

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

Foreign Trade of the Republic of Uzbekistan

Author: Zokhida Shosalimova

Supervisor: prof.Ing. Mansoor Maitah, Ph.D. et Ph.D.

© 2020 CULS Prague

BACHELOR THESIS ASSIGNMENT

B.Sc. Zokhida Shosalimova

Economics and Management

Thesis title

Foreign Trade of the Republic of Uzbekistan

Objectives of thesis

Followings are main objectives of thesis: Review the position of the Republic of Uzbekistan in foreign trade, evaluate the state of a market relations with other countries or, to be more accurate the relationship of imports and exports. Survey the membership of market practice. Identify the strengths and weaknesses of the country, goods and services that it owns, which affects most. Characterize the turnover and stability of foreign trade. Analyze the dynamics of the country's growth for the last decade. Examine the factors through testing that can directly or indirectly affect GDP growth.

Methodology

Methods such as synthesis, abstraction, observation, deduction, descriptive and comparative analysis are used in order to be able to analyze the state in which country is on. Qualitative and quantitative method analysis have been performed, evaluation parameters and test as well. By means of the found data, a model is created for the regression analysis to discover the influencing factors and, in the end, confirming the testing and interpreting the conclusion.

The proposed extent of the thesis

40 – 60 pages

Keywords

Foreign trade, Market, Import, Export, Economy, Uzbekistan

Recommended information sources

ČESKÁ ZEMĚDĚLSKÁ UNIVERZITA V PRAZE. INSTITUT TROPŮ A SUBTROPŮ, – JENÍČEK, V. – KREPL, V.
International trade and developing countries. Prague: Czech University of Agriculture, 2006. ISBN
80-213-1464-8.

SHERLOCK, J. – REUVID, J. *International trade : an essential guide to the principles and practice of export*.
London: Kogan Page, 2011. ISBN 978-0-7494-6237-6.

World investment report 1996 : investment, trade and international policy arrangements. NEW YORK:
UNITED NATIONS, 1996. ISBN 92-1-104468-5.

Expected date of thesis defence

2019/20 SS – FEM

The Bachelor Thesis Supervisor

prof.Ing. Mansoor Maitah, Ph.D. et Ph.D.

Supervising department

Department of Economics

Electronic approval: 20. 3. 2020

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 23. 3. 2020

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 23. 03. 2020

Declaration

I declare that I worked on my bachelor thesis entitled " Foreign Trade of the Republic of Uzbekistan", by myself and I used only those sources that were mentioned at the end of the thesis. As the author of the thesis, I declare that the thesis does not violate the copyright of any third party.

In Prague

.....

Zokhida Shosalimova

Acknowledgement

I would like to thank my mom, for giving the opportunity to study abroad and always supporting me. All my family members, for their love and support especially throughout my study journey.

Sincere gratitude to Mr. Mansoor Maitah for his patience, comprehension, guiding and consulting to finish my thesis.

Also, I would like to thank my friends, Sergazy Dinaliyev, Ramizkhon Rovshanov, Olga Gorbunova, Assel Zhambylova and others, for their help, support and advices

Foreign Trade of the Republic of Uzbekistan

Zahraniční obchod Republiky Uzbekistán

Summary

This thesis aims to distinguish influencing components on the economy of a country and the condition of foreign trade. Describes what the market is, how it works and the overall development of trade in the country in different periods of time. The general information on the current situation on the foreign trade market and its change in the dynamics over the last decade analyzed. And, explanations are given regarding instruments of trade regulation, trade balance, exports, and imports of the country.

As for a practical part, data found for several years, and analyzed to make mathematical models for the further analysis. Regression analysis showed influence of export of cotton, unemployment on GDP per capita in the country. The simulation is executed in the Gretl program. Based on that, it revealed which of the variables has more significant impact. As a result, explanations and the recommendations of the author are attached.

Keywords: Foreign trade, Market, Import, Export, Economy, Uzbekistan

Souhrn

Tato práce si klade za cíl odlišit vlivové složky na ekonomiku země a stav zahraničního obchodu. Popisuje, jaký je trh, jak funguje a celkový vývoj obchodu v zemi v různých obdobích. Analyzovány byly obecné informace o současné situaci na trhu zahraničního obchodu a jeho změně v dynamice za poslední desetiletí. Vysvětlují se také nástroje regulace obchodu, obchodní bilance, vývozu a dovozu země.

Pokud jde o praktickou část, údaje nalezené již několik let a analyzované za účelem vytvoření matematických modelů pro další analýzu. Regresní analýza ukázala vliv vývozu bavlny, nezaměstnanost na HDP na obyvatele v zemi. Simulace se provádí v programu Gretl. Na základě toho zjistila, která z proměnných má výraznější dopad. V důsledku toho jsou připojena vysvětlení a doporučení autora.

Klíčová slova: Zahraniční Obchod, Trh, Dovoz, Vývoz, Ekonomika, Uzbekistán

Table of Contents

1 INTRODUCTION	10
2 OBJECTIVES AND METHODOLOGY.....	11
2.1 Objectives.....	11
2.2 Methodology	11
3 LITERATURE REVIEW	12
3.1 Trade Market and its functions.	12
3.2 Regulation of Foreign Trade	13
3.2.1 Tariff Methods for International Trade Regulation.....	14
3.3 The world trade system	18
3.3.1 Position of developing countries in the world trade system.....	18
3.3.2 Development of World Trade	19
3.4 The World Trade Organization (WTO)	20
4 Practical Part	20
4.1 Overview of Uzbekistan.....	20
4.1.1 Uzbekistan in Russian Empire period.....	22
4.1.2 Soviet Uzbekistan	22
4.1.3 Independent Uzbekistan	23
4.1.4 Modern History	24
4.2 Foreign Trade Activities of Uzbekistan	25
4.2.1 Commonwealth of Independent States Free Trade Area (CISFTA)	27
4.2.2 Uzbekistan in Commonwealth of Independent States Free Trade Area (CISFTA)	29
4.3 Trade in Uzbekistan	30
4.3.1 Export.....	31
4.3.3 Estimation of the dynamics of GDP.....	35
4.4.5 Testing for Collinearity	44
4.4.6 Testing for Heteroskedasticity	44
5 CONCLUSION	46

List of Figures

Figure 1 Uzbekistan area	21
Figure 2 Country Context	24
Figure 3 Uzbekistan-Commitments by Fiscal Year (in Millions of Dollars)	25
Figure 4 Review of GDP per capita.....	30
Figure 5 Top 5 Export Destinations.....	32
Figure 6 Top 5 Import Destinations.....	34
Figure 7 Dynamics of GDP	35
Figure 8 Changes in GDP structure, in percentage.....	36

List of Tables

Table 1 Gross domestic product, fare of cotton and unemployment rate in Uzbekistan for 2004-2017	38
Table 2 – Dynamics of indicators	39
Table 3 - Correlation matrix.	40
Table 4: OLS, using observations 2004-2017 (T = 14)	41
Table 5 – Results of Autocorrelation test	43
Table 6 Results for Collinearity.....	44
Table 7 – Heteroskedasticity test result	44
Table 8– White’s test result	45

1 INTRODUCTION

The Republic of Uzbekistan is one of the 6 landlocked countries, and bordering with rest of them, such as: Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan and Turkmenistan. The country does not have direct access to the seaports, but it has favorable climate for agriculture and rich with its natural resources, both factors playing a key role in growth and development of the economy.

Production of cotton, extracting of gold, oil, gas and trading them have always been dominating sectors in the efficiency of the economy.

Thanks to Foreign Trade, Uzbekistan has increased the economy of the country significantly, which is important variable to meet needs of population and enrich them.

In theoretical part, detailed information regarding current state of foreign trade, impacts of it, latest changes in trade indicators are given.

Practical part is dedicated to research and analysis of foreign trade balance, top exported and imported commodities of the country, variables that impact economic growth. Regression analysis is also made, to see and analyze the indicators impacting the GDP rate, such as export of cotton and unemployment rate.

2 OBJECTIVES AND METHODOLOGY

2.1 Objectives

Followings are main objectives of thesis: Review the position of the Republic of Uzbekistan in foreign trade, evaluate the state of a market relations with alternative countries or, in other words, the relationship of imports and exports. Survey the membership of market practice. Identify the strengths and weaknesses of the country, goods and services that it owns, which affects most. Characterize the turnover and stability of foreign trade. Analyze the dynamics of the country's growth for the last decade. Examine the factors through testing that can directly or indirectly affect GDP growth.

2.2 Methodology

Methods such as synthesis, abstraction, observation, deduction, descriptive and comparative analysis are used to be able to analyze the state in which country is on. Qualitative and quantitative method analysis are performed, evaluation parameters and test as well. By means of the found data, a model is created for the regression analysis to discover the influencing factors and, in the end, confirming the testing and interpreting the conclusion.

3 LITERATURE REVIEW

3.1 Trade Market and its functions.

Trade is the basic economic concept, including the purchase and sale of goods and services with compensation paid by the buyer to the seller, or the exchange of them, called barter. The most common exchange method for these transactions is money. 21st century has made payment possible in virtual currency too, the most popular of which is Bitcoin. Everything can be sold and bought in market:

1. Nutrition products, clothing, cars, houses etc.
2. Resources, services, lands, equipment, raw materials, working force etc.

