regions across Kazakhstan. One of the reasons is that it isn't rich with a natural resources and reserves that could be traded and exported to another countries. The average income level is low. Thus, the annual deviation on average is quite high, and doesn't seem to improve for the past 5 years, however. It is hard to conclude the impact of covid-19 on a salary indicator, as its level of deviation was always negative.

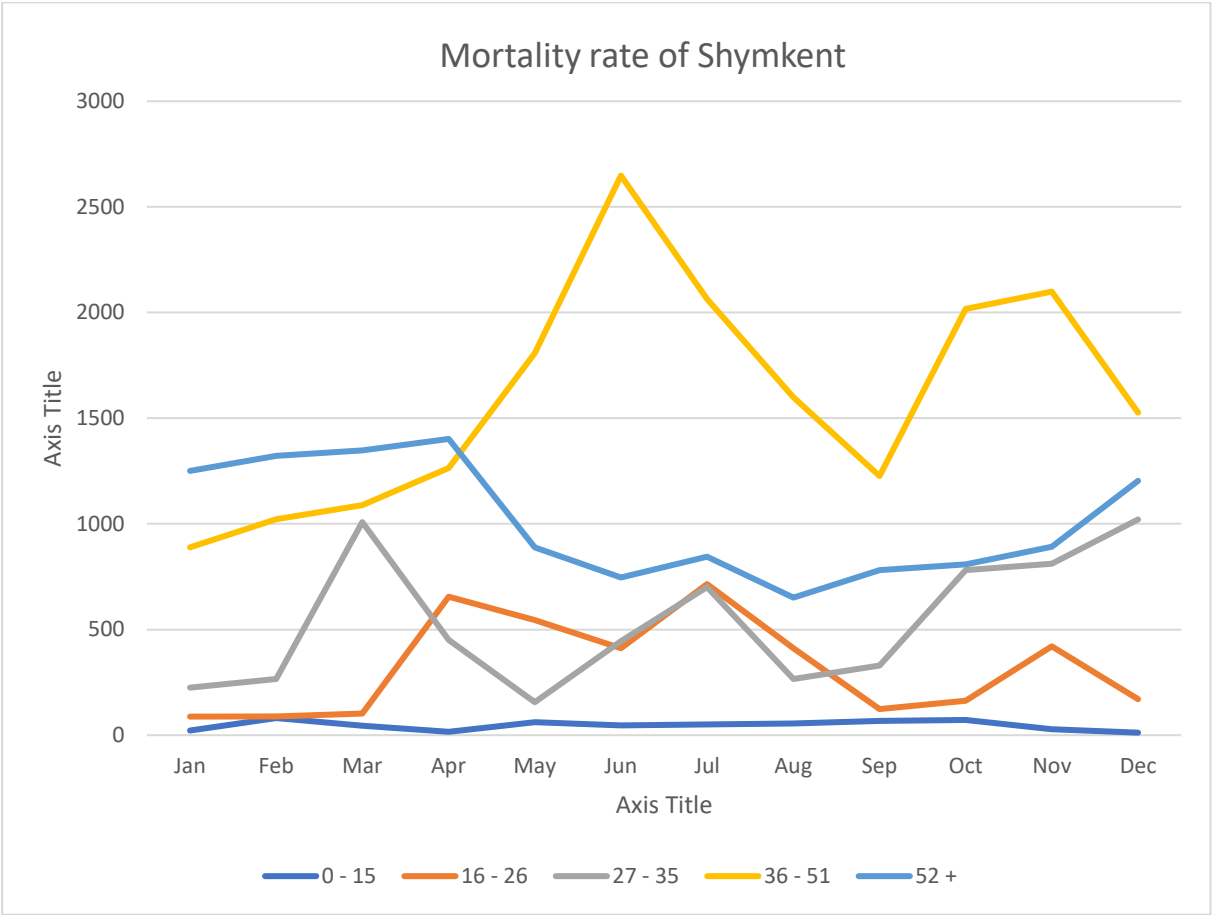
Table 14: Average Income in Karaganda region, annual.

Year	2 017	2 018	2 019	2 020	2 021
Average KZT in Turkestan Region	115 919,04	122 893,25	125 355,66	127 123,35	130 175,01
Average KZT in Kazakhstan	180 000	184 100	187 850	190 275	192 650
Deviation of salary	-64 081	-61 207	-62 495	-63 152	-62 475

Source: Bureau of National Statistics of Kazakhstan (2022).

