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Bachelor Thesis

Macroeconomic indicators of the Republic of Uzbekistan

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

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Business Administration

Thesis title

Macroeconomic indicators of the Republic of Uzbekistan

Objectives of thesis

The main goal bachelor's thesis is to determine the development of the main macroeconomic the indicators (GDP per capita, economic growth, inflation, unemployment, exports and imports, external and public debts) of Uzbekistan for the period 2011-2021. The thesis will investigate how the macroeconomic indicators in the Uzbekistan changed after the change of the president of the country (for the first time after the separation of the Republic of Uzbekistan from the countries of the USSR and the formation of an independent state) to indicate the influence of the economic development strategies of the first president I.A. Karimov and the current president Sh.M. Mirziyoyev on macroeconomic indexes.

Methodology

The thesis consists of two types of research. Quantitative and qualitative research data.

Qualitative data research is devoted to describing information about the economic development of a country for the selected period. With the help of various sources, thesis finds out the main aspects of economic development. It further explains the factor causing why the indicators developed in the given way.

The quantitative research method is used to directly count, explain and comment data about Uzbekistan GDP, inflation, unemployment, imports and exports, external and public debts for the period 2011-2021.

The proposed extent of the thesis

30-40 pages

Keywords

GDR, Inflation, Import, Export, External and Public debts, Economic growth

Recommended information sources

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Expected date of thesis defence

2021/22 SS – FEM

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Declaration of honor

I declare that I have worked on my bachelor thesis titled «Macroeconomic indicators of the Republic of Uzbekistan» 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 March 15, 2022 _____

Acknowledgements

I would like to take this opportunity to first and foremost thank God Almighty for being my strength in the writing of this thesis.

I express my gratitude towards my Mother and Adajon for always being supportive of my education and their prayers. Without you none of this would indeed be possible. I am very thankful to my K.K for his love, understanding and continuing support to complete this research work.

I am extremely gratitude to my research supervisor, doc. Ing. Mgr. Petr Wawrosz, Ph.D. for giving me the opportunity to do research and providing me invaluable guidance throughout this research. It was a great privilege and honour to work and study under his guidance.

Tatyana Saydinahunova

March 15, 2022

Macroeconomic indicators of the Republic of Uzbekistan

Abstract

The main aim of this thesis is the study of major macroeconomic indicators on the example of Republic of Uzbekistan. The second objective is to understand the features of each selected indicator, introduce the economy of Uzbekistan giving a historical background and explaining why this is a good example for the analysis.

The practical part of this work targets at analyzing tendencies of macroeconomic indicators in Uzbekistan for the period from 2010 to 2020, as well as covering the presidency change in 2016 and pandemics affect of 2020 and the following years. To support the evidence, qualitative and quantitative methods of research have been used, applying secondary data collection method. For better understanding, graphical and tabular representations of the data have been used.

Conclusion part is dedicated for a discussion of the results obtained and final summary of the analysis.

Makroekonomické Ukazatele Republiky Uzbekistán

Souhrn

Hlavním cílem této práce je studium hlavních makroekonomických ukazatelů na příkladu Republiky Uzbekistán. Druhým cílem je porozumět vlastnostem každého vybraného ukazatele, představit ekonomiku Uzbekistánu s uvedením historického pozadí a vysvětlit, proč je to dobrý příklad pro analýzu.

Praktická část této práce se zaměřuje na analýzu tendencí makroekonomických ukazatelů v Uzbekistánu pro období 2010 až 2020, dále na změnu předsednictví v roce 2016 a vliv pandemie na rok 2020 a následující roky. K podpoře důkazů byly použity kvalitativní a kvantitativní metody výzkumu s aplikací sekundární metody sběru dat. Pro lepší pochopení bylo použito grafické a tabulkové znázornění dat.

Závěrečná část je věnována diskuzi získaných výsledků a závěrečnému shrnutí analýzy.

Klíčová slova

Makroekonomie, HDP, Inflace, Tempo růstu, Nezaměstnanost, Export, Import, Parita kupní síly, Veřejný dluh, Uzbekistán

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List of abbreviations

CIS	—	Commonwealth of Independent States
COVID-19 / SARS-CoV-2	—	Coronavirus disease 2019
CPI	—	Consumer Price Index
GDP	—	Gross Domestic Product
OEC	—	The Observatory of Economic Complexity
PPP	—	Purchasing Power Parity
SCO	—	Shanghai Cooperation Organization
UK	—	United Kingdom
US	—	United States
US dollars / USD	—	United States dollars
USSR	—	Union of Soviet Socialist Republics
Uzbek SSR	—	Uzbek Soviet Socialist Republic

I. Introduction

The development of the human society throughout history has been characterized by various types of economic relationships. In order to regulate these relations and understand their nature, scientific substantiation of the ongoing economic processes was also improved. At different stages of the economic science development, there were different criteria for determining the wealth of the state.

The notion of economics formed as an exact science which required clear interrelated economic processes. Like any science, economics operates with a number of different indicators, both at the company level and at the state level too.

Besides, the use of mathematical methods in relation to analyzing economic processes made it possible to determine a range of fundamental indicators characterizing economic situation of any state. Indicators which are aimed to characterize the state of the country economy are called 'macroeconomic'. A clear interpretation and understanding of the economic essence of these indicators and their mutual influence is the basis for developing a policy for regulating economic processes in the state.

In the period of transitional economy in Republic of Uzbekistan, consideration of macroeconomic indicators is very relevant. The country experienced an unexpected and dramatic presidency change in the year of 2016 which made the country to re-consider the economics of the country.

This diploma thesis is devoted to consideration of macroeconomic indicators and their changes throughout the selected period applied to the economy of Uzbekistan in particular.

II. Objectives and Methodology

2.1. Objectives and research questions

Object of study: macroeconomic indicators of the Republic of Uzbekistan for the period from 2010 to 2021.

The main purpose of this Bachelor thesis to study the macroeconomic indicators such as GDP per capita, economic growth, inflation, unemployment, exports and imports, external and public debts to identify the issues and justify the improvement of state of the economy.

To achieve the objective very effectively, it is crucial to cover the following topics:
- Give an overview of the macroeconomic indicators in a broader sense and select the most important ones for analysis.
- Provide the formula for each of the indicator and describe the results
- Introduce the economy of Uzbekistan, give a historical overview over the past few years, covering the change of presidency.
- Summarize the overall situation in Uzbekistan and drive conclusions

This paper aims to answer the following research questions:
- What are the tendencies of the selected macroeconomic indicators for the period from 2010 till 2020?
- Is the economy of Uzbekistan in a better shape since the presidency change?
- To which extent pandemics affect the economy of Uzbekistan?

As a result of this paper, the topic of macroeconomic indicators will be revealed with help of an example of the Republic of Uzbekistan due to its rich economic and historical backgrounds.

2.2. Methodology

In order to address the above-mentioned research questions, it is important to perform the empirical research on macroeconomic indexes, cover the main features of common indicators, show their formulas, provide a theoretical background and give an example of an economy, in which those indicators would be analyzed. This analysis will aid to understand the fluctuations of the macroeconomic indicators over the ages as well as demonstrate the reaction on different internal and external factors affecting the economy of the country. Besides, to support the evidence, qualitative and quantitative methods of research will be applied utilizing mostly secondary collections of data. To give a clearer perspective on this thesis, it is divided into two main parts – theoretical and practical.

The first part of this work is mainly theoretical, which implies the literature review of the scientific literature, books, journals, articles and other academic sources of information. It specifies the range of the macroeconomic variables selected for the analysis and gives a quick overview of each indicator, its formula and description of the key features.

The latter part contains practice. In this part, the economy of Uzbekistan is viewed in particular. The aim of this chapter is to discover and give a historical background of the economy of Uzbekistan and analyze dynamics of indicators in terms of their development throughout the selected period from 2010 to 2020 using descriptive and comparative methods for analysis. For practical part of the work, the data is retrieved from the official statistical web source – the World Bank. All the tables are consolidated by the author, depicted in charts and analyzed.

Conclusion part is dedicated for a discussion of the results obtained and final summary of the analysis.

III. Theoretical part

As it has been mentioned before, macroeconomic indicators play a very crucial role in estimation of efficiency of domestic economy and politics. Application of those indicators is very useful in measuring of the health of the domestic economy as well as comparison to other economies.

There are few reasons why the macroeconomic metrics are important. For instance, from the political perspective, political actors use macroeconomic indicators in order to analyze the effectiveness of their performance during political legislature to support or change the direction of political intentions during the upcoming elections, whereas from the economic perspective, macroeconomic indicators are utilized in favor of making policies and reforms.