The advantages of a market for people are: purchasing of something in a market is cheaper, than producing it, makes easy to find a good, saves time and of course there will be a variety of same goods which can be chosen from. Or in other words, in conditions of limited resources, market allows to meet the needs with the lowest cost. So, we can say, that Market makes everything a lot easier for both, suppliers and consumers.¹

Market plays a key role in the economy of most countries, and Foreign Trade gives even more opportunities for the government and its population. The demand and supply of goods and services change when a country opens for trade, which affects households, both consumers and workers. It is understood that trade affects everyone because markets are interconnected, so imports and exports affect all prices in the economy, including prices in non-tradable sectors. One of the most important events of the last century can be considered the integration of economic factors into the world economic system. This integration process, often called globalization, has significantly increased trade between countries.

The first wave of globalization ended with the outbreak of the First World War, when the decline of liberalism and the growth of nationalism led to a reduction in international trade. After World War II, trade began to grow again. This new and ongoing wave of globalization

¹ Retrieved from: <https://www.investopedia.com/terms/t/trade.asp>

has led international trade to grow faster than ever before. Today, the amount of exports and imports between countries is more than 50% of total world production.²

3.2 Regulation of Foreign Trade

There are various rules governing the import and export of goods which can interfere with each other sometimes, that is why the regulation of international trade might be a complex process. In order to avoid receiving any dangerous goods or items that might have been produced in an illegal manner, specific methods might include to protect the country, keeping the markets competitive at the same time

Before applying any methods of regulating international trade, regulators have to take into account eventual dangerous behavior that may occur. The governing bodies set the appropriate standards according to identified possible and existing threats to international trade. These laws exist to protect trade-related countries and enterprises, in addition to the final consumer, who may eventually consume or otherwise use imported goods. Promoting an open economy, where importing and exporting can be carried out freely, is primarily established in regulations. It also exists to prevent compromising or unethical practices among trade participants. This can be difficult with competing standards of different nations.

Following points are main objectives of foreign trade:

- change of volume of export and import
- changes in the structure of foreign trade;
- providing the country with the necessary resources;
- the change in the ratio of export and import prices.

There are three main approaches to the regulation of international trade:

- in cases, in which the instruments of state control used by the government individually and not coordinated with the trading partner is a system of unilateral measures
- the undertaking of bilateral agreements, in which trade policy measures agreed between trading partners;
- the undertaking of multilateral agreements. Trade policy is coordinated and regulated by the participating countries (the General Agreement on Tariffs and Trade, which is included in the system of the WTO agreements, agreements on trade of EU member states)

²Retrieved from: <https://ourworldindata.org/trade-and-globalization>

3.2.1 Tariff Methods for International Trade Regulation

The functions and types of custom duties

The main and oldest instrument of foreign trade policy is Custom tariff. This can be a scientific set of rates of customs duties, obligatory on merchandise and alternative things, imported to the customs district of a country or exported from this territory.

Collected by the Duties customs represents a tax on merchandise and other different things that move through customs border of the state. Duties perform the subsequent functions:

- *a fiscal function*, once they are wont to generate, mobilize, accumulate monetary resources of the state. This perform applies to each import and export duties;
- *a protectionist function*, once they are introduced to scale back or eliminate the imports, thereby protective domestic producers from foreign competition;
- *a balance performs*, when they are introduced to forestall from unwanted exports of the products, the domestic cost of that are lower than the world ones.
- There are the subsequent kinds of duties:

1. **Consistent with the means of levying:**

- a. **ad valorem (value) duties** (TAV) obligatory as a proportion to the customs price of the products that are subject to duty (for example, thirtieth of customs value);
- b. **specific duties** (TS) obligatory within the prescribed quantity of cash per unit of products that are subject to duty (for example, \$15 per one ton);
- c. **compound duties** that mix the 2 preceding varieties of customs duties (for example, thirtieth of customs price, however no over \$15 per one ton).

2. **Consistent with the article of levying:**

- a. **import duties** obligatory on the products imported to the customs territory of a country;
- b. **export duties** obligatory on the products exported from the customs territory of a country.

3. **According to the nature:**

- a. **seasonal** (import and export) **obligations**, forced on the merchandise of the regular nature for operational direction of international trade. It is valid throughout some months;
- b. **special duties** applied by the state within the following cases:

- i. as defensive obligations, in case products are imported to the customs territory of a nation in such amount or below such conditions that cause or threaten to cause harm to domestic producers of the similar or competing products;
 - ii. as a preventative measure against the participants of foreign economic activity, that disserve the interests of the state during a specific business, likewise as a measure to prevent the unfair competition;
 - iii. as a measure in reaction to biased and (or) the unfriendly actions of foreign countries, as well as in response to the activities of various countries that restrict the legitimate rights of entities of foreign financial activity of a country;
- c. **anti-dumping duties** applied to the imports to the customs territory at the cost considerably lower than in the country of exports at the time of the exports, if such imports cause or threaten to cause damage to domestic producers of comparable or competing items, or block organization or growth of production of such goods;
- d. **compensation obligations** connected to the imports of the products on the customs territory, within the production or exports of which the subsidies are utilized directly or indirectly, if such exports cause or threaten to cause harm to domestic producers of comparable or competing products or impede organization or spread of production of such goods.

4. **According to the origin:**

- a. **autonomous obligations** on the premise of one-sided choices of public authorities;
- b. **agreement obligations** forced on the premise of reciprocal or multilateral agreements;
- c. **preferential duties** with rates lower than the current tariff.

5. **According to the sorts of rates:**

- a. **permanent rates** are rates of customs tariffs, forced by public authorities, which cannot change looking on the circumstances;

- b. **variable rates** are rates of customs tariffs, which can change by state specialists in certain cases.

6. **According to the calculation method:**

- a. **nominal rates** are customs rates, shown within the customs tariff;
- b. **effective (actual) rates** are a real level of customs rates for the final goods, calculated on the idea of the extent of obligations, forced on the premise of foreign units and parts of the products.³

The economic results of the imposition of a obligation

Economic results of the imposition of a duty: have an effect on production, goods turnover and welfare of the nation and utilization that introduced the import tariff, and its accomplices. Introduction of the import tariff to secure the domestic producers, who bear the losses due to glutting the markets by cheaper products, influence the economy of each, the small and big countries. A country is small, in the event that its demand for imported goods does not alter world prices, and the big one, if a change in demand for imported goods causes a change in world costs.⁴

Non-tariff Obstructions for Worldwide Trade Regulation

For international trade regulations also applied the other trade limitation, -non-tariff ones, which is broadly utilized in the trade practices.

Distribution of non-tariff barriers stems from the truth that their presentation is the advantage of the state government, and they do not seem to be regulated by international agreements. Governments are liberal to apply any reasonably non-tariff barriers, which is not attainable with the tariffs, regulated by the WTO. In expansion, non-tariff obstructions typically do not lead to immediate increase of the value of the products and, thus, a customer does not feel their impact within the shape of supplementary tax (presenting a tax makes the product price increases by the number of the duty).

In a few cases, the use of non-tariff strategies, with a comparatively liberal customs treatment, can lead to a more prohibitive nature of state trade policy as an entire.

³Retrieved from: https://ebrary.net/7271/economics/tariff_methods_international_trade_regulation#438

⁴Retrieved from: https://ebrary.net/7271/economics/tariff_methods_international_trade_regulation

Non-tariff barriers are often partitioned into the following groups: quantitative, hidden and monetary ones.

The quantitative trade restrictions

Quantitative restrictions embody quotas, licensing, "voluntary" export restraints.

Setting quotas.

A quota is the most typical form of non-tariff barriers.

A quota is a quantitative measure of the export or import limiting of the products by a quantity or number for a certain period. Quotas are generally used to regulate the imports of agricultural products.

A quota can be imposed, in case if Government only wants to regulate the movement of some goods instead of its restriction.

Two types of quotas exist, and applied in the following cases:

- In order to prevent the market from scarce products and to meet political objectives, the government obligate *Export quotas*.
These quotas are rare;
- To be able to secure the domestic market from the foreign competition, to attain the equilibrium in the trade balance, to control supply and demand in the country, to response adequately to discriminatory trade facilities of other countries, *Import quotas* are set by the government.

Following economic impacts resulted after introducing quotas:

Comparing to tariffs on import limitations, the more effective instruments are quotas. Thanks to them, the level of imports can be stable, despite the expansion in demand, which increases the cost of a product.

1. Being an absolute value, quotas are inflexible to the cost of a product;
2. Quotas are more practical for speedy actions of administrative authorities and they are simple to manipulate (enactment of corresponding legislation needed in case of tariffs);

3. quotas are a direct source of monopoly profits; they continually increase the incomes of producers of import-substituting products; they constrain import competition (tariffs usually allow it).

Licensing.

Quotas are imposed by government authorities through the provision of licenses.

To be able to import/export goods freely in a particular period of time, licensing is needed, which is a permission, granted by public authorities. A permit is issued by the state through the special authorized agencies.

Licensing may be in the following forms:

- an integral part of the quota. In this case, a license is a document which certifies the right to import or export the goods within the obtained quota;
- an autonomous tool of government regulation.⁵

3.3 The world trade system

The world trade order has been continually advancing. It is known, that the primary phase of the globalization we are still encountering nowadays started in the middle of the 19th century. Since then, there has been a developing conviction among economic policymakers that free trade has economic benefits for all countries.

To form global trade free and fair, it became clear, that universal rules are needed. However, the negotiations on a worldwide trade agreement (known as the "Doha Round"), which were pointed at advance opening markets and integrating developing countries better into the world trading framework, have slowed down. In reaction to this stagnation efforts on liberalization of economy at the territorial level are created currently.

