

ALFRED NOBEL UNIVERSITY  
DEPARTMENT OF GLOBAL ECONOMICS

Bachelor's Thesis

**Development and ways of implementation of the international  
investment project “Rebar manufacturing enterprise” in Turkey.**

Student: Narmin Farzullayeva

Group: IE-17eng

Specialty: 292 International economic relations

Supervisor: \_\_\_\_\_

Last name, initials, scientific degree

Dnipro, 2021

***The Bachelor's thesis assignment Template***

**ALFRED NOBEL UNIVERSITY  
DEPARTMENT OF GLOBAL ECONOMICS**

First (bachelor) level

Specialty 292 International economic relations

Approved by:  
Head of the Department \_\_\_\_\_  
\_\_\_\_\_

(signature, last name, initials, scientific degree, academic status)  
“\_\_\_\_” 20\_\_ p.

**The Bachelor's Thesis  
Assignment**  
Narmin Farzullayeva

1. Title: Development and ways of implementation of the international investment project “Rebar manufacturing enterprise” in Turkey

2. Supervisor \_\_\_\_\_

(last name, initials, scientific degree, academic status)

Approved with the Order of «\_\_\_\_” 20\_\_, No. \_\_\_\_\_

3. Deadline for submission \_\_\_\_\_.

4. Aim of the paper is to investigate the ways of implementation of the international investment project “rebar manufacturing enterprise” in Turkey.

5. Thesis outline (list of issues to be developed):

- to analyze the development of the Turkish economy;
- identify the basic principles of taxation;
- assess the investment climate in Turkey and the degree of its attractiveness to Ukrainian investors;
- to analyze the foreign trade operations and steel production and consumption in Turkey;
- analyze and calculate financial indicators;
- determine the total costs, revenues and the payback period.

6. Date of issue of the assignment \_\_\_\_\_

7. Thesis schedule

| No | Stages  | The deadline for submission |             |
|----|---|-----------------------------|-------------|
|    |   | Schedule date               | Actual date |
| 1  | Turkey economic outlook: current situation, main problems and further development.              |                             |             |
| 2  | Foreign economy of Turkey   |                             |             |
| 3  | Development of an international investment project to establish rebar manufacturing enterprise. |                             |             |
| 4  | The whole paper   |                             |             |

Student  
signature \_\_\_\_\_

last name, initials

Supervisor \_\_\_\_\_

signature \_\_\_\_\_

last name, initials

## THESIS SCHEDULE

Academic year \_\_\_\_\_  
 Mode of study \_\_\_\_\_

| No . | <b>Stages in the Thesis Process</b>                                 | <b>Deadline</b> | <b>Notes</b> |
|------|---|-----------------|--------------|
| 1    | The student is assigned his/her thesis supervisor                   |                 |              |
| 2    | The student selects the topic of the thesis                         |                 |              |
| 3    | The thesis topic is approved by the Head of the Department          |                 |              |
| 4    | The student gets the Thesis Assignment from the supervisor          |                 |              |
| 5    | The student conducts a literature review and creates a bibliography |                 |              |
| 6    | The student completes Chapter 1                                     |                 |              |
| 7    | The student collects materials on a company's performance           |                 |              |
| 8    | The student completes Chapter 2                                     |                 |              |
| 9    | The student completes Chapter 3                                     |                 |              |
| 10   | The students draw out conclusions and recommendations               |                 |              |
| 11   | The student formats the paper and receive the supervisor's review   |                 |              |
| 12   | Thesis Pre-defense  |                 |              |
| 13   | Thesis Defense  |                 |              |

**Approved at the meeting of the department**

**Minutes No. \_\_\_\_ of \_\_\_\_\_ 20\_\_\_\_**

**Head of the department**

## ANNOTATION

### *Development and ways of implementation of the international investment project “Rebar manufacturing enterprise” in Turkey*

The work aims to study the current state of the market and economy, the investment climate, analysis of competitors and the feasibility of doing business in Turkey. Turkey is a country open to foreign investors. The country is trying to attract more investors through various development incentives. Turkey has some significant advantages in foreign direct investment among other economies. One of them is that the country serves as a logistics hub for many countries due to its unique geographical location.

An international investment project for rebar production in Iskenderun was developed at the expense of an investor from Ukraine. All necessary calculations to determine the attractiveness of the investment project were performed, including the expected profits, costs and the required amount of start-up capital.