All in all, macroeconomic indicators (such as inflation, unemployment, public deficit gross domestic product, public spending and balance of payments, etc.) act as the key arbitrators for estimation of economic performance at the domestic and global levels. Any macroeconomic decision could have political consequences as well as in the society. Consequently, citizens should be aware and be well informed in macroeconomic matters.

This thesis is aimed to cover the concept of the following variables:

- GDP per capita
- Economic growth
- Inflation
- Unemployment
- Exports and imports
- External (public) debts

3.1. GDP and its types

Gross domestic product (hereinafter GDP) is one of the important indicators of the country economy as well as the basic measure which is used in most analyses of countries' economies (Eurostat, 2017).

GDP value, in simple terms, is a monetary measurement of the market value of all consumer goods and services produced by a particular country within the certain time period (Callen, 2020). This measurement is often referred as the economic growth of the country.

There are several types of the GDP measurement we often hear: nominal GDP, real GDP, GDP per capita, GDP growth rate, and GDP purchasing power parity. The distinction of these types will be discussed below (Bergh, 2009).

3.1.1. Nominal GDP

This is one of the major types of GDP which includes aggregate measure of goods and services of the particular economy for actual prices (Bergh, 2009). In other words, this type works with the current prices in local currency or US dollars at the current exchange rates, not taking into consideration inflation or price fluctuations. The value of nominal GDP is relevant only if it is compared within the same year, e.g. per quarter (VIBE Education Ltd, 2021).

The common formula for this indicator is as follows:

Formula 1. Nominal GDP

$$Nominal\ GDP = C + I + G + (X - M)$$

, where

C – Consumption (or, sum of products and services consumed domestically)

I – Investment

G – Government spending

X – Exports

M – Imports

Source: Coyle, 2015.

Nominal GDP can be found utilizing one of the three methods: expenditure approach, income approach, and production approach (Bergh, 2009). The above-mentioned

approach is expenditure one, in which all spent expenses for domestic purchase of services and goods in a selected time period.

In this particular method, adding exports less imports as products exported are produced domestically on contrary to the imported goods, which are produced outside of the selected country, hence, not considered economically.

The nominal GDP considers the values with current prices alongside with growth while compared to the GDP of the previous period.

3.1.2. Real GDP

Unlikely to nominal GDP, the value of the real GDP is adjusted to the current market changes in terms of inflation and price fluctuations (Callen, 2020). This measurement is used when economic growth is considered for more than one year.

Real value is calculated utilizing the price deflator – difference in prices between the current and base year. Definitely, the nominal value tends to be higher than real one since the inflation value is usually positive.

Formula 2. Real GDP

$$Real\ GDP = \frac{Nominal\ GDP}{Deflator}$$

Source: Coyle, 2015.

As it has been highlighted before and as it is represented by the formula, the significant difference between nominal and real GDP can be noticed only at a substantial deflation or inflation (depending on which of the GDP indicators is lower – nominal or real respectively) (VIBE Education Ltd, 2021).

3.1.3. GDP per capita

'Per capita' as per its definition means that the value is per person. It captures both GDP and population measurements. This indicator shows the amount of income per person in a selected economy, which potentially represents average ability to produce or average living standards of the country (Bergh, 2009). Even though this indicator is often used for analyzing if the average citizen living in the country is better or worse off, GDP per capita is not the metric which indicates the real living standard or well-being of the person in a particular country.

This is a more theoretical value which does not take into account number of factors that are extremely important to general well-being of each person. Some countries might have a higher rate of the GDP per capita, however, a small population count, which indicates that the country has very self-sufficient economy on the basis of a large variety of resources (Bergh, 2009).

A formula is very simple:

Formula 3. GDP per capita

$$GDP \ per \ capita = \frac{GDP \ of \ the \ country}{Population \ of \ the \ country}$$

Source: Coyle, 2015.

This indicator is usually not analyzed alone but in a row with other GDP values (VIBE Education Ltd, 2021). This indicator is often used to compare the domestic productivity versus other countries' economies. It is very crucial to understand to which extent GDP and population measurements contribute to the cumulative result and affects growth of the GDP per capita.

One of the specificities is that the growth of this measurement at the relatively stable level of population can be a result of technological progress.

3.1.4. GDP Growth Rate

The GDP growth rate is the pace of the average GDP rate per annum at the market price on the basis of the stable local currency for a selected economy within the certain time period. It shows the difference between two values of GDP – for one period and next one versus the GDP for the earlier period of time (World Health Organization, 2021).

Just to simplify what has already been stated above, we may use the formula:

Formula 4. GDP growth rate

$$GDP\ growth\ rate = \frac{(GDP\ for\ current\ year - GDP\ for\ last\ year)}{GDP\ for\ last\ year}$$

Source: Coyle, 2015.

To have the mentioned metric in percentages, the value is multiplied by 100%.

3.1.5. *GDP Purchasing Power Parity (PPP)*

Purchasing power parity (hereinafter PPP) is the measurement of the difference of price levels among the countries. The value of this indicator expresses how much does a certain quantity of goods and services cost in various countries at the particular currency units (Eurostat, 2018). The PPPs are calculated based on the comparison of the level of prices for a standard consumer basket of comparable goods and services which are selected as the consumption patterns.

Formula 5. Purchasing power parity

$$PPP = \frac{cost\ of\ product\ or\ service\ in\ one\ currency}{cost\ of\ product\ or\ service\ in\ another\ currency}$$

Source: Sarno and Taylor, 2003.

According to the theory of PPP, the same amount of money converted at the current exchange rate into national currencies in different countries of the world can buy the same amount of goods and services in the absence of transport costs and restrictions on transportation (Bergh, 2009).

Based on this notion, there is another type of GDP that estimates the volume of GDP of the selected country. The formula is a proportion of the given GDP value versus purchasing power parity (please refer to the formula below).

Formula 6. GDP PPP

$$GDP_{PPP} = \frac{GDP}{PPP}$$

Source: Sarno and Taylor, 2003.

To limit the scope of the types of GDP, there are two GDP indicators would be analyzed in this thesis – economic growth rate and GDP per capita in particular. As GDP is the representation of the economic strength, the higher the value is better for the economy.

3.2. Inflation

Basically, inflation is the pace with which the prices are increasing for a certain time period (Hall, 1982). In a broader sense, inflation is one of the indicators that shows the overall incline in prices or cost of living in a particular country. It can also be measured in a narrower sense, when the inflation is calculated at the level of certain products or services, e.g. food, manicure, etc. Regardless the context, inflation is the index that demonstrates the dynamics of the level of expensiveness of certain range of products for a particular time period, e.g. one year (Hall, 1982).

As aforementioned, any increase in prices of products and services is referred to as inflation. One of the indicators that can measure inflation is the Consumer Price Index (or CPI). The formula is demonstrated below:

Formula 7. Consumer price index

$$CPI = \frac{cost\ of\ standard\ market\ basket\ in\ current\ year}{cost\ of\ standard\ market\ basket\ at\ base} \times 100$$

Source: Hill, 2022.

Formula 8. Inflation

$$Inflation\ rate = \frac{(CPI_{x+1} - CPI_x)}{CPI_x}$$, where

CPI_x – current year CPI

CPI_{x+1} – CPI for next year

Source: Hill, 2022.

A contrary concept of inflation is deflation – a decline in general price level or known as negative growth. This notion usually has a seasonal character. A long-term deflation is a very rare phenomena in the modern economy.

Inflation raise is usually caused by the number of factors (Hall, 1982):

- Growth in the governmental spending, when the financing requires increase in the money supply to exceed the needs of commodity. This phenomenon often takes place at the crisis or war period (Olive, 1990).
- Excessive expansion of the money supply due to mass lending, and the financial resource for lending is taken not from savings, but from the emission of unsecured currency.
- Monopoly of large firms to determine prices and their own production costs, especially in the raw materials industries.
- Trade union monopoly, which limits the possibilities for lower wages leading to an overall increase in costs (Olive, 1990).

- Reduction of the real volume of national production which at the stable level of money supply leads to an increase in prices since the previous amount of money corresponds to a smaller volume of products and services.
- Increase and introduction of new government taxes, duties, excise taxes, etc., with a stable level of money supply.

3.3. Unemployment

This is another well-known indicator. There are three major types of unemployment – frictional, cyclical, and structural (Thirlwall, 1969). There are a few additional types which are met rarely – seasonal, voluntary, and institutional. Despite the distinction provided, there is no clear criteria which unemployment belongs to each type, meaning that those variations are closely related and inter-connected.