3.3.1 Position of developing countries in the world trade system

Unfortunately, for most developing countries, the liberalization of world trade did not deliver the advantages that they had hope for. Many of them are not able to produce high-quality products at low price. Moreover, the absence of a functioning export industry

⁵Retrieved from: https://ebrary.net/7272/economics/non-tariff_barriers_international_trade_regulation

in many developing countries takes away the ability of competing with producers of other countries. In addition, many developing countries are concerned, that aspects such as sustainability and human rights, that are increasing progressively on the agenda of discussions on trade policy, would possibly damage their competitiveness. As a consequence, small and poor developing countries remain excluded from the trade growth. If they require to become engaging for investors, they must create concessions within the worldwide competition for business locations, that is why they are establishing free trade zones or bringing down their taxes, as an example. In any case, such measures mean that governments are missing out on incomes they desperately require for investments in education, health, wellbeing and infrastructure.⁶

3.3.2 Development of World Trade

According to the Capitalist economic theory, the most proficient way to cultivate development is considered an entirely liberalized global market, since each country specializes in creating the goods and services in which it has a comparative advantage. Yet, in apply, cutting trade obstructions and opening markets do not fundamentally create improvement. Trade in inherently unequal and poor countries seldom experience rising well-being but expanding unemployment, poverty and financial gain difference, because wealthy countries and large corporations dominate the worldwide marketplace and build terrible unequal relations of power and information.

An extra issue is, that free trade is not equally free. Agrarian subsidies and alternative trade obstructions within the US and the EU prevent poor nations from gaining access to the foremost necessary markets. Meantime, the poor countries open their own markets for export from the USA and the EU. Critics of free trade note, that many of the abundant countries of the world sheltered the economies by assurance when they were in the beginning of own development. Other than, multinational corporations so dominate in trade, that new trade rules usually help to gain profits and benefits to those companies. Promotion of “fair trade” has started after debating of Nongovernmental Organizations and deciding that trade can help to boost the growth, if it is environmentally sustainable and incorporates regarding to human and labor rights.⁷

⁶Retrieved from: <https://www.bmz.de/en/issues/wirtschaft/welthandel/welthandelssystem/index.html>

⁷Retrieved from: <https://www.globalpolicy.org/social-and-economic-policy/international-trade-and-development-1-57.html>

3.4 The World Trade Organization (WTO)

The fundamental goal of the WTO is to eliminate all international trade barriers. These embody tariff barriers to trade (especially customs duties) and non-tariff barriers to trade (e.g. technical standards and regulations or time-consuming bureaucratic hurdles). Another objective is to ensure that trade policies are foreseeable and apparent.

Nowadays, the WTO has 164 members (as at September 2017) About 2/3 of members are developing countries or increasing economies. Their interests are given special attention.

In the WTO system there are three main duty-bound pillars for all its members: the General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

The WTO is also a forum which gives the capacity for the settlement of trade disputes. During first decade after WTO was established, more than 300 dispute settlement materialized. Nowadays, this number has gone up to more than 500 (as at September 2017). Developing countries are utilizing dispute settlement successfully as well. For them, numerous special rules and reliefs apply. As part of the so-called "Doha Round", a change of the strategy is being negotiated.⁸

4 Practical Part

4.1 Overview of Uzbekistan

The Republic of Uzbekistan, a double-landlocked country in Central Asia, bordering with Kazakhstan to the west and to the north, Kyrgyzstan and Tajikistan to the east, and Afghanistan and Turkmenistan to the south. Uzbek is the official language of Uzbekistan, and Russian language is for international communication. Tashkent is the capital, and the official currency is the Uzbekistani som (UZS).

⁸Retrieved from: <https://www.bmz.de/en/issues/wirtschaft/welthandel/welthandelssystem/index.html>

Figure 1 Uzbekistan area



Source: (m. yukle.mobi, 2014)

Culture, art, and natural resources of the Republic of Uzbekistan are in an excessively rich heritage level. Alexander the Great, Genghis Khan, and Tamerlane the Great all left their marks in the long and eventful history which witnesses are monuments remaining throughout the country. During the 18th and 19th centuries the Khanates of Khiva, Kokand and the Emirate of Bukhara ruled the region. In the 18th century the interest of Russia to the region have increased rapidly. During the competing times of Russia and Britain for influence in a diplomatic and occasionally military struggle known as “The Great Game”, the interest of Russia for the region have intensified even more.

At first, the Central Asian territories supported the 1917 Bolshevik revolution hoping that they could obtain independence from Russia. However, support soon turned to fierce opposition from the nationalist Basmachi development, and also the Soviet forces were constrained to pull back. Soviet power was re-established in September 1919, although armed opposition continued into the early 1920s. On 27 October 1924, the Uzbek Soviet Socialist Republic (UzSSR) was found, and in May 1925 became part of the Union of Soviet Socialist Republics (USSR).

Under Tsarist rule, there had been little industrial growth in Central Asia although some raw materials were extracted. Throughout World War II, industrial base of Uzbekistan was

enlarged by the re-location of factories from the war-zone. Post-war Soviet development policies targeted on the exploitation of the country's raw materials, with notably serious investment within the production of cotton. By the late 1980s, the republic was manufacturing 90% of the Soviet Union's cotton, one third of its gold, and half of its uranium.

Independent since 1991, Uzbekistan aims to gradually reduce its dependence on agriculture while rising its mineral and fossil oil reserves. Uzbekistan is a dry, double-landlocked country of which 10% consists of intensely cultivated, irrigated river valleys. More than 60% of the population lives in most populated rural communities. A fundamental share of exports are energy supplies and hydrocarbons, together with natural gas and petroleum. Other major export earners include cotton, food, services, and metals. Uzbekistan is now the world's fifth-largest cotton exporter and sixth-largest producer.⁹

4.1.1 Uzbekistan in Russian Empire period

In 19th century the Kokand Khanate was eliminated, after an armed irruption of Russian troops in the 60-ies and the Turkestan Governor-Generalship was established on July 11, 1867. The Emirate of Bukhara and the Khiva Khanate received the status of a protectorate. Power was under the governor-general, who executed all the military and civil administration.

The new government was mainly focused on the agricultural sector of Uzbekistan economy, which resulted in the cotton growth for the requirements of Russian industry. Mining operations began, cottonseed oil mills and gin houses were constructed, the Trans-Caspian railway was built, which connected Central Asia with European part of Russia.

4.1.2 Soviet Uzbekistan

In the autumn of 1917 the Soviet power was pronounced. Turkestan was granted the status of the Soviet Republic within the RSFSR. As Nationalists opposed with decision, a fierce guerrilla war for the sovereignty of their place of origin have started. In Central Asia, from 1917 to 1921, there was a conflict between guerillas and troops of the Red Army, which ended with the victory of the Soviet Union. Five new republics within the USSR were established in 1924, as well as the Uzbek SSR, which existed until 1991.

⁹Retrieved from: <http://taxsummaries.pwc.com/ID/Republic-of-Uzbekistan-Overview>

In the first decade of the Soviet power in Uzbekistan, numerous measures were centered to the elimination of illiteracy and construction of schools. It affected the traditional life style and culture additionally. A dynamic industrialization of Uzbekistan took place in the 30-ies of the 20th century: large plants and fabrics of light and heavy industry were constructed, new cities were built near these plants, and old ones were reconstructed. Meanwhile Uzbekistan suffered from Stalin's political repressions, which affected leading politicians and cultural figures of Uzbekistan too. During World War II of 1941-1945 the male population of the republics of the Soviet Union was brought to the front, and the most significant enterprises and people were evacuated to the republics of Central Asia, including Uzbekistan. Throughout this period Tashkent became evacuation center, which granted a shelter to refugees from all Soviet Union and was called the City of bread and the City of friendship of Nations

Because of a heavy earthquake in 1966, the major parts of the old city were destroyed. Consequently, the town was remodeled within the Soviet style by the architects, coming from all over the USSR. The subway in Tashkent was put into operation at the end of 1977. It was the first subway in Central Asia

4.1.3 Independent Uzbekistan

Due to the collapse of the USSR political independence of Uzbekistan was declared at the extraordinary VI session of the Supreme Council on August 31, 1991.

The 1st of September was announced as an Independence Day. The Republic of Uzbekistan was officially recognized as an independent state by 160 countries around the world. On March 2, 1992 Uzbekistan joined the UN as a new member. On December 8, 1992 the new Constitution of the Republic of Uzbekistan was adopted. A presidential form of government became the key role of the new political system in Uzbekistan, in which the power of the President, as head of the state, and executive power were concentrated.

Since gaining the independence, Uzbekistan took a course to build the democratic state with market economy. The republic obtained the chance which allowed to conduct the foreign economic activity freely. Today, Uzbekistan is in the lists of the Organization for Economic Cooperation, the European Bank for Reconstruction and Development, the International

Monetary Fund, the International Labor Organization, Shanghai Cooperation Organization and other reputable organizations.¹⁰

4.1.4 Modern History

In 2017, after the drivers of the old development model were depleted, Uzbekistan launched an ambitious program of market-oriented reforms that was not dispensed yet within the country's modern history.