Key words: investment climate, Turkey, industry, payback period, taxes in Turkey, profit.

## АНОТАЦІЯ

### *Розробка та шляхи реалізації міжнародного інвестиційного проекту «Підприємство з виробництва арматури» в Туреччині.*

Робота полягає в дослідженні сучасного стану ринку та економіки, інвестиційного клімату, в аналізі конкурентів та доцільності ведення бізнесу в Туреччині. Туреччина - це країна, відкрита для іноземних інвесторів. Країна намагається залучити більше інвесторів за допомогою різноманітних стимулів розвитку. Туреччина має значні переваги серед інших країн стосовно прямих іноземних інвестицій. Серед них є те, що країна служить логістичним центром для багатьох країн завдяки своєму унікальному географічному розташуванню.

У роботі розроблено міжнародний інвестиційний проект з виробництва арматури в Іскендерун за рахунок власних коштів інвестора з України. Були виконані всі розрахунки, необхідні для визначення привабливості інвестиційного проекту, в тому числі очікувані прибутки, витрати та необхідна кількість стартового капіталу.

Ключові слова: інвестиційний клімат, Туреччина, промисловість, термін окупності, податки в Туреччині, прибуток.

## TABLE OF CONTENTS

**Topic: Development and implementation of the international investment project  
“rebar manufacturing enterprise” in Turkey.**

|  |    |
|--|----|
| Introduction.....  | 6  |
| 1. Turkey economic outlook: current situation, main problems and further development.....              | 8  |
| 1.1 Stages of economic development in Turkey over the past 15 years.....                               | 8  |
| 1.2 Significant changes in state’s economy with the change of governance.....                          | 11 |
| 1.3 Industrial and service sectors as main sources of country’s income.....                            | 15 |
| 2. Foreign economy of Turkey.....  | 21 |
| 2.1 Importing and exporting in Turkey.....   | 21 |
| 2.2 Foreign direct investment activity.....  | 24 |
| 2.3 Cooperation between Ukraine and Turkey towards increasing mutual investment.....                   | 32 |
| 3. Development of an international investment project to establish rebar manufacturing enterprise..... | 36 |
| 3.1 Crude steel production in Turkey.....  | 36 |
| 3.2 Evaluation of the effectiveness of the investment project.....                                     | 38 |
| 3.3 Sources of attraction, economic attractiveness and profitability of the project.....               | 40 |
| Conclusion.....  | 47 |
| References.....  | 49 |

## INTRODUCTION

Foreign direct investment (FDI) is an integral part of an open and well-functioning economic system and a major factor for development. At the same time, however, the receipt of an increasing number of benefits from FDI by different countries, sectors of the economy and groups of the population, does not occur automatically, and these benefits are not evenly distributed among them. The ability to attract FDI to an increasing number of developing countries and maximize the benefits from them to achieve the goals of development is determined by the policies pursued by these countries and the international investment climate.

Increasing consumption rates in many areas around the world continue rapidly in the steel industry, too. The consumption of steel products that provide inputs as raw materials to the construction, transportation, machinery industry and automotive sectors, which are the main areas of steel consumption, has also come to considerable numbers.

Impressive growth performance and structural reforms that Turkey has taken in the last decade have provided the country's entry into radar of many international investors. Turkey's Foreign Direct Investment (FDI) Law is based on the principle of equal treatment makes it possible to have the same rights and obligations as local investors and international investors.

The conditions for company formation and share transfer are the same as those applied to local investors. Accordingly, international investors can establish all types of companies specified in the Turkish Commercial Code (TCC). It meets international standards, encourages private equity and IPO activities, providing transparency in government operations and business environment which makes Turkey's compliance with EU legislation and EU accession process offers an approach to corporate governance.

In Turkey, there is no legal or practical restrictions for foreign direct investment. In particular, with the adoption of the Foreign Direct Investment Law in 2003, foreign investments have become an integral part of the country's macro-economic program. FDI Law, reducing bureaucracy, foreign investors in Turkey provide easier access to markets and bringing the equal treatment principle is ensure that foreign investors have the same rights as Turkish citizens. Since the entry into force of the Law, foreign direct investment

coming to Turkey increased significantly and the country's proactive policies applied in this area continues to practice.

The aim of this study is to determine the economic factors that impact on FDI. The effect of FDI on economic factors in Turkish economy and investment climate during pandemic will also be analyzed.