- ○ Frictional type is the term that is utilized to describe the population of the country which is unemployed on the temporary basis (Thirlwall, 1969). This is one of the shortest varieties of unemployment in terms of the time range, e.g. when people get a job immediately after leaving the previous one.
- ○ Cyclical unemployment, also known as demand-deficient (Thirlwall, 1969). This is the type associated with the changes in the country economy, over some business cycle. It is a medium-term unemployment as it can last from one month till one year.
- ○ Structural unemployment is the notion of unemployment when there is a mismatch between supply of workers and demand of them (Thirlwall, 1969). The issue in this case is constituted on the basis of that unemployed people may not have particular level of knowledge or education for a vacant position.
- ○ Other types of unemployment:
  - Voluntary, when the people prefer being unemployed
  - Seasonal, associated to some season (e.g. summer work)
  - Institutional, as the matter of the governmental regulations

Since unemployment is the notion when the person is not able to find a job for some reason, unemployment rate is the metric which represents the level of the unemployed people versus the population count of the country (Ahuja, 2016). This can be seen in the below formula.

Formula 9. Unemployment rate

$$U = \frac{unemployed\ people}{labor\ force} \times 100$$

, where

U – unemployment rate

Unemployed people – number of unemployed people

Labor force – number of active people – both employed and unemployed

Source: Layard, et al., 2009.

One of the most important notes in this formula is that unemployed people is the share of people who belong to the active population, who might currently not work or seek for a job.

3.4. Exports and imports

Export is a term which is used in order to define the concept of the country to produce products and services at the domestic level, however, do it for the use of other countries (Feenstra and Kee, 2004).

On the contrary, imports are goods and services which have been purchased from the other country. For a selected country economy, it is the outflow of money in a sake of getting the products from foreign producer.

In this paper, this metric would be analyzed in current US dollars. As it was discussed before, macroeconomics also has a term 'net exports', which is frequently used in order to find GDP of any country.

Formula 10. Net exports

$$Net\ Exports = X - M$$

, where

X – total value of foreign countries' spending on products and services of the domestic country

M – total value of domestic country's spending on products and services obtained from foreign countries

Source: Seyoum, 2021.

In order to find the net imports, the formula would look similar, however, opposite to the formula of exports. In Formula 11, there is a subtraction of the total amount of imports versus the total amount of exports.

Formula 11. Net imports

$$Net\ Imports = M - X$$

, where

X – total value of foreign countries' spending on products and services of the domestic country

M – total value of domestic country's spending on products and services obtained from foreign countries

Source: Seyoum, 2021.

3.5. Public debt: External debt vs. internal debt

External debt, or foreign debt, is one of the components of the total debt of the government which country owes to foreign creditors. Public debt represents the total current debt of the country, which is often expressed as a ratio of GDP. Public debt is the notion that can be regulated internally and externally. Internal debt depicts the obligations

of the state to the local lenders, whereas external debt, or public debt, is the one that represents obligations outside country.

In this thesis, public debt would be viewed in particular. The notion of public debt is one of the types that might include not only debt to governments, but also businesses and individuals. This definition is frequently used with the term of the sovereign debt. Basically, the public debt is the cumulative sum of the annual budget deficit. This is an outcome of years of state leadership spending more than they get through the taxation revenues. All in all, the deficit of the nation impacts the debt of the state and contrariwise. There is no particular formula for the public debt (Acikgoz, 2019).

Figure 1. Summary of the classification of the types of public debts

Types of public debts	Based on maturity	Short term		
		Medium term		
		Long term		
	Based on resource	Internal	Private individuals	
			Private institutions	
			Social security institutions	
			Economic organizations	
			Central Bank	
			Commercial banks	
			Insurance companies	
		External	Based on maturity	Short term
				Medium term
				Long term
			Based on purpose	Development credits
				Technical credits
				Defence credits
				Donations
			Based on creditors	Intergovernmental borrowing
				Borrowing from international organizations
				Borrowing from private sources
			Based on debtors	Public sector
				Private sector
			Based on repayment	Foreign currency
				Local currency
	Based on voluntariness	Voluntary		
		Compulsory		

Source: Acikgoz, 2019.

The differences of the types of the public debts have been summarized in the above table, represented in Figure 1. There are three major types of the public debts: based on the length of the agreement (or maturity), based on the resources, and based on the voluntariness.

The first category is maturity-based. This is a very straightforward category as there are only three options of agreements that might occur: short-term, medium-term, and long-term. Short term agreement is when the debt is taken for the period from 3 to 12 months in general, medium-term debts imply the debt borrowed for the period from 1 to 5 years and long-term, when the debt is for more than 5 years (Acikgoz, 2019).

The second category is based on the resource, which has two subcategories of the debts: internal borrowing and external borrowing. Internal debt is the type of debt which has been rendered domestically from the own national resources. Such kind of debt does not impact the internal fluctuations of the national income. These internal debts can be taken from the Central Bank of the country, private institutions, individuals, commercial banks, and other multinational companies working domestically. The opposite type would be referring to external borrowing. This type of the debt implies the logic of provision of the debts from the foreign entity, i.e. country. Unlikely to the internal borrowing, external debt has an inclining effect on the local income of the country at the point of time when it is taken, and declining effect when it is all has been paid (Acikgoz, 2019).

External is sub-divided in the groups of 5 other types:
- maturity-based – the period of time or the term of the loan the country gets either for short, or medium, or long-term
- purpose-based – the purpose for which the country gets the loan, either for the development needs, defense purposes, technicality-based, or even donations, which more belong to the voluntary part
- creditor-based – this is a simple sub-type which identifies the creditor's level of belonging to the group of international, multinational, intragovernmental or private entities
- debtors-based, showing the debt belonging to the one or another sector – either private or public one
- re-payment-based – this is a category that defines in which currency the loan would be re-paid, whether the local currency or foreign currency. Typically, the borrowings from the international organizations are held in foreign currencies, which is not very convenient for the countries with unstable exchange rates

The last category is based on the voluntariness. The debt in this case can be either on voluntary basis or mandatory basis. The differentiation between them is that the borrowings taken voluntarily refer to the debts which are given to the government by the state's own desire (Acikgoz, 2019). In contrary, compulsory debts speak for themselves. These types of debts are forced to be taken by the government. Economic, political instability, wars, natural disasters, crisis – all these force majeure situations might fall into this category. As per legal terms, such category is rather categorized as debts taken due to some coercion or due to the threat if something.

Referring to the let-say unexpected debts requested since this was obliged to do so, we may distinguish productive and non-productive borrowings (Acikgoz, 2019). First of all, the productive borrowing is considered in case if the debts are used for infrastructure development, for instance, building railways, energy and power stations, which refer to the contribution to the economy in sense of giving a productive capacity to the country, meaning that that there is a continuous contribution to the budget of the state. In productive borrowing, government is the one which re-pays the interest from the revenues brought by the productive projects.

Alternatively, non-productive borrowings are exactly referred to the economic, political instability, social instability, wars, natural disasters, crisis, etc. These cases do not bring the national revenue. The government pays out the interest from the taxes, hence, putting a burden on the shoulders of the people.

The country that is going to be analyzed in the practical part of this thesis is discussed from the point of view of the long-term debts which have been borrowed from the global organizations. The nature of the borrowings can be both referred to obligatory and voluntary category as after the Soviet Union collapse more and more countries required financial support to raise the country as an independent state. Thus, acquiring debts from the global and multinational entities, from different countries and even private individuals.

IV. Practical part

4.1. Historical background of Uzbekistan

Being a part of the Soviet Union, in 1980s, Uzbekistan began to inherit similar tendencies as in the other republics: desire for obtaining the national identity, intention to gain independence from the USSR, inter-ethnic conflicts, etc. (Hanson, 2014). In June 1989, Islam Karimov came to power in the Uzbek SSR. He began to pursue a policy popular with the population in the economic, social, cultural, religious spheres, protecting and ensuring the interests of Uzbekistan (Robinson, 2004). The same year, the Supreme Soviet established Uzbek language as the language of the state, leaving Russian as the language of inter-ethnic communication.

In March 1990, the Supreme Soviet of the Uzbek SSR established and announced the post of President. Hence, Islam Karimov became the first president, being in power from 1991 to 2016, winning elections in 1995, 2000, 2007, and 2015. To lead the country, he chose the compromise policy (Robinson, 2004). As being officially stated, Uzbekistan is a multi-party democratic republic, however, in reality, the opposition is not welcomed and even persecuted.