As it has been mentioned in the chapter above, the data for mortality rate are usually available for the big administrative cities of Kazakhstan, in Turkestan region, the biggest city is Shymkent, the **Graph – 5**, illustrates the development of Shymkent city. Due to its closest borders with China, the Shymkent city experienced more death cases in the beginning of the 2020 and still kept on increasing to the end of 2021. Most of the mortality rate is observed among the age of 36 – 51, and 52 + aged people which belong to an economic group of activity

Graph 5: Mortality rate of Shymkent city



Source: Bureau of National Statistics of Kazakhstan (2022).

6 Conclusion

The author evaluated the impact of the regional development of Karaganda region from and Turkestan economic perspective and has considered the following indicators: The GDP contribution to the national GDP, the average income per region, the number of registered enterprises in the region, economic actively population, number of unemployed people and the number of self-employed people. Most of the focus was to evaluate the COVID-19 crisis of the regional development.

From the stated analysis and comparisons of the annual data, the author concludes that the Turkestan region was mostly affected by covid-19 and the announcement of lockdown led to a massive shutdown of small, medium, and large enterprises, which led to a numeric increase of unemployed people. The agrarian sector of the Turkestan region held the economic stability however, the suffer of pandemic has left a heavy mark and the economy of Turkestan region couldn't recover from the consequences that fast.

In comparison to the Karaganda region, this region is more oriented on heavy industry and natural resources extraction. The effect of covid-19 crisis has also impacted the economic perspective of the region in between 2019 and 2020 ,however the indicators which the author has considered show a quick recovery of that region back to the normal. The unemployment rate however stagnated and still seem to be quite high, especially in Karaganda city. Whereas, in Turkestan region, the Shymkent city seem to have also a quite high rate of unemployment and the recovery is under the question. The average income in Karaganda city is much higher than in Turkestan region due to its involvement in industry-oriented businesses, however, the slight deviation of income See, **Table – 9**, is seen between the period of 2019 and 2020, which indicates a stagnation in Income level. This, however, wasn't identified in the region of Turkestan. The mortality rate for both regions were high, however, the Turkestan region indicates a higher case of death due to covid-19. First of all, this is due to a bigger population in those regions and second is that the Shymkent city is the closest city with borders of Kyrgyzstan and Uzbekistan.

The crisis of covid-19 had massively impacted both regions, however, comparing those two based on the economic comparisons, the Turkestan region experienced a bigger impact from economic perspective as well as its regional development could not recover that fast as it did Karaganda region.

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Appendix – 1.

Year	billions USD		billions USD		billions USD		billions USD	
	2018	%	2019	%	2020	%	2021	%
Total GDP	179,3	ratio	181,7	ratio	171,1	ratio	190,8	ratio
Akmola	6,10	3,40%	5,63	3,10%	4,45	2,60%	5,34	2,8%
Aktobe	5,56	3,10%	6,36	3,50%	6,67	3,90%	7,63	4,0%
Almaty	11,12	6,20%	9,45	5,20%	10,44	6,10%	10,88	5,7%
Atyrau	12,91	7,20%	11,99	6,60%	10,78	6,30%	12,97	6,8%
West - Kazakhstan	34,96	19,50%	36,52	20,10%	34,56	20,20%	38,92	20,4%
Dzhambul	6,63	3,70%	6,54	3,60%	5,82	3,4%	6,49	3,4%
Karaganda	11,83	6,60%	13,63	7,50%	10,27	6,0%	12,40	6,5%
Kostanay	8,07	4,50%	7,99	4,40%	7,70	4,50%	9,35	4,9%
Kyzyl – Orda	8,61	4,80%	6,90	3,80%	5,48	3,20%	5,72	3,0%
Mangystau	3,77	2,10%	3,63	2%	2,74	1,60%	2,48	1,3%
Pavlodar	3,59	2,00%	4,54	2,50%	5,65	3,30%	5,15	2,7%
North- Kazakhstan	7,35	4,10%	5,81	3,20%	6,33	3,70%	7,44	3,9%
Turkestan	5,92	3,30%	4,18	2,30%	4,96	2,90%	6,68	3,5%
East - Kazakhstan	12,73	7,10%	10,90	6,00%	13,86	8,10%	18,32	9,6%
Astana	9,86	5,50%	9,09	5,00%	4,45	2,60%	5,91	3,1%
Almaty	20,08	11,20%	22,35	12,30%	21,22	12,40%	19,84	10,4%
Shymkent	10,22	5,70%	16,17	8,90%	15,74	9,20%	15,26	8,0%

Source: Own calculation, based on the data of Bureau of National Statistics of Kazakhstan (2022).