# Czech University of Life Sciences Prague Faculty of Economics and Management Business Administration



Development of coronavirus pandemic in Kyrgyz Republic.

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#### CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

### **BACHELOR THESIS ASSIGNMENT**

Zhasmin Baktybekova

**Business Administration** 

Thesis title

Development of coronavirus pandemic in Kyrgys Republic

#### Objectives of thesis

The aim of the bachelor thesis is to describe the main statistics of the development of the incidence of covid-19 and the socio-economic impact of COVID-19 in Kyrgyzstan. The thesis also aims to introduce the plans to combat COVID-19 that have been developed in Kyrgyzstan and to provide recommendation to improve the effectiveness of the response to COVID-19.

#### Methodology

The bachelor thesis will consist of two main parts – theoretical part and practical part. For the theoretical part, data sources such as scientific literature, academic journals and online libraries will be used. The theoretical part is devoted to clarify the important terms of this thesis. The second, practical part, aims to analyze main indicators of covid-19 pandemic in the USA using methods of exploratory data analysis and statistical methods for time series analysis.

#### The proposed extent of the thesis

30-40 pages

#### Keywords

COVID 19 pandemic, COVID 19 vaccination, Kyrgys Republic, time series analysis

#### Recommended information sources

FIELD, A. Discovering statistics using IBM SPSS statistics. Thousand Oaks: SAGE Publications, 2013. ISBN 978-1-4462-4917-8.

Ministry of Health and Social Development of the Kyrgyz Republic [online] Available at: https://med.kg NISBET, R., ELDER, J., MINER, G. Handbook of statistical analysis and data mining applications.

Amsterdam: Amsterdam, 2009. ISBN 978-0-12-374765-5.

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Prague on 14. 03. 2022

Declaration
I declare that I have been using only the resources mentioned above to bring a topic of "The
impact of pandemic situation on the Republic of Kyrgyzstan." As being an author of the
bachelor thesis, I declare the thesis does not break any copyrights and does not correspond to
any plagiarism.
In Prague on
Zhasmin Baktybekova

Acknowledgment
I would like to say the heartiest thanks Ing. Zuzana Pacáková to who tough me the basic aspects of statistics and with her given explanations during lectures and seminars convinced me to write about the particular topic. I would also thank his supervisor for an additional information that was spoken and explained in detail.

Development of coronavirus pandemic in Kyrgyz

Republic.

**Abstract:** 

On March 11, 2020, the World Health Organization declared a global pandemic due to the rapid

spread of the COVID-19 virus, which was firstly reported in Wuhan (China) in December 2019.

In Kyrgyzstan the first case was recorded on March 18<sup>th</sup>.

The Bachelor Thesis is focused on assessment of an overall impact of COVID-19 on the

economic and social aspects of population in Kyrgyzstan. The whole thesis is divided into two

parts: Theoretical and practical. The theoretical part covers the economic factors of the

Kyrgyzstan and deeply described its consistency. Within the practical part, a survey was applied

in order to gather the data and process it. The assumption was also stated by the author, based

on the economic consistency, the author assumes that labour class had to struggle whilst

ongoing pandemic.

Key words: Covid-19, economic growth, impact of pandemic, GDP, assessment.

Vývoj pandemie koronaviru v Kyrgyzské republice.

Souhrn:

Dne 11. března 2020 vyhlásila Světová zdravotnická organizace celosvětovou pandemii kvůli

rychlému šíření viru COVID-19, který byl poprvé hlášen ve Wuhanu (Čína) v prosinci 2019.

V Kyrgyzstánu byl první případ zaznamenán 18. března.

Bakalářská práce je zaměřena na zhodnocení celkového dopadu COVID-19 na ekonomické a

sociální aspekty populace v Kyrgyzstánu. Celá práce je rozdělena na dvě části: Teoretickou a

praktickou. Teoretická část pokrývá ekonomické faktory Kyrgyzstánu a hluboce popisuje jeho

konzistenci. V rámci praktické části byl proveden průzkum za účelem sběru dat a jejich

zpracování. Předpoklad byl také vysloven autorem, na základě ekonomické konzistence autor

předpokládá, že dělnická třída musela v době probíhající pandemie bojovat.

Klíčova slova: Covid-19, ekonomický růst, dopad pandemie, HDP, hodnocení.

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#### 1 Introduction

The Covid pandemic was announced by a Public Health Emergency of International Concern on 30 January of 2020, and the world pandemic on 11 March of 2020. The global impact of COVID-19 on different states, its public health and mobility among the whole population is huge. The emergency directly impacted on global health and mobility of the world's population. In order to prevent the spread of the virus, different containment policies have been implemented which restricted people's mobility and affected various categories of population, including migrants.

Therefore, the pandemic continues to pose different challenges, governors and officials of Central Asia and all CIS countries have adopted preventive measures in order to be prepared for COVID-19 outbreaks. As a results, thousands of migrants stayed abroad, who were unemployed and were uncertain about their future. Even though those who managed to return home or even stayed abroad, it all had a massive impact on population of Kyrgyzstan. Because in most cases, they are not covered by state social protection systems.

The system of healthcare of Kyrgyzstan, has been going through numerous reforms for the last 20 years, with the help of bilateral trades and supports of World Bank, the Asian Development Bank, World Health Organization, European Union, and Islamic Development Bank. These reforms were certainly somewhat successful, in comparison to the other countries with relatively the same level of income, it made the system much stronger with the medical equipment which were bought within these reform's framework.

The entire country was going thru the state of emergency on March 22, within Bishkek regions as well as Osh and some other parts of the country. Different restrictions were introduced between March and May of 2020, and especially border restrictions with the neighbouring counties which played a major role in declining main sources of income of the whole population.

#### 2 Objectives and Methodology

#### 2.1 Goal

The goal of the bachelor thesis is to define how COVID-19 pandemic situation has impacted the Republic of Kyrgyzstan and its people. What are the sectors that mostly got affected by the situation and how people managed to handle the situation, when social and financial stability has certainly worsened in the whole state. the goal is to describe, what are the sectors that contribute the most to the GDP of Kyrgyzstan and hence analyse, what are the sub-factors that had been impacted by COVID-19 development.

#### 2.2 Methodology

To define the impact of the COVID-19 pandemic, for the author. It is necessary to analyse the consistency of Kyrgyz' economy. That's what the theoretical part is dedicated to. The theoretical background will cover the different macroeconomic aspects and some economic sectors which shape the economy of Kyrgyzstan. Because physical contact between people should be minimized, the author applies a survey, which consists of 16 questions with the multiple-choice answers and 5 additional questions to rate governmental services whilst pandemic. However, some questions could be skipped for the participants, who didn't relate to the certain questions.

All the answers are recorded and based on the number of samplings, the author will be using percentage ratio to make a conclusion, based on each question. However, the economy of Kyrgyzstan is based mainly on the goods and services trade and remittances, hence workers who work abroad and hence, the boarders with the neighbouring countries were closed, the author believes that it mostly impacted the workers who used to work abroad and lost their jobs due to COVID-19 situation. To find-out the survey will be distributed randomly, within the groups and public and even in some institutions in Kyrgyz Republic.

As an additional tool, the author will compare the development of macroeconomic indicators that will demonstrate the impact of COVID-19 on the whole economy of Kyrgyzstan.

The author's assumption is that the main sector of economy such as, Agricultural, Construction, Remittances contribute the most to the GDP of Kyrgyzstan, hence such working labour class has suffered the most, due to lockdown and pandemic situation.

#### 3 Theoretical Part

Kyrgyzstan is a landlocked country, located in the Eastern part of Central Asia. With its population of 6,7 million people. It is a small and opened country with a limited resource base. According to the World Bank (2018) only 7,5 percent of land is arable, and more than 50 percent of area lies at altitudes between 1000 and 3000 meters, and more than 30 % lies at higher altitude of 3000 meters above see-level.

After the collapse of the Soviet Union, in 1991, Kyrgyzstan as the rest of the CIS states has received its independence and turned into an independent democratic state with a mixed presidential – parliamentary political systems, which eventually experienced drastic economic transformations. UNIDO (2018) the sudden liberalization of economy, and loss of fiscal transfers from the Soviet Union and disruption of trade flows between individual republics, among the other macroeconomic factors, led to a massive economic downturn of the whole population. It also experienced difficulties in the economy, due to the repeatedly political turbulences such as in 2005 or 2010.

Therefore, the aftermath of independence, Kyrgyzstan experienced a long-lasting recession, which lead to a complete erosion of an industrial work. Nevertheless, a steady growth was observed in 2005, which allowed country to regain its GDP per capita in 2011. Additionally, the country shifted from a low to lower-middle income group, according to World Bank classification (Choi, Perez & Myburgh, 2014). Regardless of its positive performance, Kyrgyzstan remains the poorest country among all Central Asian countries, after Tajikistan. The whole economy is dependent on the three major source of income, which are highly volatile, the exploration of natural resources, remittances and foreign aids and loans, which places it in a very vulnerable position, and unpredicted external shocks.

The economic growth has been driven for the last decade, mainly by the service, including trade. On the other hand, the contribution of an industrial sector was fluctuated, given a strong presence of natural resources activities. This growth has been insufficient to improve and facilitate the thriving middle class with secure and sufficient income sources to cover the family's living standards and costs, including education and social security. Therefore, the

majority of population remains in poorly paid and low productive jobs. Income distribution is remarkably balanced in Kyrgyzstan society. Its Gini index, according to Word Bank (2018) ranks 5<sup>th</sup> among the top countries, although the living standards are relatively low.