Dissolution of the USSR took place in 1988 – 1991 (Robinson, 2004). Uzbekistan one of the last countries which left the Soviet Union, in 1991. In August 24th, 1991 Uzbekistan was announced to be independent democratic state. At that time, local movements appeared in the republic, for example – 'Birlik' (Unity) and 'Erk' (Freedom). In 1991, Birlik was registered as an official political party in the country. It was a nationalist opposition (as mentioned above, this party included two of its leaders in the Presidential Council), and as opposition was banned in 1993. The next serious oppositions emerged only in 1999 and in 2005.

The result of the referendum in March 1991 showed that most of the population in USSR was against of independent secession of Uzbekistan. Nevertheless, dissolution touched Uzbekistan too. Few days later after the August Coup, the Supreme Court of Uzbekistan on August 31, 1991 proclaimed independence and sovereignty of the Republic. Uzbekistan was one of the last countries which proclaimed its independence from Soviet

Union. On December 29, 1991, a referendum on the state independence of Uzbekistan was held again. According to its results, 98.2% of citizens were voted 'pro' sovereignty of the republic, which is proof of the state independence of Uzbekistan proclaimed back in August (Robinson, 2004). In addition, on the same day, presidential elections took place in Uzbekistan. The turnout was high – almost 95% of citizens, 86% of which voted for Islam Karimov. In January 1992, he was inaugurated.

In 1991-1992 Uzbekistan has approved its own signs of independence – its coat of arms and the flag. In 1992, the Republic of Uzbekistan adopted their Constitution.

After the USSR dissolution, economic sphere was in crisis, which led to the separatism movements to develop even more. Undoubtedly, the dissolution caused a transformation of the state system replacing the Soviet structures – new administrative system appeared, including purely Asian institutions of khokims (head of local administration) and makhallas (administrative units). Nevertheless, some Soviet organizations continued to operate until 1992 (for example, the Turkestan Military District).

Also, in December 1991 the heads of the post-Soviet countries gathered in Alma-Ata. As the result of negotiation proceedings, the Alma-Ata Declaration was signed, in which Russia, Ukraine, Belarus, Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, and Uzbekistan entered the organization of the Commonwealth of Independent States (CIS) (Nohlen, Grotz and Hartmann, 2001). The signed Declaration prescribed the goals, principles, and foundations of the CIS.

Following the CIS agreement, Uzbekistan became a member of the United Nations in 1992. Upon the Declaration and new government settlement, Uzbekistan was aiming at maintaining stability and strengthening the power of the country, which most of the country were lack of after USSR dissolution.

The year of 1994 brought the Parliamentary elections. This is the first election which implied the contest between 634 candidates: 250 of members were nominated by the domestic councils, 243 by the largest party in the country — People's Democratic Party of Uzbekistan, and 141 by the Progress Party (Nohlen et al., 2001). The turnout was 93.6% in the first round of these elections. Later in 1995, Uzbek presidential term referendum took

place. The turnout was also high — 99.3%, 99.6% of which voted for presidential term extension till 2000 of the current president.

The next parliamentary election happened only in 1999, the turnout accounted 93%. Similarly to previous election, the People's Democratic Party of Uzbekistan took the majority of party seats, accounting 49 out of 250 total (Nohlen et al., 2001). Further parliamentary elections took place in 2004, when instead of democratic party, the liberal party won the most places. In 2009, the turnout for the parliamentary elections was significantly lower — 79.7%. Upon the end of the presidential term, Islam Karimov again won elections in 2000, taking 95.7% votes at the 95% turnout and 90.6% turnout in 2007.

The constitutional referendum in Uzbekistan was held in 2002. The aim of this referendum was to prolong the general presidential term up to 7 years and introduce a bicameral parliament. Both points of the constitution were implemented due to approval by 90% of voted citizens (The New Humanitarian, 2002).

In 2015, Islam Karimov won his final presidential elections, but in 2016 he died. As a temporary solution Shavkat Mirziyoyev was appointed as an acting president. However, he also won the early elections, gaining 88.6% of the votes and took the power as president in December 2016. During his term in office, Mirziyoyev consolidated power in Uzbekistan and gained influence among citizens, which created opportunities for the active development of Uzbekistan in all spheres of public life of the country.

On September 5, 2017, the Uzbek authorities devalued the national currency, bringing down its rate by 48%. From April 2018, the republic of Uzbekistan gained an opportunity to withdraw the cash in foreign currency from international plastic cards without restrictions.

Besides, tourism in recent years has become one of the key spheres of the economy of Uzbekistan. The tourism sector at the state level is defined as one of the main sectors of the economy, to which the state pays great attention. If Uzbekistan was visited by an average of 1.2 to 2.5 million foreigners per year in 2008-2017, then in 2018 and 2019 this number raised for more than 6.4 and 6.7 million foreigners, respectively. For example, in the period from 1992 to 2007, on average, only 170 to 900 thousand foreigners visited the country annually. Since 2017, due to Uzbekistan's radical liberalization of its visa policy, they cancelled entry visas for most countries of the world.

Since the presidentship of Shavkat Mirziyoyev, the economy of the country started to raise:

- As of July 2019, there were 66.6 thousand enterprises functioning, about 14.5 thousand of them were located in the capital.
- Uzbekistan placed its first one billion US dollars in Eurobonds in London in 2019. Most of them were bought by investors from the UK.
- The outflow of the population from Uzbekistan gradually decreased (first time after the country gained its independence) and in 2019 amounted to 13.2 thousand people. In January and December 2019, the population of Uzbekistan increased by 650.3 thousand people.
- By the end of 2020, 70% of schools and 78% of healthcare institutions were connected to internet. Some of the institutions around the capital city were already connected to the 5G communications.

In 2021, Shavkat Mirziyoyev won the second term of the presidential elections with the help of 80.1% votes and a turnout of 80% (Uzlidep, 2021).
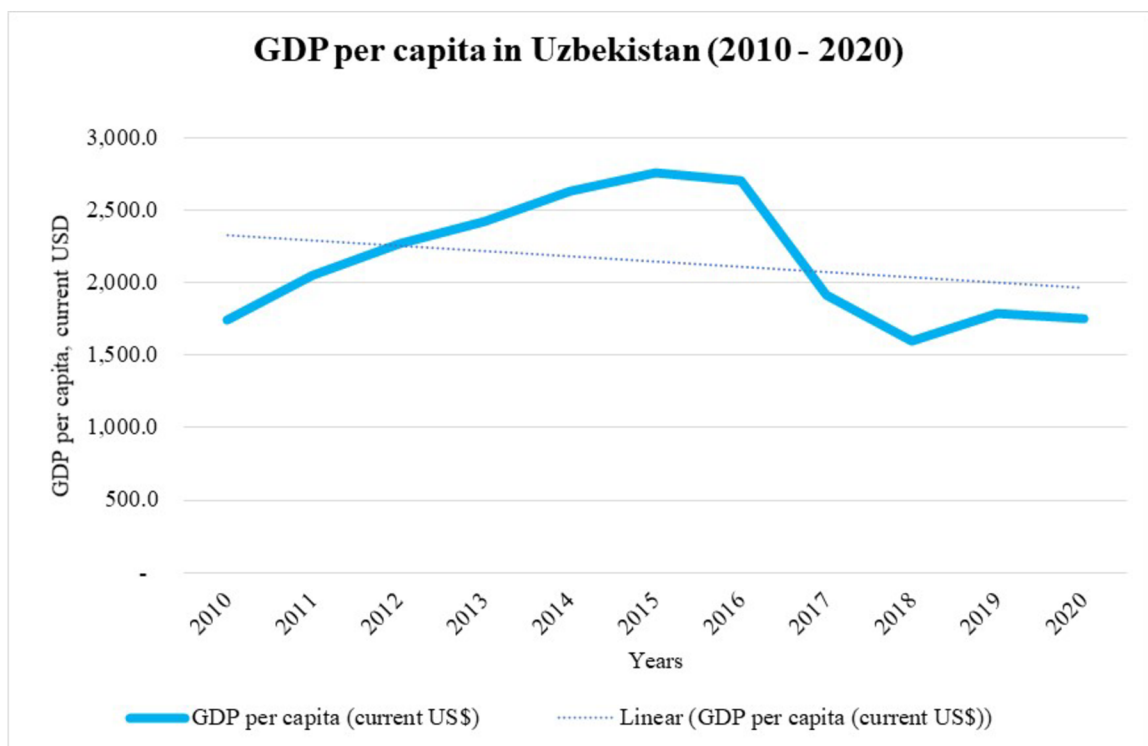
4.2. GDP per capita

Uzbekistan is a very rich for its resources. As the heart of the Central Asia, it is land-locked. The population of Uzbekistan accounts of 33.94 million people in 2021, which is 1.4 percent of increase in comparison to 2020 (United Nations, 2022).