Figure 2 Country Context

Uzbekistan	2018
Population, million	32.9
GDP, current US\$ billion	40.3
GDP per capita, current US\$	1,223
Life Expectancy at Birth, years ⁽²⁰¹⁷⁾	71.4

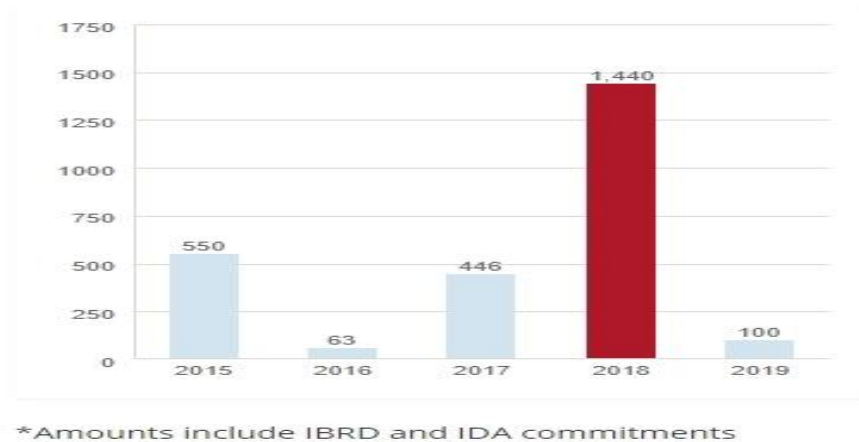
Source:(worldbank.org,2018)

The Government's National Development Strategy for 2017–21 aims to remodel the country by liberalizing the economy, reshaping the role of the state in the economy, modernizing the agriculture sector, strengthening governance, creating markets, as well as in monetary services, enabling private sector development, investing in human capital, and progressing social protection and service delivery for all citizens. The Strategy, to be implemented over five years, is guided by an annual state program.

The country's reform momentum has also created new opportunities for regional cooperation in Central Asia, including in energy, transport, water, and economic connectivity.

¹⁰Retrieved from: <https://www.advantour.com/uzbekistan/history/history-today.htm>

Figure 3 Uzbekistan-Commitments by Fiscal Year (in Millions of Dollars)



Source: (worldbank.org,2018)

The Government has created fast progress on implementing a formidable variety of policy changes in a short period of time by initiating public service, judicial, academic, and tax systems reforms; liberalizing the foreign exchange regime followed by price liberalization measures; strengthening the independence of the Central Bank of Uzbekistan (CBU); simplifying the visa regime; rising the investment climate and business environment; initiating necessary reforms within the agricultural sector; scaling up anticorruption efforts; and opening a dialogue between the Government and the citizens of Uzbekistan.¹¹

4.2 Foreign Trade Activities of Uzbekistan

As a part of the economic system reform of the Republic of Uzbekistan, over the past period the Ministry has started few arrangements on liberalizing foreign economic activity and increasing the export potential of the Republic.

In foreign economic sphere, the strategy of expansion and strengthening of trade and economic relations with foreign countries was continued, firstly with China, the Russian Federation, Kazakhstan, South Korea, Turkmenistan, Turkey, and Germany.

¹¹Retrieved from: <https://www.worldbank.org/en/country/uzbekistan/overview>

In 2017 the turnover of the Republic of Uzbekistan with foreign countries increased by 11,3%, incl. exports increased by 15,4%, imports – 7,2%. Volumes of trade has grown with all major foreign trade partners, by 16,8% with China, Russia – 16,1%, Kazakhstan – 9,7%, Kyrgyzstan – 51,6%, Tajikistan – 20,2%, Afghanistan – 15,2%, South Korea – 27,1%, Turkey – 31,8%, Germany – 15,9% and others.

For the first time in the history of modern Uzbekistan, joint production of domestic products was launched abroad, assembly production of cars of JSC “GM Uzbekistan” has begun in Kazakhstan, and the similar projects on building industrial assembly of vehicles, agricultural machinery, electrical items, construction materials and textiles are being implemented in Kyrgyzstan.

Only in 2017, 21 top level visits took place, 700 documents were signed in the trade, economic and investment spheres for a total of about USD 60,00 billion, including USD 11,00 billion trade contracts.

All export limits such as the process for exporting goods without prepayment and guarantee obligations were lifted, extension of tax benefits for exports has been entered. Unnecessary and outdated licensing functions have been liquidated.

The obligatory sale of foreign currency earnings, which in fact was a tax on exports, has also been eliminated.

Rates of the import customs duties and excises sharply were reduced by food products, the imported consumer goods and goods used at production of finished goods. As a result, the arithmetic average rate of customs duty in Uzbekistan became 6,45%.

Over the past period, more than 950 new enterprises have been involved in export activities, the volume of export made up more than USD 0,6 billion, 118 new types of goods are exported, the geography of deliveries broaden to 62 new markets as well.

The share of high added value finished goods in the export of the Republic of Uzbekistan incremented from 28,5% to 34,5%, export of cars increased by 3,3 times, electric and cable products -1,7 times, pharmaceuticals – 1,2 times, textile – 1,3 times.

Uzbekistan is concentrated currently on trade enlargement measures through creating trading houses (with show-rooms) in foreign countries.

To this day, over 1 000 trading houses are functioning abroad, out of them 75 have been established in 2017, including 26 in the countries of Central Asia.

In 2017 domestic enterprises have taken part in more than 80 international exhibitions and fairs in 20 countries of the world, we have signed export contracts and agreements amounting to USD 1,36 billion.

At the same time, in accordance with the 5 priority areas of Uzbekistan's Development technique for 2017-2021, and to encourage export volumes, includes modern enterprises in export and develop export of latest products, based on integrated marketing research, the Ministry has developed an idea on development of export activities of the Republic of Uzbekistan for 2018-2022. Concurring to this Concept, a country tends to predict increase in exports of the Republic of Uzbekistan by 2022 to the extent of up to USD 30 billion, or 2,6 times over current export indicators

To diminish the transport expense part in overall export of products, Uzbekistan has received discounts of up to 40% on the transportation of mineral fertilizers, cotton fiber, fruit and vegetable products and non-ferrous metals across the territories of Kazakhstan, Russia, Turkmenistan, Azerbaijan, Georgia and Iran.

As part of the formation of efficient and reliable alternative transport and transit corridors, a pilot auto rally on the Uzbekistan-Kyrgyzstan-China road corridor was organized (the core direction of BRI), and the 1st meeting of the operating committee of the Ashgabat agreement was organized for the practical implementation of the international transport and transit corridor «Uzbekistan-Turkmenistan-Iran-Oman».¹²

4.2.1 Commonwealth of Independent States Free Trade Area (CISFTA)

“The Treaty on the Free Trade Zone of the States Parties to the Commonwealth of Independent States” was signed on October 18, 2011.

The agreement provides the simplification of the legal basis of trade and economic relations between the countries that signed it, having replaced several multilateral and about 100

¹²Retrieved from: <http://www.uzbekembassy.in/summary-of-2017-in-foreign-trade-policy-of-the-republic-of-uzbekistan/>

bilateral documents regulating until that time the free trade regime in the Commonwealth space.

The document was signed by the heads of government of eight CIS countries (Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan and Ukraine), of which more than 90% of mutual trade of the countries are the share.

In a preamble to the contract it is proclaimed that participants, in view of need of appropriate and effective functioning of the free trade zone and need of integration into world economy and the international trading system, aim to improve living standards of the population of their states constantly. The agreement contains the concept, basic conditions and norms governing trade and economic relations of the CIS member states at a higher qualitative level.

According to the contract, the quantity of exclusions from the free trade regime when importing is considerably reduced. In fact, it involves three products: alcohol, sugar and tobacco products (with the entry into force of the contract, the number of seizures on imports nevertheless decreased and in the beginning of 2015 was only two items: white and other sugars).

The parties have decided to “freeze” export duties at the existing level and, and in six months after the introduction of the contract in force to begin negotiations on their stage-by-stage cancellation. Presently, export duties mostly used to products of the fuel and energy complex, fertilizers, hides, waste and scrap metals, mineral raw materials, seeds of agricultural crops and live cattle.

They additionally created the choice, not to utilize technical, sanitary and phytosanitary measures as boundaries to trade. The agreement fixes the annulment of quantitative confinement in the mutual trade of the CIS member states in the form of quotas, licenses or different measures, which means that non-tariff restrictions are fully canceled.

Here are important provisions of the document:

- granting each other national treatment in respect of domestic taxes, fees, laws, rules referring to the sale, transportation, distribution, use, process of products on the intra-national market;
- proclaiming the principle of freedom of transit.

In case of a threat of harm to domestic producers, the agreement also provides the use of temporary protective measures in mutual trade in respect of industrial and agricultural goods in accordance with Article XIX of GATT 1994, the WTO Agreement on protective measures.

According to the Article 9 of the treaty, it is dedicated to the utilization of anti-dumping and countervailing measures in mutual trade and is oriented at liquidation the practice of subsidizing exports. At the same time, clear legal processes for resolving problems arising in mutual trade were determined.

The agreement encloses a rule based on the WTO rules (Article 14), which gives possibility of temporary application of limitations to protect its external financial position, prevent the threat of a decline in foreign exchange reserves, the balance of payments, including restrictions on payments and transfers in connection with trade in products within the parties.

The contract contains the case providing independent consideration of a dispute by the group of experts according to the procedure of settlement of disputes based on the international practice. It additionally has currently been approved and entered into force for seven states: Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, the Russian Federation and Ukraine. The Republic of Tajikistan did not complete the approval procedure of the signed treaty. On May 31/2013, a Protocol was signed on the application of the Free Trade Zone Agreement of October 18, 2011 between its Parties and the Republic of Uzbekistan.¹³

4.2.2 Uzbekistan in Commonwealth of Independent States Free Trade Area (CISFTA)

On May 31/2013 Uzbekistan joined the agreement on a free trade zone of the Commonwealth of Independent States (CIS). On this day, a regular meeting of the CIS Council of Heads of Government was held in Minsk, and the entrance of Uzbekistan to the treaty was enforced as part of this conferences.