In order for the author to make any assessment of how Covid-19 has impacted the Republic of Kyrgyzstan, it is necessary to cover macroeconomic indicators, which could eventually demonstrate the impact. According to the (Abyshev, 2021) the pandemic has touched all the macroeconomic variables such as:

- GDP
- Unemployment rate
- Exchange rate
- Government Expenditures
- Trade
- Foreign Direct Investments

Additionally, the socio-economic impact is also present in the following.

#### 3.1 Global evaluation of policy frameworks to combat COVID-19

Different strategies and policies were introduced and adopted to cope with COVID-19 and have varied at different stages of severity and lifetime of the pandemic while resources have been limited. It is argued by (Siow, 2020) that such countries as (China, USA, Korea, Japan, France, Italy and UK) were the hardest to be hit by COVID-19. However, considering the level of unreadiness of every state and lack of resilience of hospitals, numerous policies were considered to source the healthcare system with equipment such as personal protective equipment and ventilators due to global shortage. The problem even occurred with bas-spaces in China, hospitals were not ready for such a turmoil and teeming conditions, when diseases was spreading very quick, thousands of people were lying on halls of hospitals waiting for meds to serve (Ranney, 2020). Other industries have also been affected, by shocks of their existence profitability and productivity, especially mining and material extraction industries, were hit by disruption to their operations and increase of global commodity prices (Laing, 2020).

Panic is one of the psychological impacts of COVID-19 which speeded the process of panic buying, which happens for the most part when situations become uncertain at national level, for example for scare equipment or everyday consumer products (Laing, 2020). And that's why in both cases, the fragility and unsustainability of already existing supply chains of global levels were not set-up in a way to handle all the pressure and high-demand peaks. However, that's what (Sarkis, 2020) questions, whether the global economy could afford to return to its initial stages of supply-chains favoured by the healthcare sectors, considering its apparent shortcomings with much needed supplies.

#### 3.1.1 Impacts of global production, exports, and imports

One challenge faced by the healthcare industry is that existing best practices, in developed countries such as (USA, Japan) do not incentivise the stockpiling of essential medical equipment, therefore the majority were financed, some governments needed to take extra steps to protect their supply chain in order to extend their manufacturers like Ford and Dyson, which started the production lines of ventilators, The USA, in particular, activated the Defence Production Act to compel car manufacturers, to focus on production of ventilators (American Geriatrics Society, 2020). Because of high costs and shortage of this vital equipment, Hospitals and suppliers in the US were also forced to focus on global market, because of a chronic shortfall of N95 masks as well as lowered price equipment (Solomon, 2020).

France and Germany have followed the same policies and EU itself imposed restrictions on the exportations of PPEs. Putting many hitherto dependent countries at risk (Bown, 2020). EU and China, based on such circumstances, reduced import tariffs on raw materials and PPE, respectively. With such circumstances of life-threatening results in logistic failures and misallocation of vital equipment and products could breathe a new life, especially when the Blockchain technology was introduced with RFID and IoT, to increase transparency and traceability (Sarkis, 2020). Global cooperation and scenario planning will be needed to implement these types of technologies. Due to such circumstances, EU has introduced the joint procurement project, where competition between member states was reduced. In USA however, states had complained that federal might was used to interfere with the laws and orders, whereas the ventilator exchange program was created (Aubrecht, 2020). However, even with trade

agreements and cooperative frameworks, the global supply chain cannot only be dependent on donations or imports for vital healthcare equipment and this realisation opens doors for localisation of production with damaging consequences for social and environmental sustainability. It could be seen as a case of N95 masks, which only for one night were on high demand to the point when airfreights by private and commercial planes were in action to deliver, as opposed to traditional shipping options by containers (Laing, 2020).

As detailed further, there was a significant reduction in emissions which is connected with traditional shipping, however there was an increase in use of airfreighting, as mentioned above, due to a high demand and urgency of use. Therefore, several countries had to re-think about their global value chains.

#### 3.1.2 Consumer Behaviour

For a long time, there was a mismatch between consumer behaviour tendencies and biophysical realities (Spash, 2020). COVID-19 has worsened the need to reflect on the social impacts and lifestyle of each individual. The consumer behaviour at some point was alarmist, due to panic situations, especially buying food and sanitary products (Aubrecht, 2020). At private level, consumer behaviour has also changed due to difficult access to goods and services, which forced the consumers to re-evaluate their purchasing patterns and needs, with a focus put on most essential items (Spash, 2020). He also argued that technological changes of modern changes brought about by rapid innovation and individual consumerism are most likely to affect the linear economy, which could be seen for example in mobile phone having an average lifetime of four years, which is assume that their manufacture/repair services are constrained by economic slowdown and especially lockdown. On the other hand, the sector of healthcare which would be able to benefit from a mass production of vital equipment is plagued by patenting. Most of the medical equipment were printed on 3D printer's patent infringement in Italy led to calls for (Open-Source Ventilators" and "Good Samaritan Laws' to help with the global emergencies like COVID-19. Around 18,5 % were delivered to Asia countries, at the very beginning, the Republic of China has taken most of the ratio percentage as it was the spot of spreadness of the virus. It is plausible that such moves and policies would help to address

expensive and material-intensive production of critical equipment, via shortage of other industries. (Pearce, 2020).

Fore perspective, it should be noted that production capacity of PPE has been demonstrated by COVID-19 to be limited across many countries, and in some countries having ration facemask production and distribution in factories (Spash, 2020). Livingston (2020) has reported that homemade facemask industry has helped a lot with the protection of mass population and addressed a massive shortage for such product. The pandemic situation will most probably influence the R&D going forward, given the high likelihood that recession will also impact on companies to take short-term views and probably will cancel the production of long-term focus and rather shift its focus on short-term production with a high cash flow and liquidity, as was the case in automotive and aerospace sectors within a previous recession on a global level.

#### 3.1.3 Negative impact of COVID-19

Undoubtedly, COVID-19 first and foremost represents a ferocious pandemic and a human tragedy that swept across the globe, resulting in a massive health crisis (WHO, 2020) and social orders and insane economic loss (IMF,2020). It has created a substantial negative impact on the global economy, where firms, government and individuals had to adjust (Spash, 2020). Indeed, the COVID-19 pandemic has distorted the world's economy, proving the absolute lack of resilience of the dominant economic model to respond to unpredicted shocks and crises. It has exposed the weakness of a global supply chain network and over-centralization of production and fragility of global economy and showed to the world the weak links among different industries, which had a direct impact on employment claims, and international tourism with transportation sectors, where in both flights were canceled. With the transportation problems the food security system has also disorder, due to lock down and border restrictions. To some extent, some of the measured which were implemented across the globe have resulted in the flattening of the COVID-19 curve (Figure 3).

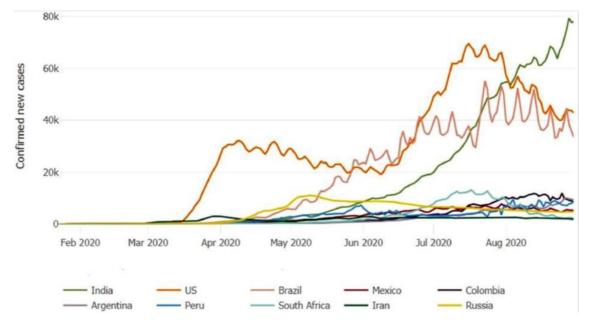


Figure 1: Confirmed cases of COVID-19, daily.

Source: JHU (2020).

Nevertheless, with the massive job loss and inadequate income inequality, the global poverty will be most likely to increase for the first time, from 1998. An estimation considers around 49 million people who might be placed in an extreme poverty due to COVID-19, with the hardest impact in Sub-Sahara Africa.

According to the United Nations' Department of Economic and Social Affairs concluded that COVID-19, is more likely to create a massive inequality, global unemployment, and discrimination in a long and medium term, if not properly used by the effective policies and instrument measures (UN DESA, 2020).

#### 3.1.4 Impact of COVID on global supply chain and international trade

COVID-19 negatively affected the global economy, by reshaping supply chains and different sectoral activities. COVID-19 is negatively impacting the global economy by changing supply chains and industry activities. Supply chains naturally suffer from fragmentation and geographic dispersion. However, globalization has made them more complex and interdependent, making them vulnerable to disruption. According to an analysis by the U.S. Institute of Supply Management, 75% of companies reported disruptions in their supply chain

(Fernandes, 2020) triggered by a crisis stemming from the misunderstanding and flexibility of multiple levels of their global supply chains, and a lack of diversification in their sourcing strategies (McKenzie, 2020). Consequently, it impacts both, exporting and importing countries and the example is the obvious lack of output for their local firms and unavailability of raw materials (Fernandes, 2020). Which eventually will lead up to the creation of momentary "manufacturing deserts" and that's exactly when the output of a country drops significantly, turns to a zone of restriction to source anything but food items and drugs.

The major problem of the stoppage of a supply chain is that China has established it-self as a dominant player of export, in goods and services in the global supply chain and hence economy (McKenzie, 2020). As per project of WTO, the decline was over 32 % in global trade. For example, globally it was witnessed a huge downturn due to reduced Chinese imports and the subsequent fall in global economic activity. This is evident because of 25<sup>th</sup> of March 2020, the global trade fell by 3,6 % comparing only to the year of 1980, where the fall was 4,2 %.

Aviation sector has experienced the hardest times of all while COVID-19 pandemic, with all the restrictions in mobility and aviation activities. (IEA, 2020).