In the past few years lots of work has been done in Uzbekistan aimed at accelerated socio-economic development and liberalization of the economy of the country, creating a completely new investment and business climate, and further integrating the country's economy into the world community.

The GDP per capita is one of the strategically important indicators for the country (Boulhol, de Serres and Molnar, 2008). Based on the statistical data, Uzbekistan has an average rate of the GDP per capita among the Asian countries.

Figure 2. GDP per capita fluctuations in Republic of Uzbekistan for the period from 2010 to 2020, current US dollars

Source: WorldBank, 2021

The Figure 2 is the picturized outcome of the data retrieved from the official website of the World Bank (2022). It shows the dynamics of the GDP per capita in Uzbekistan in current US dollars for the period from 2010 till 2020. During the selected period this indicator experiences a slow but a stable raise from 1742.3 current USD in 2010 to 2754 current USD in 2015. A critical point turns to be the year of 2016. As it has already been mentioned before, the year of 2016 is well-known for the change of the presidency in the country. Exactly this fact made the economic data to fall. GDP per capita has a decreasing tendency from 2016 till 2018, afterwards, it starts to recover in a very slow pace. In 2018, GDP per capita accounted 1597.1 current USD – it is the lowest index within the analyzed period.

Again, one of the most important factors which made the GDP indicator to diminish is the pandemics which put the world economies in a huge stress. Comparatively to 2018, it can be concluded that the decline just in 33.3 current USD from 2019 to 2020 is not sufficient, hence, still allows to keep the Uzbekistan economy in a pretty good shape.

Although at the description level the economy seems to be good overall, the slope of the linear trendline is directed downward. By the year of 2030 Shavkat Mirziyoyev plans to develop the country and increase per capita income to 4000 US dollars and create a solid foundation in order to enter the ranks of upper middle-income economies. Since this is not a very easy task to do, in order to achieve this, the country must radically change labor efficiency by creating new technologies and value chains through development based on science and innovation in the economy.

4.3. Economic growth rate

Despite the fact that economic growth rate is quite close to the GDP per capita, the values are completely distinct to each other, which at the end gives the result of even more negative slope. The Figure 3 clearly demonstrates the fluctuations of the GDP rate in percentages in Uzbekistan for the selected period.

Figure 3. Economic growth rate fluctuations in Republic of Uzbekistan for the period from 2010 to 2020, %
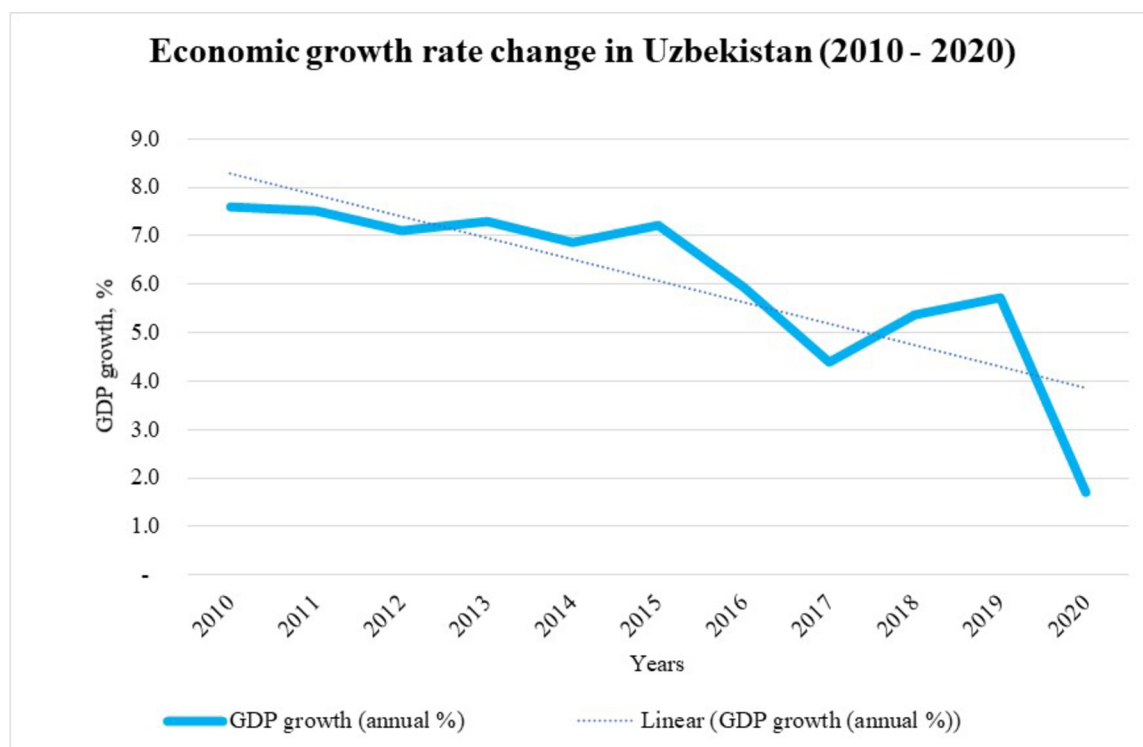
Source: WorldBank, 2021

The overall tendency of the growth rate is purely negative. The highest value is observed only at the beginning of the analyzed period, which was 7.6% in 2010. From 2010 till 2012 the economic growth indicator fell by 0.5%. This fall is conditioned by Fergana Valley earthquake in 2011, hitting not only Uzbekistan but also the neighboring countries – Kyrgyzstan and Tajikistan. Later in 2012, Tajikistan accused the neighboring country Uzbekistan of imposing economic blockade, that made the country fear the restriction of dam supplying the water to one of the main crops grown traditionally – cotton (BBC, 2012). In addition to that, in June 2012, the issue which has also impacted the economic growth of the country in a negative way is that the Uzbek Foreign Ministry decided to quit the Collective Security Treaty Organization led by Russia. This was a pact like NATO that implied the membership of the 7 post-Soviet countries (Deasy, 2012).

According to the Figure 3, in 2013 the country had a slight increase up to 7.3%. The reason of this incline can be a result of the Uzbek League 22nd season of the top level football, which attracted more capital to the state. The next decrease is conditioned by the parliamentary elections in 2014-2015, and presidential elections in 2015. Winning elections collecting 90% of the votes, the president passed away in 2016, which resulted in a drastic fall in economic growth within the next 2 years respectively. Having 7.2% in 2015, in 2017 this indicator hit the threshold of 4.4%. After a small recovery in the following years in 2018 and 2019, the pandemics hit the country mercilessly. From 5.7% in 2019, the year of 2020 brought a nightmary low economic growth of 1.7% in 2020, which is almost 3.5 times lower.

All in all, due to the number of external and internal factors impacting the economy of country, the tendency of the economic growth of Uzbekistan is negative, which explains the skewness of the trendline slope.

4.4. Inflation rate

After the dissolution of USSR, Uzbekistan had very hard times to recover and become independent. The inflation rate of the country was extremely high in most of the post-Soviet countries, Uzbekistan was not an exception from this rule. An extremely high

inflation led to slowdown of the growth and less stability. With the higher inflation rates, country also had a low competitiveness on the international arena.

And the worst consequence is when the price incline does not keep up with the wages raise. This is one of the major issues which happened to most of the post-Soviet countries, which made the members of poor families to migrate to richer neighboring countries for illegal or partially legal job seeking purposes in order to support their families in Uzbekistan.

From the official statistical data retrieved from the World Bank (2022), the chart represented in Figure 4 shows the inflation rate dynamics over the analyzed period. As we can see the highest inflation rate in the selected period is observed in 2010, which was 48.6%. From the year of 2010 till 2013, there is a stable fall of inflation rate, then a slight raise in 2014, which then continued to decline till 2016 to the point of 8.6%. Inflation fell by 5.7 times throughout the 6-year period.