The work studies the current state of the market and economy, investment opportunities, analysis of competitors and the feasibility of doing business in Turkey. Over the past 15 years, Turkey has shown rapid economic growth, improved working conditions, and an increase in average wages. Its laws provide investment opportunities for both citizens of this country and people living in other countries.

An international investment project for manufacturing rebar in Iskenderun was developed at the expense of an investor from Ukraine. Expected profits and expenses, the required amount of start-up capital has been counted. All this makes it possible to assess the attractiveness of this project.

# CHAPTER 1

## TURKEY ECONOMIC OUTLOOK: CURRENT SITUATION, MAIN PROBLEMS AND FURTHER DEVELOPMENT.

### 1.1 STAGES OF ECONOMIC DEVELOPMENT IN TURKEY OVER THE PAST 15 YEARS.

Turkey's economy is defined by International Monetary Fund (IMF) as an economy by emerging market economies. It is among industrialized countries of the world. At the same time, the country is described by economists and political scientists as one of the most recently industrialized countries in the world. Turkey is the world's 19th largest economy by nominal Gross Domestic Product (GDP) (Table 1.1) and the 13th largest economy by GDP. It is among the world's leading manufacturers in business lines such as agricultural products, textiles, motor vehicles, ships and other transportation equipment, construction materials, consumer electronics and white goods. Although the state still plays an important role in industry, banking, transportation and communication lines, a rapid development has been achieved in the private sector in recent years.

*Tab.1.1. Top 20 countries by nominal GDP (2019)*

| Rank | Country        | GDP (USD mln) |
|------|----------------|---------------|
| 1    | United States  | 20,807,269    |
| 2    | China          | 14,342,903    |
| 3    | Japan          | 5,081,770     |
| 4    | Germany        | 3,845,630     |
| 5    | India          | 2,875,142     |
| 6    | United Kingdom | 2,827,113     |
| 7    | France         | 2,715,518     |
| 8    | Italy          | 2,001,244     |
| 9    | Brazil         | 1,839,758     |
| 10   | Canada         | 1,736,426     |
| 11   | Russia         | 1,699,877     |
| 12   | South Korea    | 1,642,383     |
| 13   | Spain          | 1,394,116     |
| 14   | Australia      | 1,392,681     |
| 15   | Mexico         | 1,258,287     |
| 16   | Indonesia      | 1,119,191     |
| 17   | Netherlands    | 909,070       |
| 18   | Saudi Arabia   | 792,967       |
| 19   | Turkey         | 754,412       |
| 20   | Switzerland    | 703,082       |

*Source: World bank, 2019*

Today many parts of Turkey can be regarded as the industrial society. Turkey is among those few Muslim countries, which successfully performed the phenomenon of rapid transition to an industrial society. Turkey, as of 2016, is the second largest economy after Indonesia among the countries where the majority of the population is Muslim. Turkey is traced by Saudi Arabia and Iran. The most advanced economy in the Turk world is also traced by Kazakhstan.

Turkey's economy grew by 1.8% in 2020, compared to 0.9% growth in 2019. An almost 2-fold increase in bank lending in the second half of 2020 made it possible to partially offset the negative consequences of the COVID-19 coronavirus pandemic and related restrictions. Turkey's sharp rise in gross domestic product (GDP) in the second half of 2020 (up 5.9% in the fourth quarter) was driven mainly by a doubling in lending by state-owned banks. While Turkey is ahead of all emerging market and G20 economies except China, growth has come at a price: cheap lending has accelerated the lira's record drop, reduced the country's foreign exchange reserves and pushed inflation up to 15% (Figure 1.1).