#### 3.1.5 Impact of COVID-19 on sustainable development goals

In 2015, the United Nation has adopted 17 sustainable development goals (SDGs) in order to improve the livelihood and natural world by the year 2030, where Kyrgyzstan has signed for it as well. The organization of SDGs has promised on two main point of the pact, where globalization was the main and retain and improve the economic development of all countries. However, COVID-19 has literally destroyed its plans, where several main reasons were covered above, in the Chapter N 3.1.2 and 3.1.3.

#### 3.1.6 Positive impact of COVID-19

COVID-19 has provoked some natural changes in behaviour and attitudes with positive impact on the planet. Nonetheless, to some extent that the trends discussed below, were imposed by the pandemic.

Improvement in air quality, due to the induced lockdown, industrial activities as well as air pollution have actually dropped, causing significant amount of air pollution reduction, from exhaust cars, power plants and other fuel sources, combustion emissions across the globe, which allowed to improve air quality. This is certainly seen on the Figure 2, where Earth Observatory pollution satellites showing huge reduction in air pollution in China and some of the European countries. Air pollution reduction was noticed by 20-30 % in China and low concentrations were noticed in India by 25 %, Rome, Milan and Madrid have all experienced a fall of 45 % and Paris has recorded the most, 54 % of reduction. (See, Figure 2.) The Figure-2 highlights the fact that people's current lifestyle has a heavy reliance on fossil fuels-based transportation system has a significant consequence on the environment and wellbeing extension. As a result, this pollution over time is responsible for respiratory diseases, coronary heart disease, lung cancer and asthma (PHE, 2020)

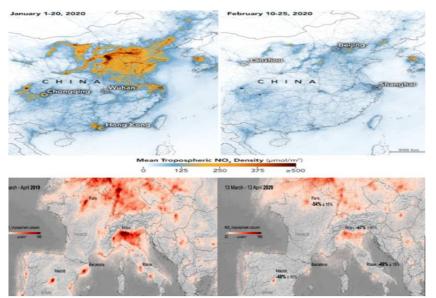


Figure 2: Air pollution reduction, January - February 2020.

Source: NASA (2020).

#### 3.1.7 Decline in primary energy use

Global energy demand within a first quarter of 2020 fell by 3,5 % with a comparison to the 2019, with a significant impact which was recorded in March as control efforts elevated in North America and Europe (IEA, 2020). The International Energy Agency (IEA) has said that

if the reduction measures in the form of traffic restrictions continue for a long time, and the economic recovery is slow in various parts of the globe, with increasing probability, annual energy demand will fall to 6%, leading to the fall of the last five years of energy demand growth. The world could have experienced a plunge in a global energy use to such level which was no recorded in the last 70 years. The impact has surpassed the global financial crisis by more than 7 times, considering percentage ratio. Coal was reported have been hit the hardest by 8 % in comparison to the first quarter, because of the COVID-19 impact, Chine whose economy is driven by coal and exported to Kyrgyzstan directly, within the bilateral trade. Oil demand was also reduced by 5 %, comparing first quarters of 2019 and 2020, mainly due to restrictions in mobility and aviation activities which constitute 60 % of global oil demand (IEA, 2020). Kyrgyzstan is highly dependent on oil reserves, hance it has impacted the GDP of Kyrgyzstan by 23,5 % within a first quarter of 2020. (Imrashev, 2020). Global electricity demand declined by 20% during full lockdown restrictions, with a spill over effect on the energy mix. Therefore, there was a high decline in all resource's usage such as electricity, gad, coal, and nuclear power.

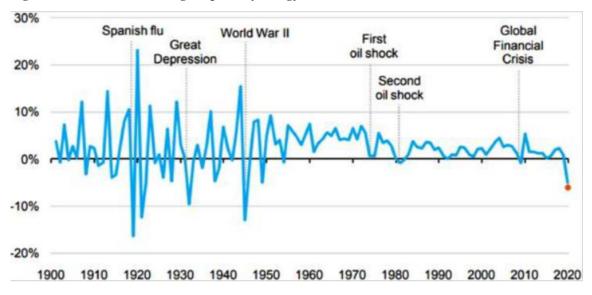


Figure 3: Annual rate of change in primary energy demand

Source: International Energy Agency (2020).

# 3.2 Overview of economic situation, industrial development, and trade in Kyrgyzstan

Kyrgyzstan is located the Central Asia, bordering in Kazakhstan, China, Tajikistan, and Uzbekistan. Kyrgyzstan is rich in mineral resources however negligible in oil and natural gas, which it imports from Kazakhstan and China, where it is value-added product. There are sustainable deposits of coal, gold and uranium and other value metals. It is located among several big rivers of Central Asia (Naryn, At-Balhi, Talas, Chu and etc.) and that's why water is the main natural resource, however the natural capital has been deteriorating for the past 8 years and the problem includes abandoned uranium, waste disposal around the rivers and extensive mining (Szirmai & Verspagen, 2015).

Manufacturing usually acts as the engine of growth in developing countries (UNIDO, 2018). Environmentally stable and rapid economic growth should be the main priority for Kyrgyzstan. Diversification supply chains are fundamentals for a continuous economic growth (ADB, 2018) UNIDO, 2018). Kyrgyzstan must build its economy with the current competitive advantage and strive to expand its manufacturing base and integrate into regional and global economic networks. In doing so, the country would compromise on environmental quality and preserve its natural capital for the future generation. In order to achieve such results, the country should adopt more efficient environmentally friendly and less resource-intensive production technologies, unfortunately in the beginning it should be done through the outsourcing services, and as an option, within bilateral trade with China, it is quite doable.

The nominal gross domestic product (GDP) of Kyrgyzstan in 2017, was 7,6 billion USD, the annual growth of GDP over the last 5 years was 5,5 % (In 2017, 4,6 %) (World Bank, 2018). Kyrgyzstan records a negative trade balance in the year of 2018 people, a particular sizable disparity is observed in trade with China. Although the level of imports is relatively low, they are rising rapidly as domestic demand is artificially boosted by inflows of foreign aid and loans.

The national Statistical Committee of the Kyrgyz Republic has highlighted industrial sectors that contribute the most to the economy:

#### Mining

- Manufacturing
- Electricity, gas and stream production, distribution, and supply
- Water supply, waste treatment and disposal
- Construction

The overall industrial contribution is accounted for 26 % in 2018.

Economy Sector

Agriculture, forestry and fishing

Mining

Manufacturing

Electricity, gas and steam production, distribution and supply

Water supply, waste treatment and disposal

Construction

Figure 4: Contribution of major sectors to Kyrgyzstan's GDP in 2018

Source: Own processing in Excel, based on data of National Statistic Committee of the Kyrgyz Republic, 2019.

Kyrgyzstan's economy depends heavily on gold mining and more specifically Kumtor Gold Mine, the 5th largest pit gold mine. However, it introduces the following problems overall, dependence on the performance of every enterprise implies a high-risk exposure to extraction rates and global commodity prices which are significantly volatile towards GDP, additionally, the mining sector generate less jobs per unit of output (in Kyrgyzstan, there are 3 000 thousand

people who are involved in the mining sector (Manley & Kulova, 2018) and it increases the burden on the natural environment.

A significant component of national income is formed by remittances, another words labour migrants working in Russia, United States and Kazakhstan, there are over 800.000 Kyrgyz migrants' workers who work abroad, where 80 % are in Russia, 4,7 % are in Kazakhstan and 3,9 % are in Turkey, USA 1,8 %, and the rest 6.6 % prevail in other states. However, the annual volume of remittances contributes to an economy approximately by 35 % of Kyrgyzstan's GDP (Kabar, 2018). The amount which was transferred in 2017 by migrants accounted for 2,21 million US dollars, 27 % more than in 2016, in 2019 the growing trend continued.

Re-export of products of Chinese origins to Russia is another re-selling factors that contributes to the dynamism of the Kyrgyz economy. A large share of Kyrgyzstan's garment export to Kazakhstan and Uzbekistan is the fact due to re-export. For example, crude oil is imported from Kazakhstan, refined by Kyrgyz companies and that partly re-export or consumed domestically.

Kyrgyz has a very weak financial system because its system is mainly based on cash-based economy. It is due to a lack of trust in the Kyrgyz Som as evidence by the country's high degree of dollarization. The Government of Kyrgyzstan faces the twin objective, keep the stability of macroeconomic and foster good conditions for industrialization and external competitiveness. According to the national bank of Kyrgyzstan, it follows the inflation rate targeting regime with a floating exchange rate permitting occasional interventions and excessively smooth volatility of Som exchange rate, together with the fiscal consolidation. As an example, in 2017, the real inflation rate in consumer sector was only 3,7 % (Statista, 2018).