Figure 4. Inflation rate fluctuations in Republic of Uzbekistan for the period from 2010 to 2020, annual %
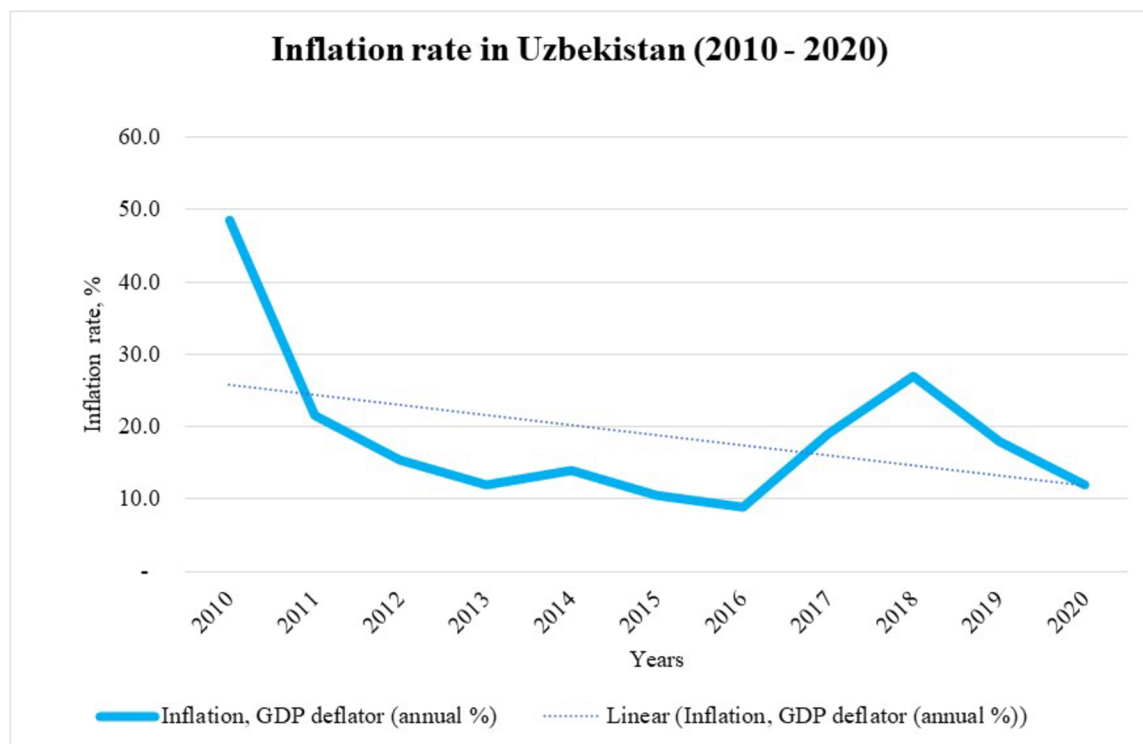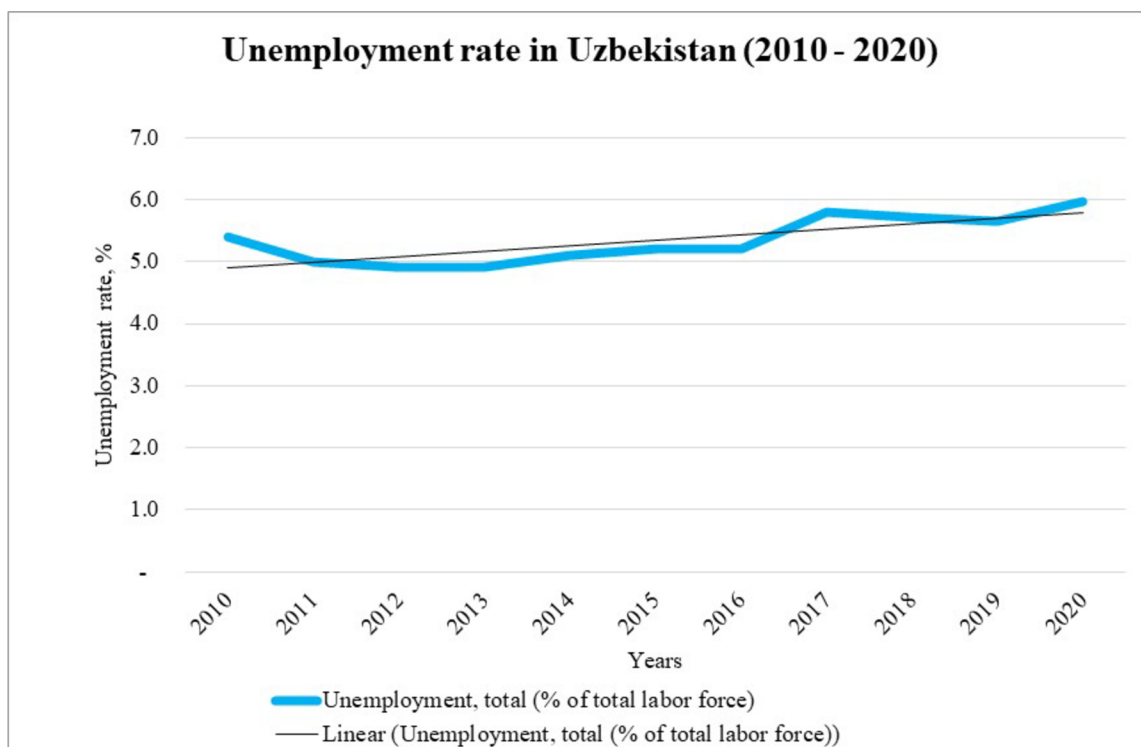

Source: WorldBank, 2021

As it was mentioned before, the occasional change of the presidency due to the decease of the previous one in 2016 caused the inflation to go up again from 8.6% in 2016 to 27% in 2018. However, the slight recovery of this indicator happened in the next two years – in 2019 it was at the level of 17.9 and in 2020 – at 11.9%. The government has set the task of reducing inflation to 9% in 2022, and to 5% in subsequent years.

4.5. Unemployment rate

As mentioned above, after the collapse of the Soviet Union, there was less and less jobs locally and people tended to migrate to richer neighborhood countries to get employed even illegally or partially legally. Despite this fact, an unemployment rate in Uzbekistan is quite stable. The average unemployment rate for the analyzed period from 2010 to 2020 reaches 5.3%, the fluctuation happens only between 4.9% to 6%.

Figure 5. Unemployment rate fluctuations in Republic of Uzbekistan for the period from 2010 to 2020, %

Source: WorldBank, 2021

The chart represented in Figure 5 shows the stability of the unemployment rate as the percentage of the total labor force in the country. Based on the trendline, the rate is slightly increasing as the skewness of the slope is minor. From 2010 to 2012 the unemployment rate was decreasing a bit and hit 4.9% in 2012 and saved its tendency in 2013. Then, it followed by a small increase up to 5.2% in 2016, and much significant increase up to 5.8% in 2017, fixing the rate of 5.7% in 2018 and 2019 by the COVID-19 times. In 2020, this indicator reached the highest threshold for the period and hit the rate of 6% of the total labor force.

According to the results of the first three quarters of 2021, which is not depicted in the chart below, the unemployment rate in Uzbekistan decreased by 1.7% in annual terms. A survey that was conducted by the Ministry of Labor of Uzbekistan in 2021 showed that 6.1 million citizens officially employed in the country, and 5.9 million people work unofficially. Additionally, other 1.4 million citizens belong to the labor force which is in need of employment.

4.6. International relationships

Republic of Uzbekistan has a range of the well-developed sectors of economy: power industry, fuel and energy resources, metallurgy, automotive industry, electrical industry, construction industry, food industry, pharmaceutical industry, transportation industry, and agriculture.

4.6.1. Relations with other countries

Russia

After the collapse of Soviet Union, Uzbekistan was able to build the economic relationships with the number of countries. One of the most strategically important partners in exporting goods and services is Russia. Uzbek-Russian trade and economic relations are developing in a dynamic pace. The trade development can be seen in a greater extent in industrial and agricultural sectors. Over the past few years, trade in these areas has more than doubled. An important role in this process is played by the 'green corridor' for the supply of Uzbek fruits and vegetables to the Russian market. The Russian side also

significantly reduced transport tariffs for the transportation of number of goods from Uzbekistan. The use of a flexible tariff policy, the expansion of benefits and preferences for the transportation and transit of goods have made it possible to significantly increase the competitiveness of goods produced in Uzbekistan. Uzbek industry enterprises have created 44 trading houses in 8 regions in Russia. In 2019, during the visit of Vladimir Putin to Uzbekistan, the parties signed an agreement on cooperation in the textile, clothing and knitwear production, which should create favorable conditions for their development, establish cooperation and exchange of experience between production and research institutions of both countries, as well as to ensure the transparency of commodity flows of textile products, including as part of the formation of logistics centers in the regions of Russia.

To summarize the Russian and Uzbek relationships, more than 90% of Uzbek exports to Russia are textile, food, and chemical products. In exchange, more than 50% of exports from Russia to Uzbekistan imply metals, timber, and mineral products.