The protocol describes the legal functions of relations between the Republic of Uzbekistan and the parties to the Treaty on the Free Trade Zone. Thus, we are talking about spreading

¹³Retrieved from: <https://ria.ru/20161018/1479411161.html>

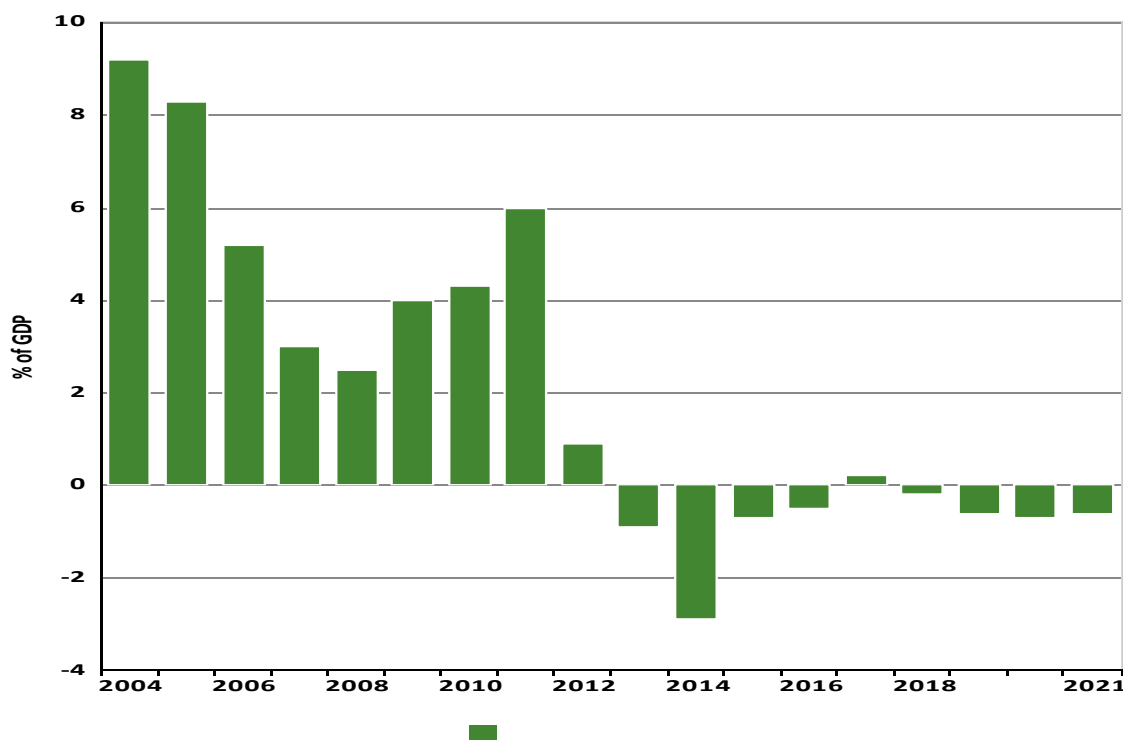
the legal space for the operating of the free trade zone and the actual participation of Uzbekistan in this mechanism in the CIS space based on the norms and rules of the World Trade Organization.

On October 18, 2011 the agreement on free trade zone within the framework of the CIS was signed by eight countries - Russia, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan and Ukraine. Later, Azerbaijan, Turkmenistan and Uzbekistan expressed their desire to further develop the issue of joining the treaty. By 2013, only Kyrgyzstan and Tajikistan have not validated the treaty, but the procedure is at the final stage.¹⁴

4.3 Trade in Uzbekistan

In 2016, Uzbekistan carried out foreign trade operations with 175 countries around the world and reached a positive balance with 86 countries. As we can see from the table below, there were a positive indicators of trade balance from 2004 to 2011 in the country. But from then, marks had declined significantly.

Figure 4 Review of GDP per capita¹⁵



source:<https://tradingeconomics.com/uzbekistan/trade-percent-of-gdp-wb-data.html>

¹⁴Retrieved from: <http://china-uz-friendship.com/?p=1017>

¹⁵Retrieved from: <http://data.worldbank.org/data-catalog/world-development-indicators>

In 2004 it shows 9.20 % of GDP, which means trade balance was on its highest point. Activity slowed down until 2008, up from 2009 we can observe a positive incline. Till 2009 the share of raw materials in export of Uzbekistan made less than 40 percent, and in the next years it grew almost to 70 percent. Since 2009 the share of raw materials in export of Uzbekistan to China increased, and by the end of 2012 such goods made 68 percent of export.

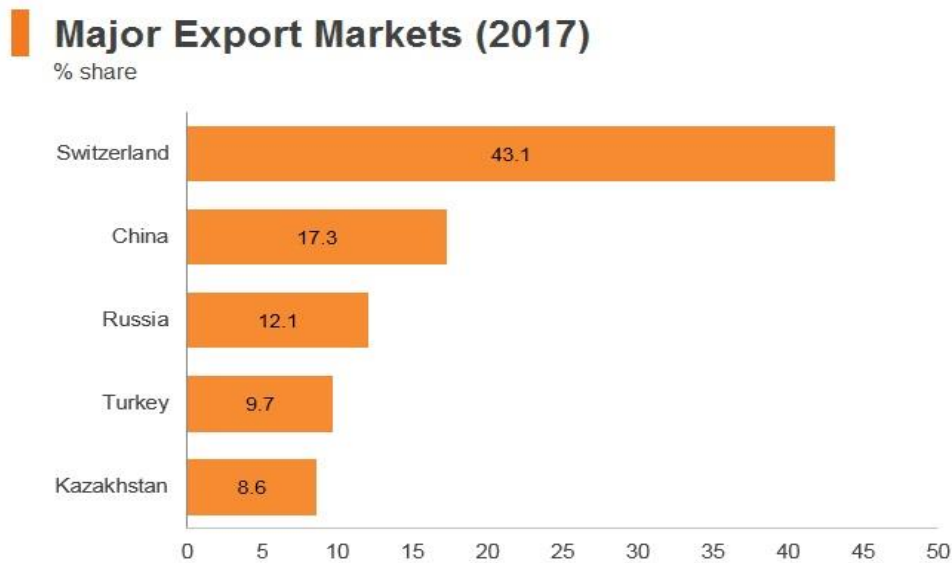
In 2012 the trade balance was sharply narrowed due to significant reduction of export of gold (volume and cost), and lower export of cotton and food (because of lower prices) was not compensated by increase in export of the processed goods and the restored gas export volumes. Falling of export of gold reflects preference of the authorities to keep a much bigger part of the extracted gold in official reserves.¹⁶

4.3.1 Export

Earlier Uzbekistan traditionally supplied Russia, Kazakhstan and other CIS countries whereas now it exports on the markets more than 120 countries of the world, including Indonesia, Norway, Mongolia, Saudi Arabia, Slovakia, the USA, Thailand and Japan.¹⁷ Major export commodities of Uzbekistan consist of metals & articles thereof, which makes the 54% of exports. Second main exported product made 21 % of manufactured consumer goods. Chemical, industrial & fuel products 14%, food & agricultural 9%; machinery & complex manufactured products made up only 2%

¹⁶Retrieved from: <https://stat.uz/en/official-statistics/foreign-economic-activity-and-trade/statistical-tables-ves/435-analiticheskie-materialy-en1/2066-foreign-trade-statistics>

Figure 5 Top 5 Export Destinations



Source: <http://china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/Uzbekistan-Market-Profile/obor/en/1/1X000000/1X0A3HWP.htm>

The table above shows us 5 top Export Markets of Uzbekistan, according to the data of 2017. The biggest export destination of Uzbekistan is Switzerland with \$3.68B, China (\$1.4B), Russia (\$1.01B), Turkey (\$815M) and Kazakhstan (\$714M) ¹⁸

From 2018, Export situation in the country has changed, and natural gas, fruit& vegetables and cotton yarn were included in the three of the leading export goods of Uzbekistan in the first half of the year.

According to the Ministry of Foreign Trade, in the period from January to June 2018 Uzbekistan exported about \$1.14B natural gas.

The volume of export of fruit and vegetable products for the reporting period was \$463.2M, and cotton yarn \$381.04M.

¹⁸Retrieved from: <https://www.cistradedata.com/uzbekistan-export-data.php>

Top 20 the exported goods of Uzbekistan include polyethylene (\$219.5M), finished textile goods (\$216.8M), cotton fiber (\$166.08M), copper cathode (\$147.6M), the electric power (\$105.98M), natural uranium (\$98.92M) and black metal rolling (\$90.37M).

Russia, China and Kazakhstan became the main trade partners of Uzbekistan in the first half of 2018.

According to the Ministry of Foreign Trade, commodity turnover between Uzbekistan and Russia from January to June 2018 was \$2.83 billion that makes 16 % from the general commodity turnover of Uzbekistan.

China took the second place. Commodity turnover between the countries for the specified period was \$2.81B that makes 15.9 % from the general commodity turnover of the country of Central Asia.