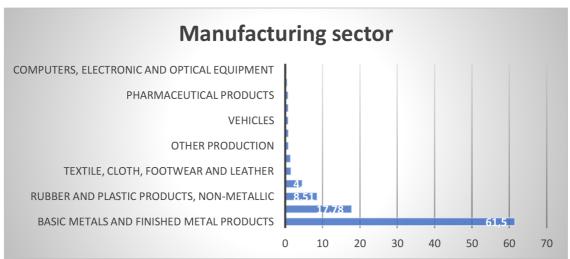
Kyrgyzstan receives a financial aid and loans from international donors such as World Bank International Monetary Fund and Asian Development Bank, Eurasian Development Bank and European bank of Reconstruction and Development and many more (Achkabar, 2016). Additionally, the financial support stems from the agreement signed by Russin-Kyrgyz Development Fund (RDKF), in 2018. In June 2018, the establishment of the joint Kazakhstan – China Eurasian Nurly (Bright) Investment Fund was signed (Qayaq Times, 2018), which included China, Japan, Germany, Switzerland, United States, Great Britain, Turkey, Denmark,

and Russian Federation. Between 2010-2016, Kyrgyzstan received 3,51 billion US dollars where 86 % of them were loans, and 14 % were grans, where the majority goes to the social sector support to cover budget deficits and renovate infrastructure, transport, and energy (Achkabar, 2016). The public debt is growing; hence country's default risks is increasing, and attractiveness of foreign investors are decreasing. The major sectors of manufacturing in Kyrgyzstan are:

- Production of basic metals and finished metal products (expect machinery and equipment)
- Production of food products, beverages, and tobacco products
- Production of rubber, plastic, and non-metallic minerals products
- Production of coke, refined petroleum
- Production of textile, manufacture of clothing and footwear, leather and extra

Mining is occupied by commercial exploration of the Kutmor gold mine, operated by a Canadian mining company, as well as smelting the gold ore and downstream activity. Gold mining and smelting account for over 7-10 % of Kyrgyzstan's GDP and about 45 % of the country's total export of goods (UNIDO, 2018). The correlation is seen in the following manner, the GDP has been growing when the growth of these activities was as well, while other industries kept on stagnating, with exception of non-metallic products, as well as food products, including beverages and tobacco products.

Figure 5: Manufacturing sector



Source: Own processing in Excel, based on data of National Statistic Committee of the Kyrgyz Republic, 2018.

Based on its locality, Kyrgyzstan's main trading partners are neighbouring countries: China, Russian and Kazakhstan. Political tensions with Kazakhstan resulted in border control and restricted bilateral trade, which led to a loss by export-oriented firms, especially companies who focus on perishable Agro-food products. Drivers of growth, in export include exports of glass, precious metals, non-monetary gold, dried fruits and butter. The import rise is based on fabrics, ceramic products, vehicle tires, medicines, and petroleum products (UNIDO, 2018) See Figure -5.

Foreign Direct Investment Inflows, totalled in 590,5 million US dollars, a reduction of 28 % as compared to 2016. This is because the annual flows are typically associated with a small number of high investment project. Main economic sector's activity is based on: FDI flows, manufacturing (46 %) professional, scientific, and technical activity (21%); financial sphere (13%). However, Abdolvand (2014) claims that reginal instability, weakness in legislative frameworks, administrative procedures might decrease FDI's attractiveness.

#### 3.3 Macroeconomic changes of Kyrgyzstan, 2019-2020

#### 3.3.1 External impact

There are mainly external channels which pandemic hit, and overall disrupted the socioeconomic life.

- Border closure
- Trade measures
- International prices
- Pandemic effects of neighbouring countries

All lad borders have been closed between Kyrgyzstan and neighbouring countries, the borders with the PRC were closed in January 2020, because of Chinese New Year and it kept on being close after a break-out of the pandemic. All imports from China have been stopped which were the main source of consumerism, which provided important inputs for the Kyrgyz garment

industry and re-export businesses have significantly contributed to the taxation system. The key boarders of crossing points for freight cargos (primarily agricultural products, food, and consumer goods) that Kyrgyz Republic shares with Kazakhstan (Ak-Tilek and Chon-Kapka) with Uzbekistan (Dostuk and Kyzyl Kiya, and with Tadjikistan (Kazylbek, Guliston, Karagach and Madaniyat). However, at least air cargo was functioning without restrictions and only 1 day a week, with the checkpoint of Manas-Airport). However, all passenger traffics with all the mentioned states above were closed.

In terms of trade measures, the Government of the Kyrgyz Republic on 22 March 2020 introduced a 6-moth ban on exports of wheat, flour, and some other foods as well as disinfection materials. Next, on 31 March 2020, the Eurasian Economic Commission introduced a ban till 30<sup>th</sup> of June 2020, on the export of selected grains and vegetables. More importantly, it was not affecting Kyrgyz Republic as the country generally doesn't export these products on wheat grain and flour. However, it imports most of the consumer products from Kazakhstan, it has slightly affected the security food.

International market prices for three commodities are crucial for balance of payments of Republic of Kyrgyz. Gold is the country's main export commodity, food a key import and export, oil which drives economic growth in the Russian Federation and Kazakhstan, the Republic of Kyrgyzstan has two migration partners. Gold prices in May 2020 reached to 1,700 USD per ounce, which recorded an increase compared to the year 2019. Due to the higher prices of this commodity, the country's export revenue for the first 4 months of 2020 reached 3 % increase, which was higher than in 2019. Therefore, the prices for food in 2020, according to Food Price Index, were down for 6 % in April of 2020, comparing to May of 2019. Oil prices fell drastically in March 2020, close to 15-29 \$ per barrel, at least the reason was clear, due to falling demand caused by lockdown and global pandemic.

IMF (2020) predicts that the GDP is expected to fall in Russian Federation, 6.6 % and in Kazakhstan by 2.5 %. The service and construction sectors of these economies where most of the migrants from Kyrgyzstan work, which experienced the shocks of even worse magnitude. The balance of payments, it has declined by 25 %, due to decline in remittance inflows for

Republic of Kyrgyzstan within the first five months. Due to these trends, exchange rate with the Russian ruble and Kazakh tenge sharply depreciated within the first five months of 2020, pressuring the Kyrgyz som.

#### 3.3.2 Internal Factors

Internal factors are presumed to have direct effect of COVID-19 as well as the government's decisions of a lockdown and associated measures. The first infection was registered in the Republic of Kyrgyzstan on 18 of March 2020. With total confirmed people who were diagnosed with COVID-19, were 35 805 thousand on 31 of July 2020. Most of the people who were diagnosed with the coronavirus disease, were health workers, highlighting the gravity of the pandemic's threat to the country's health system. The peak of the confirmed cases were from mid of June, with the increased number of cases by almost 600 % within 2 weeks. The similar cases were also monitored in the neighbouring countries, Kazakhstan and Uzbekistan. Around 70 % out of total confirmed cases, were recoveries with infected individuals discharged from treatment facilities.

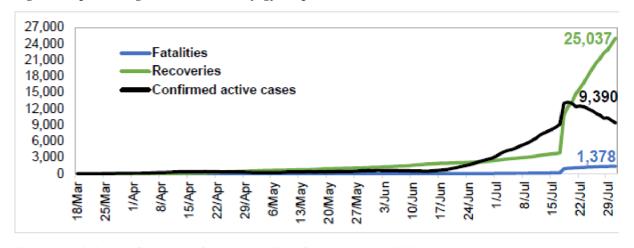


Figure 6: Epidemiological trends in the Kyrgyz Republic

Source: Ministry of Health of the Republic of Kyrgyzstan (2021).

On 22 of March 2020, the government of Kyrgyzstan declared an emergency situation for entire country, meaning strict limitations on the movement of people and requirements to abide by social distancing rules. It resulted in a temporary closure of many micro, small and medium-

sized enterprises (MSMEs), along with some larger educational, recreational, and cultural sectors have been either closed or have transferred to remote working modes.

#### 3.3.3 Economic crisis

The GDP of Kyrgyzstan ranging for 2000 – 2019, was 4,4 % on average annual growth, however, the growth has been volatile, due to political, economic, and other shocks. The key drivers of growth for recent years included private consumption > 100% GDP and investments in fixed capital >30 % GDP, with much of fixed investment taking the form of construction spending and which was mainly financed due to remittances and borrowings from external sources. The IMF forecast predicts a 12 % decline in GDP, while ADB's estimation of GDP decline was only 5 %. Such a decline might severely impact the Republic of Kyrgyzstan's prospects in achieving a few SDGs, including goal 1. Poverty eradication, food security, decent employment, and shared prosperity.

Since the GDP consists of supply and demand factors, the author will cover each of them individually, (Asian Development Bank, 2020)

#### **Supply shocks**

- Boarder closures with PRC, which imported of PRC machinery, inputs and mainly consumer goods, which eventually will be expensive.
- Closure of all boarders, for movement of people, which impacts the tourism sectors and arrival of worker's home.
- Kyrgyzstani migrant workers who returned home in winter season and are unable to return for their jobs to Russian Federation.
- Increasing prices for imported goods hence increasing financial risks and debt servicing costs.
- Lockdown in Bishkek and Osh, and other parts of the country which stopped economic activities in urban areas as well as social distancing measures.

#### **Demand shocks**

- Sharp decline in remittance inflows (25 % decrease within the first 5 months of 2020),
   which reduces housing spending on residential construction as well as many high-end consumer goods and services
- Income decreases of households and reduce of domestic demand in general.
- Government revenues shortfall, reduction in public spending on goods and services
- Reduction in demand for Kyrgyzstan tourism services due to border closure and reduction in international air travels.

#### **Fiscal situation**

The budget of Kyrgyz Republic covers the budget of the central government (republican budget) budgets of cities, towns and rural municipalities or even local budgets and several extra budgetary funds. According to IMF (2020) estimates, general government revenue and expenditure were at 34 % and 34, 4 % of GDP respectively. More than 85 % of government revenues typically come from domestic sources as taxes and social contributions and nontax revenue. In 2019, foreign grands stood at 2,2 % of GDP, foreign aid in different forms financed about 12,5 % of general government expenditures, which is

However, the deficit of the external financing has increased as well, as per Revised year of 2020, which is indicated in the Figure – 7. An overall budget balancing decreased drastically.