China

The People's Republic of China is one of the largest investors in the economy of Uzbekistan. Both countries are members of the Shanghai Cooperation Organization (SCO).

Currently, China is the leading trading partner of Uzbekistan, as the largest source of exports and imports for the country. Over the ongoing relationships China increases its loans to contribute to the development of Uzbekistan. As per the latest data, the volume of these investments accumulates about 8 billion dollars. Besides, both countries are considered strategically important for the Belt and Road Initiative.

Other countries

Uzbekistan has also successfully gained built the relationship with such countries as Kazakhstan, Turkey, Kyrgyzstan, Tajikistan, and India. In general, according to the results of the first quarter of 2021, goods and services were imported to Uzbekistan from more than 136 countries.

4.6.2. Exports and imports

Uzbekistan is also very rich for its natural resources. It is well-known for its oil and gas resources, which they extract, process and transport to other countries. Also, the republic has coal and uranus mining industries. Therefore, Uzbekistan is considered as one of the hugest oil and natural gas producer. Also, it is very rich with ferrous and non-ferrous metallurgy. Non-ferrous metallurgy includes extraction and production of copper, tungsten, silver, and gold. The gold mining production is one of the most popular exporting sectors. The republic is included in the range of the largest exporters, which exports lots of cotton, gold, copper, ethylene, and other natural resources. The most important agricultural products of Uzbekistan, in addition to cotton, are fruits, vegetables and grains such as wheat, rice and corn. The largest countries which contribute to the exports of goods from Uzbekistan include Russia, UK, China, Switzerland, Germany, Kazakhstan, etc.

Figure 6. Exports and imports trend in Republic of Uzbekistan for the period from 2010 to 2020, current billion US dollars
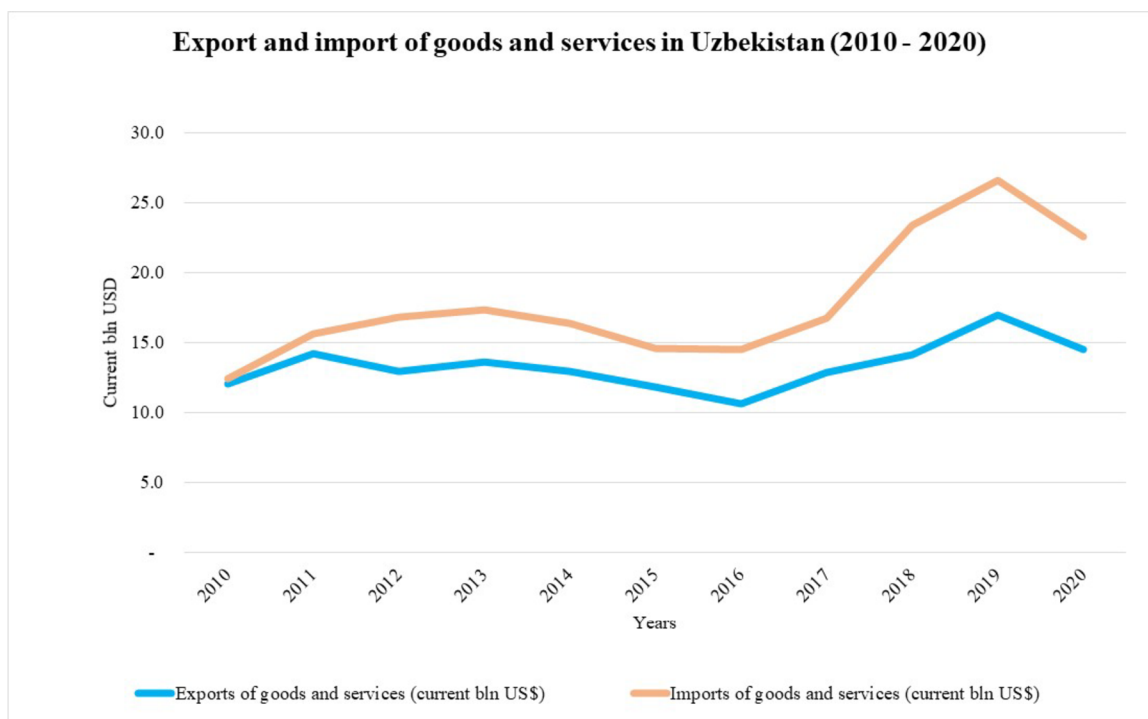
Source: WorldBank, 2021

In contrary, Uzbekistan tends to import too. The top imports of Uzbekistan include the range of cars, planes, helicopters and other vehicles and their parts, petroleum, medicine. The largest imports are got from China, Russia, Kazakhstan, Turkey, and South Korea (OEC, 2022).

As per the official statistical data retrieved from the World Bank (2022), the graph of the exports and imports seems to be proportional. It is reflected in Figure 6. Both linear graphs show that Uzbekistan saves the balance of imports and exports. And it is obvious that Uzbek Republic tends to import more rather than export the goods and services.

For selected period, both export and import indicators started to raise in 2010 and 2011. However, in the year of 2012 exports of the goods dropped, whereas imports continued to increase. After 2013, both indexes began slightly decrease up until 2016, when both hit the lowest value for the time interval – 10.6 billion US dollars in exports and 14.5 billion US dollars in imports. Despite the shock after the occasional change of the presidency, both exports and imports started to incline with faster pace than ever. This way, throughout four years after the presidency change, Uzbekistan was able to export the goods amounting at 17 billion US dollars and import up to 26.6 billion US dollars in 2019. Definitely, pandemics impacted the economics of all countries all over the world. Each of the indexes for exports and imports of goods and services fell in the year of 2020 by almost 1.2 times.

4.7. Public debt

As the obligation of the government, public debt is also an important factor for analysis. As per the Figure 7, based on the statistical data from the World Bank (2022), the external debt of Uzbekistan keeps increasing over the ages. The trend line from 2010 to 2020 is skewed and has a positive trend.

Figure 7 illustrates a step by step increase of the debt, which does not exceed the rate increase in more than 1.5 times, saving the tendency of average raise by 1.16 times annually. The only visible change might be foreseen between 2018 and 2020, since the pandemics started, the debt started to increase in its value as more and more countries

needed the financial support for the economy, and Uzbekistan is not an exception in these terms.

Figure 7. External debt fluctuations in Republic of Uzbekistan for the period from 2010 to 2020, billion US dollars
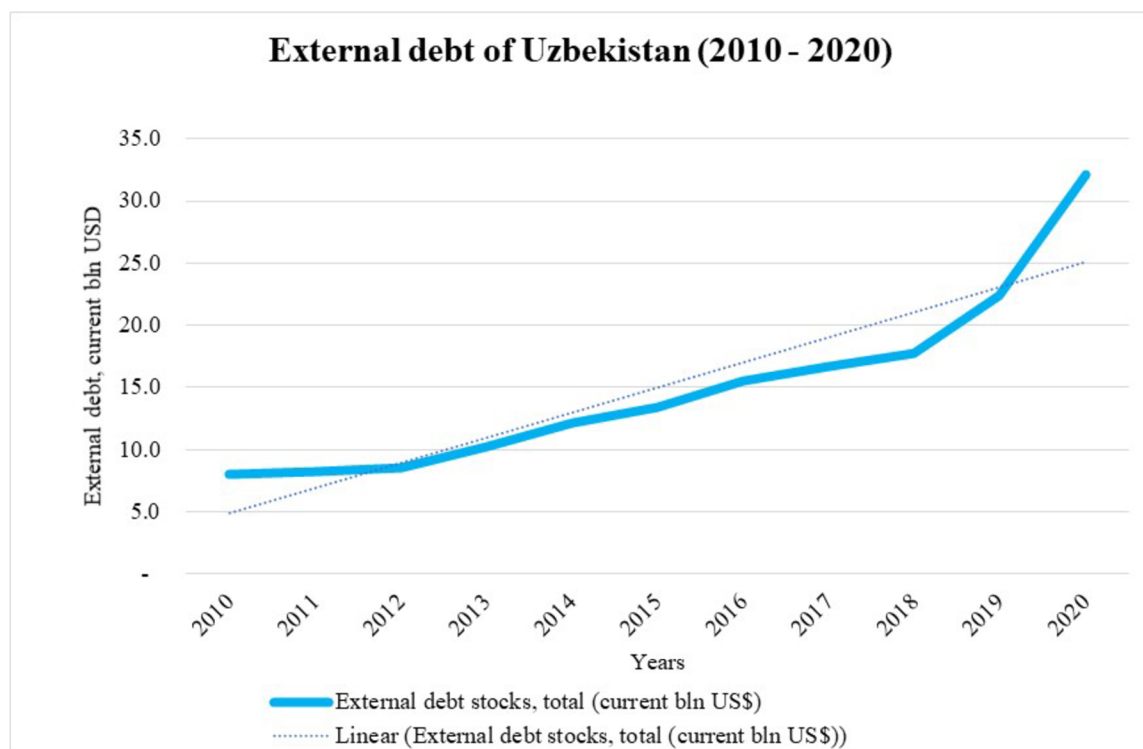
Source: WorldBank, 2021

Concerning the year of 2021, which is not yet present on the graph, the public debt in the second quarter of 2021 increased by 24.2 billion US dollars, which is 38.5% of the gross domestic product of the country. The cost of servicing the public debt exceeded 1 billion US dollars. This debt is gone to the eight foreign loan agreements on behalf of Uzbekistan for a total of 972 million US dollars, of which 330 million US dollars is dedicated to support the budget and 642 million US dollars to finance projects in the field of healthcare, provision of clean drinking water and sewerage, animal husbandry, development of the chemical industry and other important social and strategic projects. The central bank explains the increase in the state external debt by attracting new loans to finance state programs related to the development of regions and sectors of the economy.