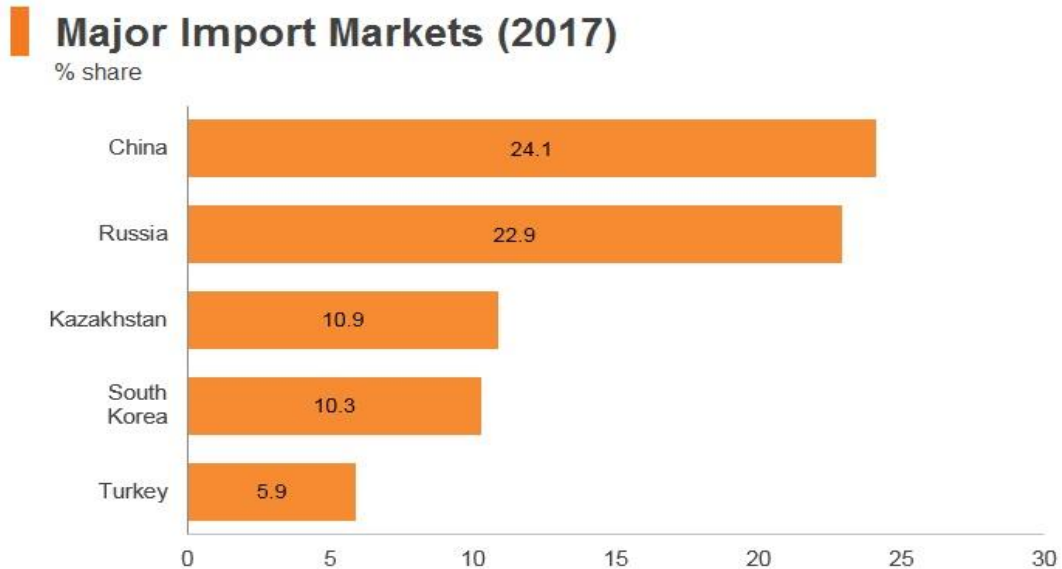
The share of Kazakhstan in the general commodity turnover of Uzbekistan made 8.1%. The total amount of trade between the countries was \$1.43B

The five largest trade partners of Uzbekistan in January-July 2018 also included Turkey (\$ 940 million and share in the total commodity turnover of Uzbekistan - 5.3 percent) and South Korea (\$ 762.4 million and 4.3 percent). (Kamila Aliyeva,2018) ¹⁹

4.3.2 Import

¹⁹Retrieved from: <https://www.azernews.az/region/135467.html>

Figure 6 Top 5 Import Destinations



Source: <http://china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/Uzbekistan-Market-Profile/obor/en/1/1X000000/1X0A3HWP.htm>

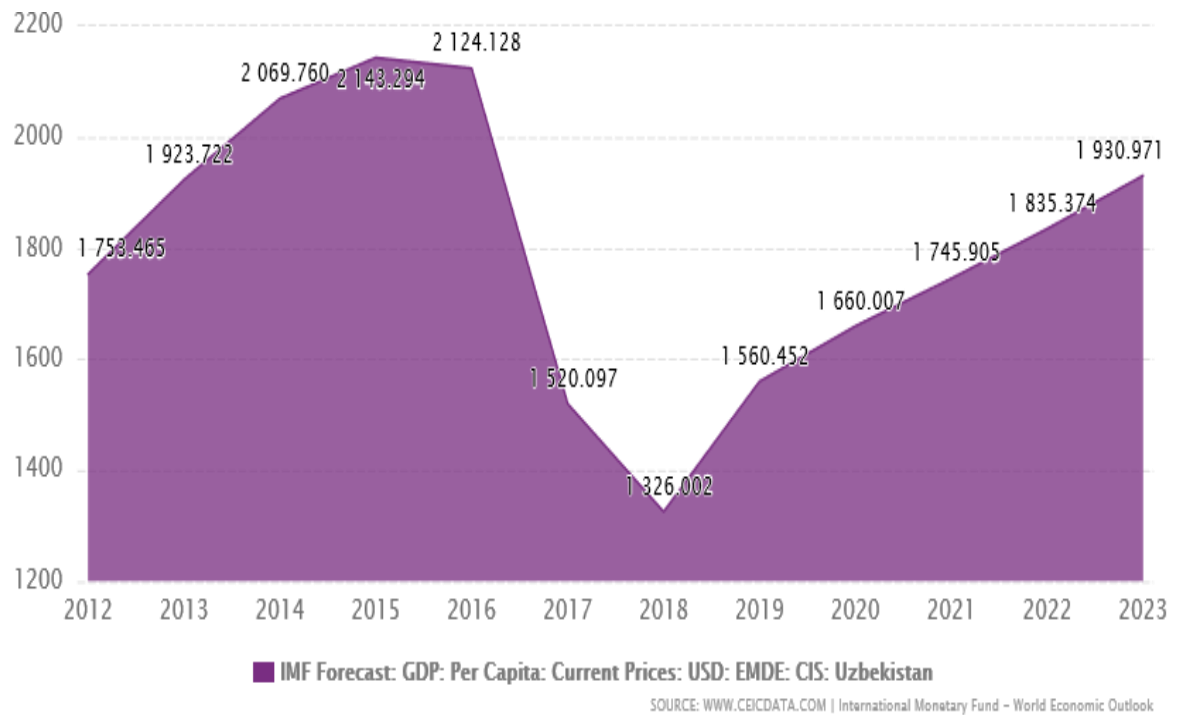
According to sources, in the period from January to July 2018, the rate of Import has exceeded the export rate almost for 25 %. Main trading partner is China again, with a turnover of which amounted \$ 1.8 B, where growth rate is 33.9%. Following by Russia, with a turnover of \$2B, with a positive increase rate of 24%. And Kazakhstan, \$863M, with a growing rate of 52.5%.²⁰

Uzbekistan imports Machinery & complex manufactured products 39%, manufactured consumer goods made 19% of import of the country, chemical, industrial & fuel products 18%, metals & articles thereof 14%, food & agricultural is only 10 %.

²⁰Retrieved from: <https://www.spot.uz/ru/2018/08/13/import/>

4.3.3 Estimation of the dynamics of GDP

Figure 7 Dynamics of GDP



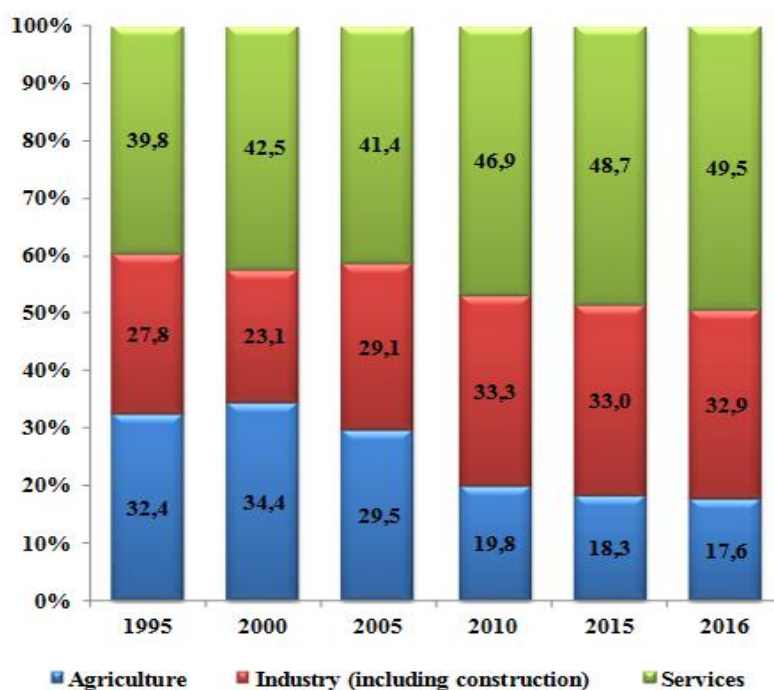
Source: <https://www.ceicdata.com/en/indicator/uzbekistan/forecast-nominal-gdp-per-capita>

Uzbekistan is one of the fastest growing economies in the world. In the past 11 years, including in 2015, the growth rate of GDP is stable and amounts to more than 8%. Despite the global economic crisis, the country's economy has grown almost 6 times, real per capita income has grown more than 9 times. The table above shows how GDP per capita grew until 2014–2015. Over the year of independence (1991-2014), GDP increased 4.5 times.²¹

²¹Retrieved from:
https://www.researchgate.net/publication/311840097_Agriculture_and_economic_development_in_Uzbekistan

One of the reasons for the decline in per capita GDP is monetary reform, carried out in September 2017, when the Central Bank of Uzbekistan carried out exchange rates in Uzbekistan. The national currency UZS immediately fell from the official exchange rate of the US dollar from 4.210 to 8100, and the black market disappeared.²²

Figure 8 Changes in GDP structure, in percentage



Source: <https://stat.uz/en/official-statistics/foreign-economic-activity-and-trade/statistical-tables-ves/435-analiticheskie-materialy-en1/2064-analysis-of-macroeconomic-indicators>

In days of independence the tendency to gradual decrease in a share of agriculture in structure of GDP remained (about 32.4 percent in 1995 up to 17.6 percent in 2016) that relates to further enlargement of potential for development of the industries and services. At the same time decrease in a share of agriculture in GDP happened against the background of positive average annual growth rates of agricultural products.

The total quantity of industrial manufacturing and a share of the industry in structure of GDP were augmented about 27.8 percent in 1995 up to 32.9 percent in 2016 thanks to the

²²Retrieved from: <https://silkroadstudies.org/resources/pdf/SilkRoadPapers/2018-04-Tsereteli-Uzbekistan.pdf>

measures taken for diversification, modernization, technical and technological updating of industries.