The government of Kyrgyzstan has taken the situation very seriously and is now applies different measures to combat anti-crisis situation. Government has provided a tax relief on debt service due in 2020. Relief measures are also parts of property tax for taxpayers who suffered from COVID-19, however it needs to be properly evaluated as these taxpayers belong to more economically advantaged segments of the population.

Figure 7: Key Parameters of the Supplementary Republican Budget for 2020, Som Billion.

	2019	2020	2020
	Actual	Original	Revised
Others (Kumtor tax, sales tax, domestic excises)	12.5	14.7	13.8
Official transfers	13.5	9.7	12.8
Nontax revenue	29.1	26.1	25.7
Total expenditure	149.3	171.7	163.0
Compensation of employees	47.7	59.3	58.8
Purchase of goods and services	19.4	24.0	21.1
Transfers to extra-budgetary fund, local budgets	34.7	36.1	36.5
Social benefits	9.9	9.9	10.2
Capital investments	26.5	29.6	23.7
Other expenditure	11.0	12.7	12.8
Deficit	-0.9	-8.0	-27.7
On-lending to SOEs	3.2	5.3	20.5
Overall budget balance (deficit less on-lending)	-4.1	-13.3	-48.2
External financing	2.9	4.8	38.5
New loans	13.1	16.7	51.6
Repayment	-10.1	-11.8	-13.1
For reference:	•		
Nominal GDP	590.0	667.1	583.2
Health expenditure financed from the republican	14.3	15.6	18.1
budget (including transfer to the Fund for Compulsory			
Medical Insurance)			

Source: Own processing, based on the data retrieved from Government of Kyrgyz Republic, statista.kr.ai

#### 3.4 Socioeconomic impacts

The republic of Kyrgyzstan and its key economic sectors include trade and consumer services, around (18 % of GDP), manufacturing (14 % of GDP), agricultural (12 % of GDP) and construction has taken 10 % of GDP. Appendix 1.

Government services such as education, administration, health, and culture are also significant. While all sectors contribute to the 4,8 declines in GDP as per report of January – May 2020, shocks to constructions and service sectors have been particularly significant.

#### **Agriculture**

Although COVID-19 impacted agricultural production less than other sectors, WFP monitoring shows that movement restrictions have prevented almost a quarter (23%) of farmers surveyed

to start planting processes on time. According to WFP, the proportion of farmers reporting difficulties accessing irrigation water rose to 25% in 2020 (up from 14% in 2018). In addition to drought conditions, quarantine-related cuts in irrigation services may have contributed to this increase. According to the reports of the Ministry of Agriculture, late frosts in April (especially in the southern regions) could significantly affect some crops (especially fruits and vegetables). However, field work is reportedly continuing as planned, even in closed rural areas. Imported raw materials such as diesel fuel for agricultural machinery from the Russian Federation, fertilizers and potato seeds from Uzbekistan, continue to arrive despite rising import prices and border closures. However, it should be noted that most of the seeds are locally produced. Nevermore, it has significantly affected the sales, as some markets have been closed and became difficult to access. Agricultural producers had to turn their financial sector for loans to fund its operational costs to cover, for the spring season. Loans are readily accessible, but became way more expensive, which raised concerns about possible repayment burdens for farm households and increases in nonperforming bank loans. Some sectors have been drastically affected, such as fishery, however their share in the agricultural output is very small, Szirmai & Verspagen (2015).

#### **Industry**

About 40% of the total industrial production in the Kyrgyz Republic, which decreased by almost 3% in the first 4 months of 2020, is provided by only one enterprise: Kumtor Gold Company. COVID-19 did not affect the profitability of this venture. Although the company's production plans for 2020 assume a 7-13% decrease in gold production compared to 2019, a decrease in the company's revenue and tax payments should not be expected, taking into account the increase in gold prices observed in 2020. In addition, in 2020, the second large Jerooy gold mine is about to start gold mining. However, some other mining operations have been delayed due to border closures, which have prevented skilled foreign workers (e.g employees of PRC mining companies) from returning to the Kyrgyz Republic. In fact, this led to a temporary halt in the work of such enterprises.2 To solve this problem, the government allowed foreign specialists to return to the country from April 17, 2020 (Tazbek, 2020).

#### Construction

The sharp contraction in government revenue and the emphasis on supporting service delivery and public sector revenue is expected to lead to a 15% reduction in capital investment in 2020. Domestic and foreign private enterprises engaged in investment activities are mainly large entities and are less vulnerable to COVID. -19 corresponding funding cuts. On the other hand, housing investment is primarily funded by remittances and household savings and cutting both can cut housing spending by as much as 50%. Considering all this, the expected decline in construction volumes and value added in 2020 is projected at the level of 22% - in January-June, a decrease in investment in fixed assets by 14.8% was recorded, according to the National Statistics Committee.

#### **Services**

The trade and consumer services sector of the Kyrgyz Republic has been the hardest hit by the COVID-19 pandemic. It is concentrated in Bishkek, Osh and Karasuu, where quarantine has paralysed the retail and wholesale trade in non-food products, as well as household services such as car and apartment repairs, hairdressers, dry cleaners and others. Much of this sector generates income through the Dordoi and Karasuu markets, which have been closed for several weeks due to the quarantine. These markets, especially Dordoi, have been hit hard by border closures, which have significantly undermined their position as a re-export center in Central Asia. The reopening of these borders is not expected anytime soon, preventing visitors from Kazakhstan and Uzbekistan from visiting markets and limiting supplies through the Torugart border crossing on the Kyrgyzstan-PRC border

#### **4 Practical Part**

#### 4.1 Evaluation of a survey

Based on the survey which the author run with the help of social media like telegram and vkontakte which gathered 603 participants, but 3 participants eventually deleted their results and denied participation in the middle of a survey but additionally, 250 participants took part in the survey in Kyrgyzstan, on a paper.

The results are the following, 850 participants took part overall, where 541 were males and the rest 309 participants were females, which is shown below on the Figure -8.

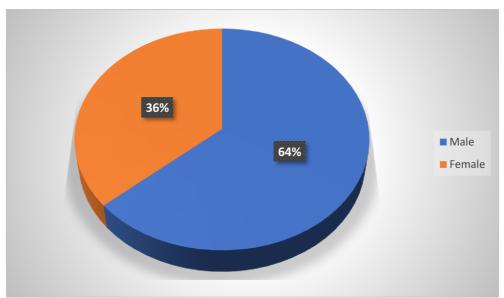


Figure 8: Gender of participants, % ration

Source: Own, excel.

The gender category varied from 15 up to 67 years old, I took a limit of a gender, because in Kyrgyzstan, according to the constitution, people can work from 15 years old and till 67, which is considered to cover the age when people get retired. As it has been mentioned above, most respondents took part in online survey (600) and the rest were taken by distribution of papers (250). The majority of participants were aged from 27 – 47 years old (523 people), which is considered to be middle-age labour class. The student's age was accounted for 15 %, which is also a high number of 126 people, See Figure – 9.

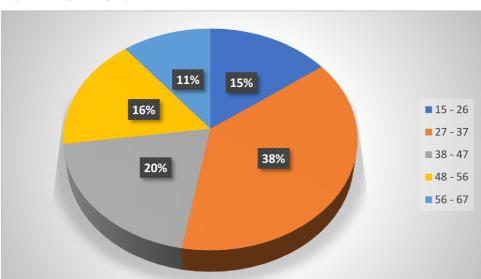


Figure 9: Age category, % ratio

Source: Own, Excel.

The following question related to the region or residency of participants where they live. As Kyrgyzstan is, most of the participants were from Bishkek and Osh areas of Kyrgyzstan, however each region is divided by sub-regions and include small cities and villages like (Osh –Ak-Burra – 33, Ak-Tilek -49, Alybek–Datka – 15, Amir–Timur – 88, Dustuk – 12, Manas–Ata – 11) overall accounted for 209 numbers of participants and (Bishkek– Ak–Bata – 105, Ak-Bosogo –211, Ak-Ordo – 35, Ak-Orgo – 88, Bakai-Ata – 115, Kok-Jar – 87) overall accounted for 641 participants.

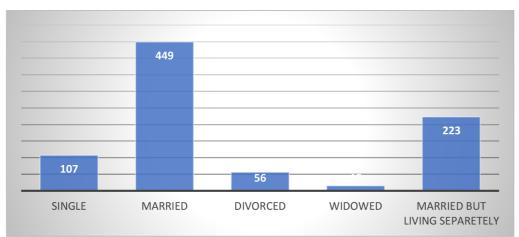


Figure 10: Martial status of participants

Source: Own, Excel.

Based on the sample gathered, most of the participants were married which accounted for people of 53 % of the total sampling, followed by married people but living separately, 26 % which is it total 79 % of the whole population. The sampling group in this case potentially could explain the reality of COVID-19 impact of social and financial aspects of adult's lives. The highest educational level achieved of the total sampling is the following: Bachelor's degree had been received by majority of the sampling group, which is 387 people (46 %) together with the higher educational diploma, 143 people (17 %), the rest could be describe together as the secondary and incomplete secondary education (38 %).

In terms of employment of the population the results were the following, See Figure -11.