These loans have been attracted by the long-term agreements with the international organizations for up to 40 years. Such global financial organizations include the World Bank, the European Bank for Reconstruction and Development, and French Development Agency. Also, other foreign state financial institutions as Japan International Cooperation Agency and the Eximbank of Korea.

Public external debt allocation by creditors is usually as follows:

- Asian Development Bank
- World Bank
- State Development Bank of China and others
- Eximbank of China
- Japan International Cooperation Agency
- International investors
- Economic Cooperation Development Fund and others
- Islamic Development Bank
- Japan Bank for International Cooperation and others
- Other international financial institutions

Nowadays we have rapidly inclining global relations, which made the significance of external debts to increase. Less developed and developing countries are obliged to resort to the external debts in order to invest into their economic development. The lack of sufficient capital markets for countries' development and small number of resources, materials and labor force require investment, and hence, inclusion of the external resources.

V. Results and discussion

There is a number of economic indicators have been discussed in this thesis – GDP and its types, inflation, unemployment, exports and imports of the country, and public debt. Same indicators were analyzed in the practical part of the thesis on an example of Uzbekistan.

Having a closer look at the case of Uzbekistan, despite the range of the factors and challenges the country has experienced, it was able to cope at the macroeconomic level. Besides, the case of this country as the post-Soviet country is unique. The collapse of the USSR impacted the range of economic sectors, making them independent from the huge union. Therefore, Uzbekistan as most of the countries fell into the situation when had to ask for additional financial help from the international organizations, countries and private entities.

Over the time the republic of Uzbekistan recovered its economy with the international and country's neighbourhood help, reaching a relative steadiness in the economy. The selected period was covering the time interval from 2010 to 2020. Few years before the presidency change in 2016, Uzbek economy experienced a slight growth in the economy, which had no significant contribution to the country's well-being. In 2016, after the old President's decease, the country economy was in shock and at the same time showed quite good results in the following years with the implementation of the range of new laws and regulations, devaluation of the currency and many more. From 2016 till 2019, GDP per capita and economic growth fell down, whereas inflation, exports and imports tendencies and external debt increased, leaving unemployment approximately at the same rate.

Definitely, since the beginning of 2020, when the COVID-19 stepped in the country, each and every economy had its challenges. This tendency is shown in all the graphs represented in this thesis. Regardless the tendency of the GDP per capita and economic growth was constantly increasing, after the year of 2019, the graphical

representation showed that these indicators fell into let-say crisis. Similar tendency is observed in the graph where the export and import of the country is represented. Inflation rate, in comparison to what the country has experienced long before 2010 is quite low.

It is complicated to drive any conclusions on the presidency change effectiveness as usually it is the matter of time to reconstruct and reshape the economy of the country as a whole. Unfortunately, one event of the changing in the presidency in 2016 has been occasionally replaced by the other event – pandemics in 2020 and the following years, which did not allow to see the changes occurred in 2016-2017 in the longer-term perspective. Thus, it is very difficult to judge objectively as the country similarly to other countries all over the world had to take emergency measures to prevent the potential spread of the virus and protect the society.

VI. Conclusion

To conclude, the main idea of this thesis was to give an overview of the macroeconomic indicators in a broader sense, select the most important indicators for analysis and provide the theoretical background in order to implement these indicators in the practical part on the example of the country. In the practical part of this thesis, the economy of Uzbekistan is introduced along with the historical background and analysis of the selected indicators for the period from 2010 to 2020, highlighting the change of the presidency as well as the pandemics.

The topic of macroeconomics and its components is very immense. Uzbekistan is a great example of an economy which has passed transitional stage. For the selected time period, from 2010 to 2020, Uzbekistan faced an occasional presidency change due to the decease of the first president. Definitely with the loss of the president, the economic as well as political orientation of the country changed.

The death of the first president brought a lot of tension to Uzbek citizens, nevertheless, the transition from one presidential regime to another was relatively smooth. As per the analysis held in this paper, it can be observed, that most of the charts show a small shock in the year 2016. However, the following years these indexes begin to recover slightly and slowly but demonstrating the success of the current governmental work. Up until today, the economy of Uzbekistan shows more stable state than it was back in 2016. The major issue which hit the whole world is the spread of the SARS-CoV-2, which led to pandemics and subsequent closure of the borders and most of the economies suffered from shortage. This is one of the key reasons why stepping in of the new president cannot be measured adequately. In order to understand the efficiency of the presidency regime change since 2016, it is necessary to observe the economy in a similar pace for a longer period of time. Unfortunately, with COVID-19 it was impossible to track the success and ability to cope with the challenges after the first president's decease. On the other hand, despite all external factors, Uzbek economy is quite stable as there is no extreme shocks.

To conclude, Uzbekistan is very rich country with its resources, and it has a wide range of spheres in which it might develop its concentration and start cooperation with other countries. The plans of the current president are very optimistic and ambitious. Since

2016 it was already a great progress in some of the sectors of economy and society, but there is still a long way from the current stage to open economy. It is complicated to give recommendations at this stage as the real picture of implementation of the rules, regulations and reforms can reflect only in the long run. But it is important to understand that all regulations require an up to date review and restructuring of the policies to build a prosperous economy.

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VIII. Appendices

Appendix 1 — GDP per capita in Uzbekistan (current USD)

Year	GDP per capita (current US$)
2010	1,742.3
2011	2,051.1
2012	2,267.6
2013	2,419.7
2014	2,628.5
2015	2,754.0
2016	2,704.7
2017	1,916.8
2018	1,597.1
2019	1,784.0
2020	1,750.7

Source: Processing according to World Bank, 2022.

Appendix 2 — Economic growth in Uzbekistan (annual %)

Year	GDP growth (annual %)
2010	7.6
2011	7.5
2012	7.1
2013	7.3
2014	6.9
2015	7.2
2016	5.9
2017	4.4
2018	5.4
2019	5.7
2020	1.7

Source: Processing according to World Bank, 2022.

Appendix 3 — Inflation in Uzbekistan (annual %)

Year	Inflation, GDP deflator (annual %)
2010	48.6
2011	21.6
2012	15.4
2013	12.0
2014	14.0
2015	10.5
2016	8.9
2017	19.1
2018	27.0
2019	17.9
2020	11.9

Source: Processing according to World Bank, 2022.

Appendix 4 — Unemployment (% of total labor force)

Year	Unemployment, total (% of total labor force)
2010	5.4
2011	5.0
2012	4.9
2013	4.9
2014	5.1
2015	5.2
2016	5.2
2017	5.8
2018	5.7
2019	5.7
2020	6.0

Source: Processing according to World Bank, 2022.

Appendix 5 — Exports and imports of Uzbekistan (current bln USD)

Year	Exports of goods and services (current bln US$)	Imports of goods and services (current bln US$)
2010	12.081	12.432
2011	14.244	15.631
2012	13.009	16.853
2013	13.633	17.371
2014	12.971	16.423
2015	11.866	14.640
2016	10.623	14.522
2017	12.881	16.785
2018	14.191	23.456
2019	17.027	26.621
2020	14.547	22.605

Source: Processing according to World Bank, 2022.

Appendix 6 — External debt in Uzbekistan (current bln USD)

Year	External debt stocks, total (current bln US$)
2010	8.0
2011	8.2
2012	8.6
2013	10.3
2014	12.1
2015	13.4
2016	15.5
2017	16.7
2018	17.7
2019	22.4
2020	32.2

Source: Processing according to World Bank, 2022.