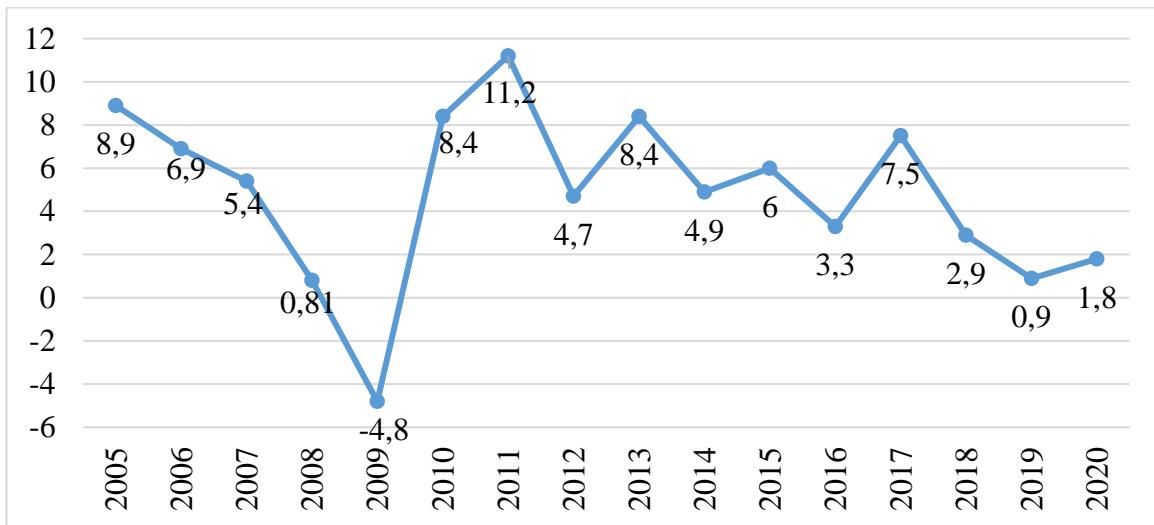


Fig. 1.1. GDP growth (annual %)

Source: World Bank, 2021

Turkey's economy is a mix of traditional crafts and modern industries. It is very dynamic and rapidly developing. The country has a large agricultural sector, which has been developing strongly lately. It is equipped with a highly developed infrastructure and workforce that is competitive even in the global market. In addition to agriculture, the service sector, industry, tourism, and the financial sector also contribute to the Turkish

economy. Turkey's financial flexibility score is 64.4, making its economy the 71st freest within the 2020 Index. Its overall score has diminished by 0.2 point due to a lower monetary wellbeing score. Turkey is positioned 36th among 45 nations within the Europe locale, and its overall score is well underneath the territorial normal and over the world average (Alex, 2020). Most of the Turkish economy is still agriculture. Turkey's agricultural sector is the seventh largest in the world, employing about a third of the country's total workforce. In addition, the industrial sector is rapidly developing in the country, and it may soon become the leader in the Turkish economy.

Turkey's economy took its place among the rare countries in the world that can grow in 2020 and showed growth of 1.8 %. This rate was followed by Taiwan and China with the fastest growing third-world country Turkey. Turkey Statistical Institute (Turkstat, 2021) showed a lower than expected 5.9 % economic growth performance in the last quarter of 2020, according to data. Contraction in construction and stoppage in exports caused growth to be below expectations. The engine of growth was the consumption expenditures of the industry and citizens. Analysts had expected last-quarter growth at 7 %. In the government's New Economy Program, the 2020 growth expectation was at the level of 0.3 %. Analysts state that 1.8 % growth may cause a downward revision in growth expectations for 2021, and foresee a strong but below 6 % growth in the first quarter of 2021 due to the restrictions and tightening in monetary policy. Though several other factors, including the waning effect of World Bank/IMF reforms and the ending of the fight between the AK Party leaders and the military decisively in favor of the former, set in motion the slide in Turkish political and economic institutions, EU-Turkey relations arguably played the critical role. Even though both the reforms adopted in the process of EU accession and the anchoring role of the relations with the EU facilitated the difficult economic and political reforms of the first phase, as relations with the EU soured subsequently, these dynamics played in reverse.

The Turkish economy has been tolerably free for more than a decade. GDP development had been vigorous until 2018, when a cash and obligation emergency pushed the economy into subsidence. Economy of Turkey is strong thanks to public finance, well-capitalized banks and a vibrant and diversified private sector. However,

moving into the freest ranks of economic freedom will require reforms that will make the labor market more competitive. It should also be noted that the government will need to strengthen the efficiency of the judicial system and the fight against corruption, which have suffered as a result of the repression that occurred due to the coup attempts in 2016.

## 1.2 SIGNIFICANT CHANGES IN STATE'S ECONOMY WITH THE CHANGE OF GOVERNANCE.

The actions of the Turkish authorities have ceased to appeal to foreign investors, namely, the rapid growth of the Turkish economy in recent decades was based on the inflow of foreign capital. But the situation has literally changed recently. Here it is vital to analyze how Turkey moved so quickly from a sharp growth to an economic crisis.