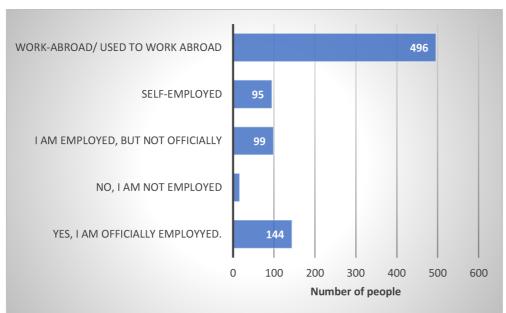


Figure 11: Employment of population

Source: Own, Excel.

Most of the population was employed abroad for the past 3 years, 496 people (58 %), while an ongoing pandemic and lockdown restrictions. However, the rest could be considered as employed within the territory of Kyrgyzstan, which accounted for 40 % for self-employed, unofficially employed and officially employed (40 %).

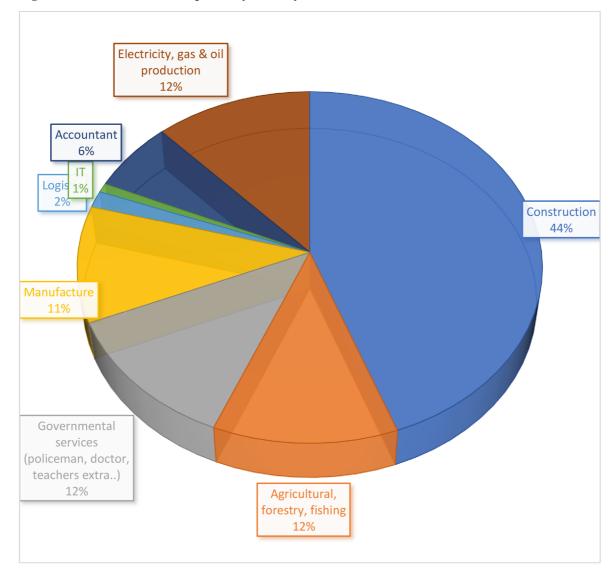


Figure 12: Distribution of occupation by industry

Source: Own, Excel.

Based on the Figure – 12, most of the participants are involved in the construction sectors. Followed by, agricultural, forestry and fishing and electricity, oil & gas production. The construction sector's involvement, based on the sampling is accounted for 377 people (44 %) and followed by 100 people on average, for the mentioned sectors.

The population of Kyrgyzstan is used to migrant to other states for the job opportunities, especially, after COVID-19 pandemic situation, when economy tries to recover. It is confirmed

by the following questions, See Figure -13, out of 850 people, 607 have migrated abroad for the past 2 years.

Have you migrated abroad for the past 2 years?

29%

71%

Yes No

Figure 13: Migration rate, based on the sampling

Source: Own, Excel.

Here, the author had to distinguish the following, people who have migrated abroad for the past 3 years were asked the additional questions, (607 people). First of all, the author needed to define where to, participants have migrated, most of them migrated to Russian Federation and Kazakhstan, which accounted for 77 %, all together.

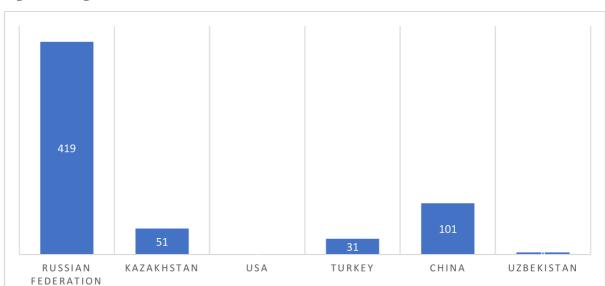


Figure 14: Migration to another countries

Source: Own, excel.

The following two question conserved the reasons of migration to another countries.

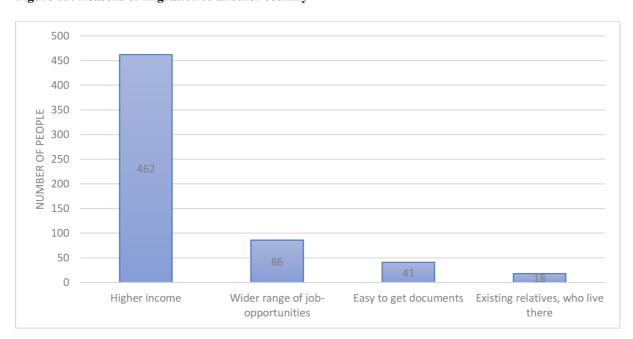


Figure 15: Reasons of migration to another country

Source: Own, excel.

Most of the participants chose to migrate due to monetary aspects, to get a job, hence earn money and make sure their family can get by, with the certain circumstances that COVID-19 had created for the population of Kyrgyzstan. The following questions, also relates to the reason of why the left Kyrgyzstan for the past 2 years, whilst ongoing pandemic and lockdown restrictions, See Figure – 15 and 16. Figure – 16, confirms that the financial situation and unemployment rate had been increasing when the lockdown was announced by the government. People had to live their countries and find a job. These two Figures are correlative.

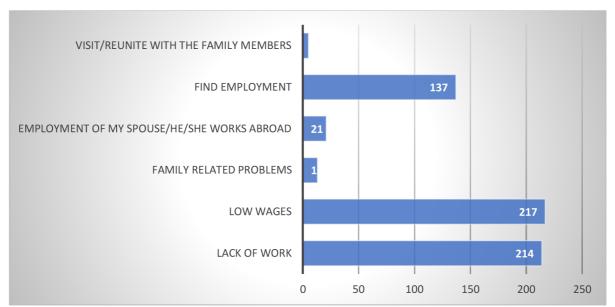


Figure 16: Reasons of living Kyrgyzstan while ongoing pandemic

Source: Own, excel.

Figure N – 17 is related to a question of whether people were employed when the pandemic was announced. 30 % of participants (256) were fully employed when the lockdown was announced and kept their employment while pandemic. 25 % participants lost their jobs when the lockdown was announced immediately (217), and the rest were either unemployed or employed abroad, which accounted for 35 % (301) and 9 % (78) participants. Based on the total sampling size of 607 people, 25 % of them lost their jobs immediately when the pandemic was announced, which is quite high percentage ration.

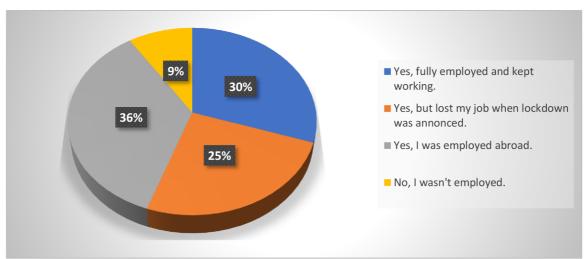


Figure 17: Employment when lockdown was announced

Source: Own, Excel.

The next question was mainly focused on why people returned, again, the sampling size of participants has decreased from 850 to 607 participants (See Figure - 18). And most of the participants returned home due to lost jobs and firing, hence COVID-19 has impacted on the sampling group very severely, even abroad people lost their jobs and only 10% (66) participants stayed abroad and kept working.

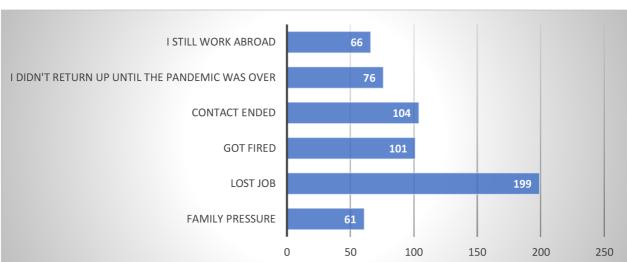


Figure 18: Reasons of returning home

Source: Own, Excel.

Figure – 19 indicates how COVID-19 has impacted every participant, most of them were affected by the COVID-19 hardly, as 48 % (411), followed by "Prefer not to answer" which questioned the author, whether it could mean a negative impact or people just didn't want to express their feelings, as it might impacted them even worse, accounted for 38 % (321).

PREFER, NOT TO ASNWER 321 NOT AT ALL **INDIFFERENT NOT SO MUCH** 88 **VERY MUCH** 411 0 50 100 150 200 250 300 350 400 450

Figure 19: Covid impact on participants

Source: Own, Excel.

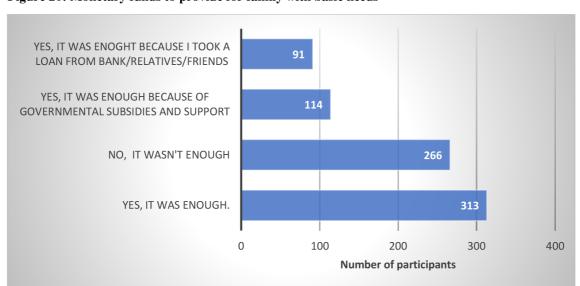


Figure 20: Monetary funds to provide for family with basic needs

Source: Own, Excel.

Since COVID-19 has impacted the employment rate all over the world. It is quite logical to consider that households struggle with monetary funds to cover-up their expenses. That's what Figure – 20 indicates. Based on the responses, 37 % (313) claimed that they had enough money to cover-up their expenses, however the rest of the sampling respondent that they would either take bank loans or get subsidies from the government, the author decided to put all 3 categories together as it shows all the negative impact of COVID-19 in relation to income, which is accounted for 55 % (471).

When the lockdown was over, on 7 of August 2021, the government announced about stopping the lockdown and people were able to move freely, however some sectors were still limited in order to monitor the riskiness of virus spreading. The next question concerned how much time it takes for people who is unemployed to this date (4.3.2022), Figure – 21, indicates the following, there were 211 people who were unemployed, which is 24,6 % of the whole sampling size (850 people). The sampling group is divided quite equally, so on average it took 1-6 moths to find a job, however, there are people 19 % (41) who are still unemployed.