At the same time development of services sector is one of the vital factors of growth of national economy, increase in employment rate and therefore financial gain. Because of realization of consistent measures for reforming of services sector, this industry for a short period became the foremost dynamically developing sector of economy. The share of services in GDP increased about 39.8 percent in 1995 up to 49.5 percent in 2016.²³

4.4 Regression Model. Effect of different factors on Gross domestic product of Uzbekistan.

This system is an examination of the yield data of components and the dynamic association between the two elements. It is imperative to light up the association between the financial markers of the country's economy. Rise and fall in the Gross Domestic Product per capita of yearly terms in the country and educational elements, for instance, fare of cotton, and besides joblessness rate. The time course of action watches data subject to a 14-cover period from 2004 to 2017. The model hopes to create a general monetary model, form a different straight backslide exhibit for the demonstrated issue and declare its variables, register and unravel the quantifiable data, survey the backslide show and decipher the assessed parameters.

4.4.1 DATA

The information found in authority hotspots for the consequent evaluation of the circumstance in the nation.

²³Retrieved from: <https://stat.uz/en/official-statistics/foreign-economic-activity-and-trade/statistical-tables-ves/435-analiticheskie-materialy-en1/2064-analysis-of-macroeconomic-indicators>

Table 1 Gross domestic product, fare of cotton and unemployment rate in Uzbekistan for 2004-2017

Variable	GDP per capita *	Export of cotton**	Unemployment rate***
TS = 14	y_t	x_{1t}	x_{2t}
2004	467	3,9	8,25
2005	550	4,8	8,26
2006	658	4,5	8,26
2007	837	4,2	8,23
2008	1,091	3	8,23
2009	1,224	3,8	8,22
2010	1,392	2,6	8,19
2011	1,577	2,5	8,16
2012	1,753	3	8,11
2013	1,924	2,3	8,06
2014	2,052	2,6	8
2015	2,124	2,2	7,94
2016	2,094	1,7	7,51
2017	1,534	0,9	7,18

Source: it is made by author²⁴

1) *General economic model.*

GDP per capita = f (Export of cotton; Unemployment rate)

2) *Multiple Linear Regression model.*

$$y_{1t} = x_{1t} + x_{2t} + \mu_{1t}$$

Dependent variable:

y_{1t} – Gross Domestic Product in thousand dollars per capita;

Independent variables:

x_{1t} – Export of cotton/ lb. Bales;

²⁴Table was created by author according to: <https://data.worldbank.org/country/uzbekistan>

x_{2t} – Unemployment rate in %;

μ_{1t} - error

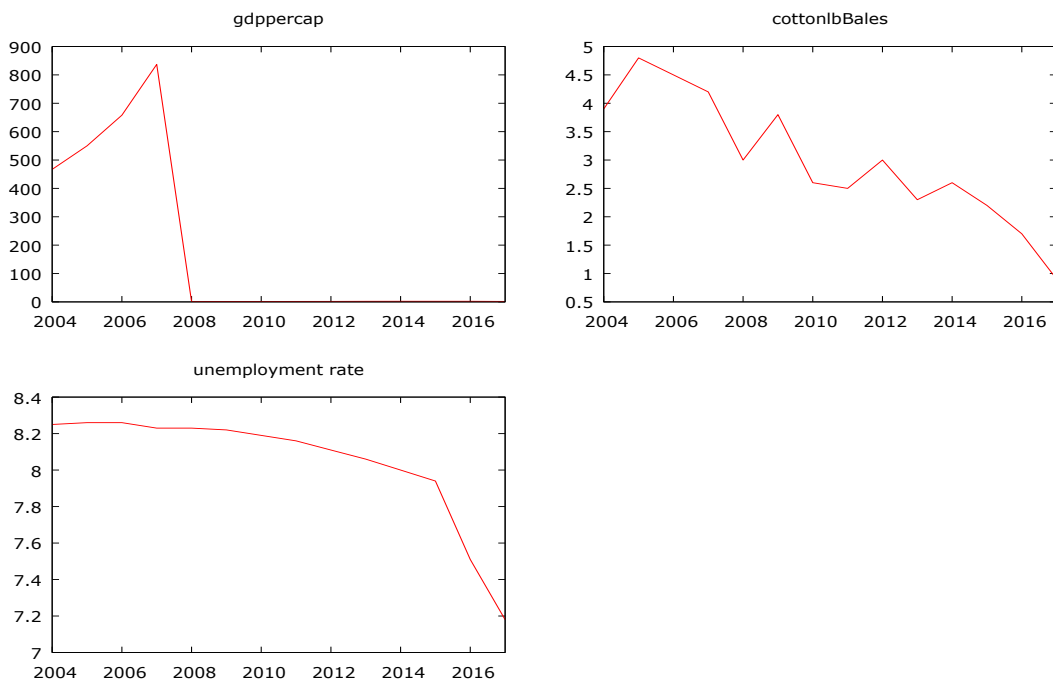
3) Generation charts of factors.

These elements of charts, as introduced beneath, permits seeing the development of the steady and factors. It can see that the base Gross domestic product per capita was in 2007 and a critical increment can see from the 2008.

Because of fare of cotton, the most extreme pointer likewise kept in 2005. Additionally, the chart demonstrates the visual vacillation from year to year.

For the joblessness rate circumstance, it can see a huge decrease after 2014.

Table 2 – Dynamics of indicators



Source: it is created by author²⁵

²⁵The graphs were made by author based on: <https://data.worldbank.org/country/uzbekistan>

4.4.2 Estimation of parameters

Multicollinearity test

Table 3 - Correlation matrix.

<u>GDP per cap</u>	<u>Cotton lbBales</u>	<u>Unemployment in %</u>	
1.0000	0.7705	0.4088	<u>GDP per cap</u>
	1.0000	0.8102	<u>Cotton lbBales</u>
		1.0000	<u>Unemployment in %</u>

Source: It is created by author²⁶

Correlation coefficients, using the observations 2004 - 2017

5% *critical value* (two-tailed) = 0.5324 for n = 14

For testing of Estimation of parameters author used OLS – test in Gretl

This model is proper for further testing. It can see that in the association structure above there is no multicollinearity between exogenous components of the model. Thusly, there is no close-by association among the factors (x_{1t} , x_{2t}) picked for an examination that impacts the general result.

For this circumstance, need to inspect whether the elements impact the steady. In view of limiting the entirety of the squared deviations of the watched estimations of the reliant factors from the qualities anticipated by the model.

²⁶ It was created by author based on Gretl program.

Table 4: OLS, using observations 2004-2017 (T = 14)

Dependent variable: *GDP per capita*

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	3942.96	1879.87	2.097	0.0599	*
x1t	347.882	72.8661	4.774	0.0006	***
x2t	-597.546	255.140	-2.342	0.0390	**
Mean dependent var	180.6261	S.D. dependent var		303.4913	
Sum squared resid	324617.2	S.E. of regression		171.7866	
R-squared	0.728896	Adjusted R-squared		0.679605	
F(2, 11)	14.78743	P-value(F)		0.000763	
Log-likelihood	-90.22455	Akaike criterion		186.4491	
Schwarz criterion	188.3663	Hannan-Quinn		186.2716	
rho	-0.114480	Durbin-Watson		2.195071	

Source: it is made by author²⁷

Statistical confirmation by Goodness of Fit:

Evaluated by R^2 - coefficient of assurance shows how close the data is to the fitted relapse demonstrate. Thusly, for this circumstance, $R^2 = 0.7288$. Explicit evaluated model and its elements elucidated 72.88% of the variability of the destitute variable, in this way clarifies the reliance. This shows coming about line in 72.88% matches the main data numbers as the model fits inside the precedent. From close enough R-square can envision that the association among variables is commonly high.

Statistical essentialness as indicated by p-values:

H₀: There are impacts of Export of cotton and Unemployment rate on GDP per capita.

H₁: There are influence from Export of cotton and Unemployment rate to GDP per capita.

If our **p-value** less or equal to α so we reject the **H₀** - it means that there are big impact of Export of cotton and Unemployment on GDP (our dependent variable)

Evaluation for $\alpha = 0.05$ and $\alpha = 0.1$

²⁷ Table was created by author based on Gretl program

- 1) Dependent variable (GDP) = 0,0599, author considers that its $> 0,05$ at the same time $< 0,1$ means rejecting H_0 our dependent variable is statistically significant at a 10% level of significance
- 2) $X_{1t} = 0,006$; $x_1 < 0,01$; $x_1 < 0,05$; and $x_1 < 0,1$ is *statistically significant* at a 1%, as well at 5 % and at 10% level of significance.
- 3) $x_{2t} = 0.0390$; $x_{2t} < 0.05$ and $x_1 < 0.1$ is *statistically significant* at a 5% and at a 10% level of significance

4.4.3 Interpretation of evaluated parameters

$$y_{1t} = 3942.96 + 347.882x_{t1} - 597.546x_{t2}$$

- 1) On the off chance that all factors are equivalent to zero, GDP is 3942.96 thousand dollars per capita.

Connection between fare of cotton and total national output (GDP) clarified by following capacity:

$$y_{1t} = 347.882x_{t1}$$

The total national output will increment by 347.882 thousand dollars for each capita. If the fare of cotton increments by 1 unit. Also, the other way around.

The parameter x_{t1} with at least a sign in like manner decidedly influences GDP. Really, this is substantial, because it justifies perceiving that the country is especially dependent on the fare of cotton. Among various markers, cotton has an immense impact.

- 2) Connection between unemployment rate and total national output (GDP) clarified by following capacity:

$$y_{1t} = - 597.546x_{t2}$$

The GDP will diminish by 597.546 thousand dollars for every capita. On the off chance that the normal joblessness rate increments by 1 unit. Also, the other way around.

On the off chance that there ought to emerge an event of joblessness in the country, the issue ends up unpredictable, since not all markers work consequently, and sometimes, genuinely, when high joblessness is moreover low GDP. Since the joblessness rate in the country has all the earmarks of being basically enduring. But, there is a situation when the joblessness rate has reduced, and meanwhile, GDP has decreased. This is really the circumstance, while during the season of degrading in the country, the GDP advanced toward getting to be lower, but then people remained at their work, that is, the joblessness rate did not push toward getting to be lower.