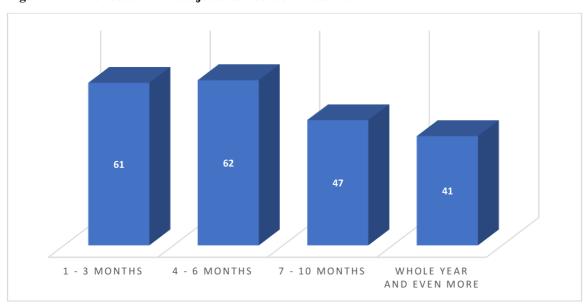
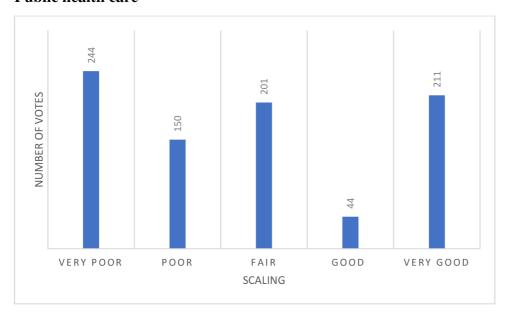


Figure 21: Time needed to find a job after lockdown was over.

Source: Own, Excel.

The following questions were about rating on the scale of "Very good" to "Very Poor" the quality of social services that government had been providing whilst pandemic. The Figure below indicated very unequal results; however, the author opinions is that the main two regions of Kyrgyzstan are Osh and Bishkek which is shown on Page 34. Most of the villages had difficulties to reach out to the hospitals which are located in the bigger cities, due-to lockdown and restrictions. That's why some people responded that "Public health services" provided on a relatively good level. But as it is shown that most people claimed that the services were at a poor level 46 % (394) the rest people claimed that the services were on a fair level.

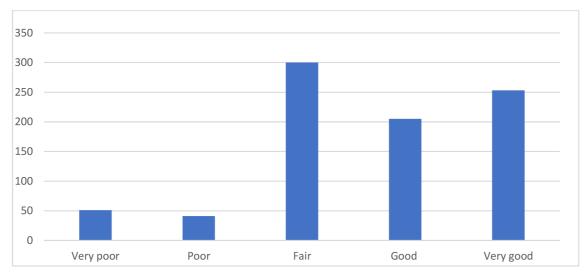
#### Public health care



Source: Own, Excel.

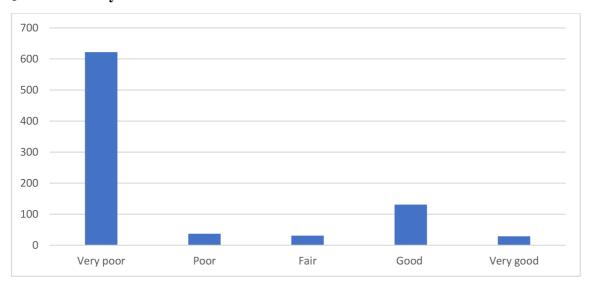
The next scaling questions concerned housing utilities, such as heating system, electricity, and water supply. Where, majority of participants were satisfied with the utility services as per 89 % of respondents, which accounted for 758 people, which could tell that government didn't cut any supply in heating systems and overall utility services for the population to save money. On the other hand, prices were also stable and didn't raise-up.

# **Housing Utilities**



Source: Own, Excel.

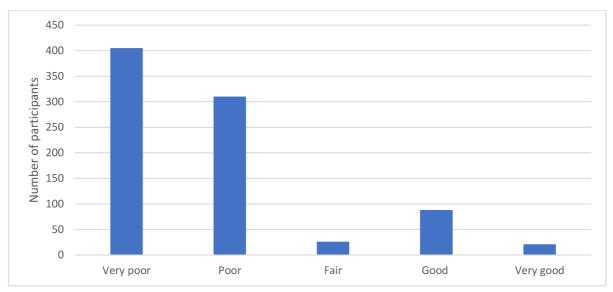
# Job availability



Source: Own, Excel.

Apparently, the COVID-19 had a massive impact on job positions, suddenly after an announcement, the unemployment rate has increased, as many manufacturers turned their productions down.

# Food availability



Source: Own, Excel.

Food availability become a problem, as many participants around 84 % (715 participants). Due to closed boarders, the import of food became limited to Kyrgyz Republic from the neighbouring countries such as Kazakhstan, China, Russian Federation and even Japan.

### **5 Discussion**

The survey results can show that the COVID-19 pandemic has negatively impacted both women and men in the Kyrgyzstan Republic, having particularly increased the burden on every household of Kyrgyz Republic.

Economic crisis, restrictions, and closure of boarders, overloaded healthcare system and social system and distant learning for kids, students, and all levels of educational institutions. However, based on the theoretical framework, the economy of Kyrgyzstan is highly dependent on the remittances of workers who mostly work abroad, according to the survey, from the whole sampling of 850 people, 607 people have migrated abroad for work, mainly to Russian Federation, and the occupation of work in this state is mainly linked with the construction work, as it can also be seen that participants who is involved into the construction sector is the most out of all. The reasons are quite clear, as the unemployment rate in Kyrgyzstan was around 6,5 % but has drastically increased to 15,7 % in 2020. Which can certainly be confirmed by the Figure – N16, where people indicated their reasons.

To compare an economic situation, the migration rate of Kyrgyz population has increased for the past 2 years, due to economic instability, people migrate to other states to earn money and provide for their family with basic needs.

In terms of the impact of COVID-19 on the participants, most of very severely impacted as per survey and the other 38 % (321 people) preferred not to answer the question, which could mean that they have lost their family members due to the virus.

However, in order to tackle the pandemic situation, the government provided help to some regions, and it is obvious that the healthcare system was not able to handle all sick people to the point, that the (Abyshev, 2021) asked for help the Republic of Kazakhstan and Russian Federation.

Even the monetary aspect of households, which was confirmed thru the author's survey can confirm. That most people didn't have enough income to provide for their families and had to take loans from banks, relatives, and friends to get by.

#### 6 Conclusion

In this Bachelor Thesis, the author planned to run a survey among Kyrgyz population to find out, how the COVID-19 pandemic situation impacted the population, from social and economic perspective. Theoretical part covered the economy of Kyrgyzstan and what is it based on, macroeconomic factors and different economic sectors that mostly contribute to the economic development of state. Based on the data retrieved the assumption that the author had at the beginning has confirmed, that the ratio of construction workers was the most, who migrated to neighbouring countries due to economic instability of Kyrgyz Republic. Especially, the economic instability has grown when the lockdown and pandemic was announced, many farmers and manufacturers had to shout – down its processes to save cost, as the boarders with the neighbouring states were also close, and some goods were under extreme inspection by boarder control. The assumption was confirmed on the sample of 850 people, who participated in the survey. The author has reached its goals and confirmed that labour working class, has suffered the most and experienced the heavy burden of COVID-19 impact. However, there was a help of government in the field of healthcare and pay-outs to the low-level households, still it was somewhat limited.

An overall assessment demonstrated a negative impact of COVID-19 on social and economic aspects of population in Kyrgyzstan.

#### 7 References

- 1. Abdolvand, J. (2014): *The dimension of water in Central Asia: security concerns and the long road of capacity building*. [online]. [Accessed: 22-1-2022]. Available at: <a href="https://doi.org/10.1007/s12665-014-3579-9">https://doi.org/10.1007/s12665-014-3579-9</a>
- 2. Achkabar. A. (2018): *The inflow of remittances into the Kyrgyz Republic will grow by 25%.* [online]. [Accessed: 22-1-2022]. Available at: <a href="https://www.akchabar.kg/news/abd-money-transfer-2018/">https://www.akchabar.kg/news/abd-money-transfer-2018/</a>
- 3. ADB (2018): Asian development outlook (ADO) How Technology Affects Jobs. Asian Development Bank. [online]. [Accessed: 12-12-2021]. Available at:
- 4. Asian development outlook (ADO) 2018: *How Technology Affects Jobs. Asian Development Bank.* [online]. [Accessed: 22-1-2022]. Available at:
- 5. Aubrecht, P., Essink, J., Kovac, M., Vandenberghe, A.-S., (2020): *Centralized and decentralized responses to COVID-19 in federal systems: US and EU comparisons.* SSRN 3584182.
- 6. Choi, J., Portugal Perez, L. A., & Myburgh, A. C. (2014): *Kyrgyz The garment sector: Impact of joining the customs union and options to increase competitiveness.* [online].

  [Accessed: 12-12-2021]. Available at:

  <a href="http://documents.worldbank.org/curated/en/965851468276859239/Kyrgyz-The-garment-sector-Impactof-joining-the-customs-union-and-options-to-increase-competitiveness">http://documents.worldbank.org/curated/en/965851468276859239/Kyrgyz-The-garment-sector-Impactof-joining-the-customs-union-and-options-to-increase-competitiveness</a>
- 7. Fernandes, N. (2020): Economic effects of coronavirus outbreak (COVID-19) on the world economy. SSRN 3557504.
- 8. Gondi S., Beckman A.L., Deveau N., Raja A.S., Ranney M.L., Popkin R., He S (2020): 

  \*Personal protective equipment needs in the USA during the COVID-19 pandemic. The Lancet. [online]. [Accessed: 12-12-2021]. Available at: 

  \*https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7255297/\*

  \*https://www.adb.org/publications/asian-development-outlook-2018-howtechnology-affects-jobs\*

- 9. IEA International Energy Agency, IEA Publications (2020): *Global Energy Review. The impacts of the COVID-19 crisis on global energy demand and CO2 emissions.* pp. 1–56. [online]. [Accessed: 12-12-2021]. Available at:
- 10. IMF. The International Monetary Fund (IMF) (2020): *World Economic Outlook: The Great Lockdown* p. 37. -37. Washington, DC. [online]. [Accessed: 12-12-2021]. Available at:
- 11. Imrashev, A.J (2020): Decline in GDP, factors? Effects? Circumstances? A study of Kyrgyzstan. [online]. [Accessed: 12-12-2021]. Available at:
- 12. JHU Coronavirus Resource Center, Johns Hopkins University (2020): MAPS & TRENDS: New Cases of COVID-19 In World Countries. [online]. [Accessed: 12-12-2021]. Available at:
- 13. Kabar. S. (2018): *Prospects for the growth of remittances to Kyrgyzstan*. [online]. [Accessed: 22-1-2022]. Available at: <a href="http://kabar.kg/news/iatc-kabar-perspektivy-rosta-denezhnykh-perevodov-v-kyrgyzstan/">http://kabar.kg/news/iatc-kabar-perspektivy-rosta-denezhnykh-perevodov-v-kyrgyzstan/</a>
- 14. Laing T. The economic impact of the Coronavirus 2019 (Covid-2019): *Implications for the mining industry. Extract. Industrial Society.* [online]. [Accessed: 12-12-2021]. Available at: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7161495/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7161495/</a>
- 15. Livingston E., Desai A., Berkwits M. (2020): Sourcing personal protective equipment during the COVID-19 pandemic. JAMA.
- 16. Manley, D., & Kulova, N. (2018): Should the Government of the Kyrgyz Republic Impose a Tax on Gold Ores and Concentrates. [online]. [Accessed: 22-1-2022]. Available at: <a href="https://www.moodys.com/research/Moodys-assigns-first-time-B2-issuer-ratings-to-Government-of--PR 331302">https://www.moodys.com/research/Moodys-assigns-first-time-B2-issuer-ratings-to-Government-of--PR 331302</a>
- 17. McKenzie B. Beyond COVID-19 (2020): *Supply chain resilience holds key to recovery.*Oxford Econ.24. [online]. [Accessed: 12-12-2021]. Available at:
- 18. NASA (2020): *Airborne Nitrogen Dioxide Plummets Over China*. [online]. [Accessed: 12-12-2021]. Available at:
- 19. Pearce J.M. (2020): A review of open-source ventilators for COVID-19 and future pandemics. F1000 Research. 2020. [online]. [Accessed: 12-12-2021]. Available at:
- 20. PHE Public Health England (2020): *Review of interventions to improve outdoor air quality and public health.* pp. 1–262. [online]. [Accessed: 12-12-2021]. Available at:

- 21. Siow W.T. (2020): *Managing COVID-19 in resource-limited settings: critical care considerations*. [online]. [Accessed: 12-12-2021]. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7175447/
- 22. Spash C.L. (2020): *The economy 'as if people mattered: revisiting critiques of economic growth in a time of crisis. Globalizations.* [online]. [Accessed: 12-12-2021]. Available at:
- 23. Szirmai, A., & Verspagen, B. (2015): *Manufacturing and economic growth in developing countries*, 1950 2005. Structural Change and Economic Dynamics, 34, 46–59. [online]. [Accessed: 22-1-2022]. Available at: <a href="https://doi.org/10.1016/j.strueco.2015.06.002">https://doi.org/10.1016/j.strueco.2015.06.002</a>
- 24. Tazbek A. (2020): Consequence of ongoing pandemic. [online]. [Accessed: 12-12-2021]. Available at: <a href="https://www.tazabek.kg/news:1614713/?from=kgnews&place=maincats">https://www.tazabek.kg/news:1614713/?from=kgnews&place=maincats</a>
- 25. UN DESA (2020): Everyone included: social impact of COVID-19. UN Depart. Econ. Soc. Aff. (UN DESA)
- 26. UNIDO (2018): Diagnostic for the Programme for Country Partnership (PCP). The Kyrgyz Republic. Building a competitive manufacturing base for strong and inclusive growth. [online]. [Accessed: 12-12-2021]. Available at:
- 27. UNIDO. (2018): Diagnostic for the Programme for Country Partnership (PCP). The Kyrgyz Republic. Building a competitive manufacturing base for strong and inclusive growth. [online]. [Accessed: 22-1-2022]. Available at: <a href="https://stat.unido.org/database/MVA">https://stat.unido.org/database/MVA</a>
- 28. WHO World Health Organization (2020): *Coronavirus Disease (COVID-19) Pandemic*. [online]. [Accessed: 16-01-2022]. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3566298
- 29. World Bank. (2018): *World Development Indicators (WDI)* | Data Catalogue. [online]. [Accessed: 12-12-2021]. Available at: <a href="https://datacatalog.worldbank.org/dataset/world-development-indicators">https://datacatalog.worldbank.org/dataset/world-development-indicators</a>
- 30. Abyshev. A (2021): Assessment of help from Russian Federation and Republic of Kazakhstan. [online]. [Accessed: 22-01-2022]. Available at: <a href="https://kyrgyzstan.un.org/en/133091-russian-federation-helps-world-food-programme-support-poor-families-kyrgyzstan">https://kyrgyzstan.un.org/en/133091-russian-federation-helps-world-food-programme-support-poor-families-kyrgyzstan</a>

# Questionary

- 1. What is your gender?
  - a) Male
  - b) Female
- 2. What is your age?
  - a) 15 26 y.o.
  - b) 27 37 y.o.
  - c) 38 47 y.o.
  - d) 48 56 y.o.
  - e) 56 67 y.o.
- 3. What is your region of living?
  - a) Osh
  - b) Bishkek
- 4. What is your marital status?
  - a) Single
  - b) Married
  - c) Divorced
  - d) Widowed
  - e) Married but living separately
- 5. What is your higher educational level achieved?
  - a) Higher education diploma
  - b) Bachelor
  - c) Secondary vocational training
  - d) Initial vocational training
  - e) Complete secondary
  - f) Incomplete secondary
- 6. Are you employed in Kyrgyzstan?
  - a) Yes, I am officially employed.
  - b) No, I am not employed.
  - c) I am employed but not officially.
  - d) Self-employed.
  - e) I worked abroad.

	c)	Government institutions (hospitals, police, extra)
	d)	Manufacture
	e)	Logistic
	f)	IT
	g)	Accountant
	h)	Electricity, Oil & Gas production
8.	Have you migrated abroad for work for the past 3 years? (if not, skip the question)	
	a)	Yes
	b)	No
9.	If you did, what state you used to work in?	
	a)	Russian Federation
	b)	China
	c)	Kazakhstan
	d)	USA
	e)	Turkey
	f)	Uzbekistan
	g)	Other
10.	What are the reasons for migration for the past 2 years?	
	a)	Lack of work
	b)	Low wages
	c)	Family related problems
	d)	Employment of my spouse, he/she works abroad.
	e)	Find employment.
	f)	Visit/Reunite with the family members.
	g)	Covid-19.
11.	. What is the reason of selecting a certain destination/country?	
	a)	Higher Income.
	b)	Wider range of job-opportunities.
	c)	Easy to get documents.
	d)	Existing relatives, who live there.

7. In what kind of sector of economy are you employed?

a) Construction

b) Agricultural, forestry, fishing

- 12. Were you employed while pandemic and lockdown was announced by the government of Kyrgyzstan?
  - a) Yes, fully employed.
  - b) Yes, but only part-time job.
  - c) No, I lost my job when lockdown was announced.
  - d) No, I was employed abroad.
- 13. If you were employed abroad, what was the reason of returning home?
  - a) Family pressure
  - b) Lost job
  - c) Covid-19 rules, lockdown.
  - d) Covid economic impact.
  - e) Contract ended.
- 14. How hard the COVID-19 situation reflected on you and your family?
  - a) Very much
  - b) Not so much
  - c) Indifferent
  - d) Not at all
  - e) Prefer, not to answer
- 15. If you are unemployed at this point, please answer, how long have you been looking for a job?
  - a) 1-3 Moths
  - b) 4 6 Moths
  - c) 7 10 Months
  - d) Whole year and even more
- 16. Did you have enough income to provide your family with basic needs?
  - a) Yes, it was enough.
  - b) No, it wasn't enough.
  - c) Yes, it was enough because government paid-off subsidies.
  - d) Yes, it was enough, I took a loan from banks/relatives/friends.

Rate the quality of governmental actions within the following services provided whilst lockdown

- 1) Public health care
- a) Vey poor
- b) Poor
- c) Fair
- d) Good

- e) Very good
- 2) Housing
  - a) Very poor
  - b) Poor
  - c) Fair
  - d) Good
  - e) Very good
- 3) Access to jobs
  - a) Very poor
  - b) Poor
  - c) Fair
  - d) Good
  - e) Very good
- 4) Salary scale
  - a) Very poor
  - b) Poor
  - c) Fair
  - d) Good
  - e) Very good
- 5) Electricity
  - a) Very poor
  - b) Poor
  - c) Fair
  - d) Good
  - e) Very good
- 6) Safety
  - a) Very poor
  - b) Poor
  - c) Fair
  - d) Good
  - e) Very good

# Appendix 1.