4.4.4 Testing for Autocorrelation

Table 5 – Results of Autocorrelation test

Breusch-Godfrey test for first-order autocorrelation

OLS, using observations 2004-2017 (T = 14)

Dependent variable: *uhat*

x1t = export of cotton; *x2t* = foreign direct investment

	coefficient	std. error	t-ratio	p-value
const	53.3753	1963.72	0.02718	0.9789
<i>x1t</i>	4.17231	76.7485	0.05436	0.9577
<i>x2t</i>	-8.23007	266.731	-0.03086	0.9760
<i>uhat_1</i>	-0.117511	0.318866	-0.3685	0.7202

Unadjusted R-squared = 0.013399

Test statistic: LMF = 0.135813,

with p-value = P (F (1,10) > 0.135813) = 0.72

Alternative statistic: TR² = 0.187591,

with p-value = P (Chi-square (1) > 0.187591) = 0.665

Observed unadjusted R-squared = 0.013399 and corresponding p-value 0.72 are greater than significance level (0.01) → **No Autocorrelation**

In addition, critical value for Chi-square (1) is found as follows;

TR² = 0.187591, p-value 0.665 > 0.01 **No Autocorrelation**

Chi-square (1) right-tail probability = 0.01;

Complementary probability = 0.99;

Critical table value = **6.635**

Critical value = 6.635 > TR² = 0.187591 **No Autocorrelation**

Source: it is made by author²⁸

²⁸Table was created by author based on Gretl program

That means there is **NO** serial correlation in this model

4.4.5 Testing for Collinearity

Table 6 Results for Collinearity

Variance Inflation Factors

Minimum possible value = 1.0; Values > 10.0 may indicate a collinearity problem

Export of cotton lb. Bales x1t 2.911

Unemployment rate % x2t 2.911

Source: Created by author²⁹

There is **NO** collinearity has been detected in the model.

4.4.6 Testing for Heteroskedasticity

Table 7 – Heteroskedasticity test result

Null Hypothesis: Heteroskedasticity not present

Alternative Hypothesis: Heteroskedasticity present

Breusch-Pagan test

OLS, using observations 2004-2017 (T = 14)

Dependent variable: scaled uhat²

	coefficient	std. error	t-ratio	p-value
const	7.30966	19.4245	0.3763	0.7138
x1t	1.01549	0.752914	1.349	0.2045
x2t	-1.16328	2.63633	-0.4413	0.6676

Explained sum of squares = 9.62541

Test statistic: LM = 4.812706,

with p-value = P (Chi-square (2) > 4.812706) = 0.090143

Chi-square (2)

right-tail probability = 0.05

complementary probability = 0.95

Critical value = 5.991

P value 0.090143 > 0.05

Source: Table was done by author³⁰

²⁹ Table was analyzed by author based on Gretl program

³⁰ Table was created by author based on Gretl program

Null hypothesis “Accepted” **Heteroskedasticity NOT present**

Critical value = 5.991 > LM = 4.812706

Null hypothesis “Accepted” **Heteroskedasticity NOT present**

Table 8– White’s test result

White's test for heteroskedasticity

OLS, using observations 2004-2017 (T = 14)

Dependent variable: \hat{u}^2

Unadjusted R-squared = 0.372629

Test statistic: $TR^2 = 5.216806$,

with p-value = $P(\text{Chi-square}(5) > 5.216806) = 0.389998$

Chi-square (5)

right-tail probability = 0.05

complementary probability = 0.95

Critical value = 11.070

Source: Table was done by author³¹

We consider that H₀ “Accepted” **Heteroskedasticity NOT present**

³¹ Table was created by author based on Gretl program

5 CONCLUSIONS

From the results of analysis, we can see a big impact of cotton fare on the GDP growth rate, which is logical, because since the country was announced Independent, the production and export of cotton have been vital for the development of the economy. After the country has expanded destinations of export, economy had increased rapidly.

In case of unemployment rate, there is a relationship between them obviously, but it is a little tricky, because we see fluctuating results, which changes in different stages in response to different situations.

Nowadays, a lot of changes are happening in Uzbekistan, different types of reforms in various aspects of the country. As for the trade, authorities are advancing conditions for trading, by eliminating barriers, implementing new rules, which give the opportunity to flourish for small and new traders. We are at a final stage of joining World Trade Organization, which will significantly boost the opportunity to get to even broader destinations, and useful for both, to Uzbekistan and to other countries.

According to the David Ricardo (1772-1823) and to his 'foreign trade' concept, it will be the best for the country, which specializes in producing and trading one product, in which, country is best at, and import other commodities. I agree with his concept, it is logical. But in case of a cotton, it has a flip side too. Producing cotton requires a lot of water and good land, and Uzbekistan had suffered from these prospects too. Since country is on the stage of reforms, big improvements at a global level, we have a lot of development and enrichments ahead.

6 References

1. Bubáková, Petra, 2014, *Empirical research in economics*. V Praze : Česká zemědělská univerzita, Provozně ekonomická fakulta, ISBN 978-80-213-2508-1
2. ČESKÁ ZEMĚDĚLSKÁ UNIVERZITA V PRAZE. INSTITUT TROPŮ A SUBTROPŮ, -- JENÍČEK, V. -- KREPL, V. *International trade and developing countries*. Prague: Czech University of Agriculture, 2006. ISBN 80-213-1464-8.
3. SHERLOCK, J. -- REUVID, J. *International trade : an essential guide to the principles and practice of export*. London: Kogan Page, 2011. ISBN 978-0-7494-6237-6.
4. *World investment report 1996 : investment, trade and international policy arrangements*. NEW YORK: UNITED NATIONS, 1996. ISBN 92-1-104468-5
5. Li M. Discussion on University Teaching Reform under the Education Massification // EURASIA Journal of Mathematics, Science and Technology Education. 2017. No 3(12). Pp. S359–S365
6. 24. Fleck M. P., Ugnich K. A., *Model of management of the enterprise in modern conditions: resource view, 2017*. // Scientific and technical statements *SPbGPU. Economic science*. - № 4. - p. 165–175.
7. Borissov, K., Pakhnin, M., Economic Growth and Property Rights on Natural Resources. *Economic Theory*, 2018, 65 (2), pp. 423–482.
8. M. Ataman Aksoy, John C. Beghin, World Bank: *Global Agricultural Trade and Developing Countries* , 2005 ISBN 0-8213-5863-4 // publisher, world bank, 1818 h street nw, washington
9. Amrita Narlikar Routledge: *International Trade and Developing Countries: Bargaining Coalitions in the GATT & WTO*, 2003, publisher: Routledge ISBN-13: 978-0415318594
10. Alice Landau: *The International Trade System* // publisher: Routledge, 2004 ISBN 0-203-30045-9

Internet resources:

1. <https://ourworldindata.org/trade-and-globalization>
 2. <https://www.investopedia.com/terms/t/trade.asp>
 3. https://ebrary.net/7271/economics/tariff_methods_international_trade_regulation#438
 4. https://ebrary.net/7271/economics/tariff_methods_international_trade_regulation
 5. <https://www.bmz.de/en/issues/wirtschaft/welthandel/welthandelssystem/index.html>
 6. <https://www.globalpolicy.org/social-and-economic-policy/international-trade-and-development-1-57.html>
 7. <https://www.bmz.de/en/issues/wirtschaft/welthandel/welthandelssystem/index.html>
 8. <http://taxsummaries.pwc.com/ID/Republic-of-Uzbekistan-Overview>
 9. <https://www.advantour.com/uzbekistan/history/history-today.htm>
 10. <https://www.worldbank.org/en/country/uzbekistan/overview>
 11. <http://www.uzbekembassy.in/summary-of-2017-in-foreign-trade-policy-of-the-republic-of-uzbekistan/>
 12. <https://ria.ru/20161018/1479411161.html>
 13. <http://china-uz-friendship.com/?p=1017>
 14. <http://data.worldbank.org/data-catalog/world-development-indicators>
 15. <https://stat.uz/en/official-statistics/foreign-economic-activity-and-trade/statistical-tables-ves/435-analiticheskie-materialy-en1/2066-foreign-trade-statistics>
 16. <http://china-trade-research.hktdc.com/business-news/article/The-Belt-and-Road-Initiative/Uzbekistan-Market-Profile/obor/en/1/1X000000/1X0A3HWP.htm>
 17. <https://www.cistradedata.com/uzbekistan-export-data.php>
 18. <https://www.azernews.az/region/135467.html>
- <https://www.spot.uz/ru/2018/08/13/import/>
19. <https://www.ceicdata.com/en/indicator/uzbekistan/forecast-nominal-gdp-per-capita>
 20. https://www.researchgate.net/publication/311840097_Agriculture_and_economic_development_in_Uzbekistan

21. <https://silkroadstudies.org/resources/pdf/SilkRoadPapers/2018-04-Tsereteli-Uzbekistan.pdf>
22. <https://stat.uz/en/official-statistics/foreign-economic-activity-and-trade/statistical-tables-ves/435-analiticheskie-materialy-en1/2064-analysis-of-macroeconomic-indicators>
23. <https://stat.uz/en/official-statistics/foreign-economic-activity-and-trade/statistical-tables-ves/435-analiticheskie-materialy-en1/2064-analysis-of-macroeconomic-indicators>
24. <https://data.worldbank.org/country/uzbekistan>