Investing in emerging markets is always a risk. Any investor will be confused trying to analyze the volumes of information and use them appropriately when some of the most reliable sources are not available in English, but even by the standards of emerging markets, the Turkish economy is full of uncertainties. A few months later, the situation changed dramatically.

Turkey is experiencing a currency crisis amid 20% inflation and 11% unemployment, and it is going through a political standoff over who will control the country's central bank (Bloomberg, 2021).

The Turkish economic miracle provided the political support and popularity of Recep Erdogan and his Justice and Development Party (AKP) - politics and economics are closely intertwined in this case. The AKP's rise to power in 2002 was associated with population fatigue from the economic crisis of 2001-2002, which led to the uncontrolled devaluation of the lira, and with disappointment in the reform program, which the IMF insisted on in exchange for stabilization support. The course that the AKP began to implement was to revise the agreements with the IMF and the transition to an active social and industrial policy. The reorientation of government spending to important from an electoral point of view social goals while maintaining a relatively balanced budget policy made it possible to ensure political stability and high rates of economic growth. Over the past 15 years, that is, since the AKP was in power, the average growth rate of Turkey's GDP was 5.6% annually. For comparison: the average growth rate in Ukraine for the

same period did not exceed 2.2% (Hurriyet, 2021). The differences in dynamics between the Ukrainian and Turkish economies have become even more visible since 2010. While the Ukrainian economy was stagnating, the Turkish one was growing rapidly.

The basis of the Turkish economic miracle was an investment boom, which was based on a large-scale inflow of foreign capital and an increase in external borrowing. Erdogan's new economic model failed to change this key feature of the Turkish economy. The country's external debt grew rapidly, primarily due to the corporate sector: from \$ 104 billion in 2000, it grew to more than \$ 450 billion in 2017. By the beginning of 2018, the volume of liabilities of Turkish companies in foreign currency exceeded \$ 320 billion (Turkstat, 2021). The construction sector, supported by both the growth in demand for housing from the population and various government programs, became the basis of the economic boom.

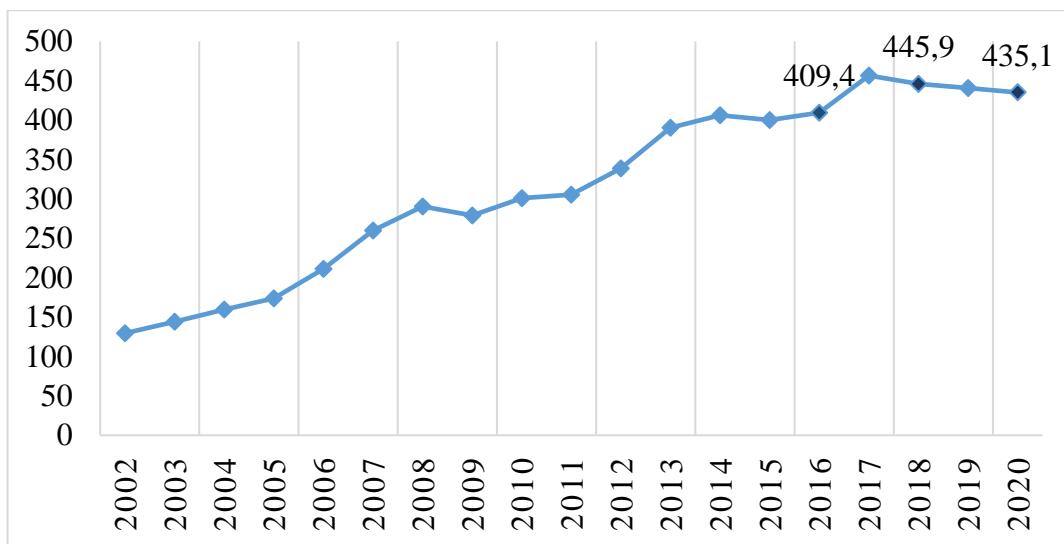
The Turkish president cannot directly control interest rates, but Erdogan used his influence to cut rates. His ability to influence monetary policy has been strengthened as he consolidated power. It was only last summer that he gained the authority to appoint central bank governors. As a result, long-term economic expansion driven by easy lending can be observed. There was also a construction boom, fueled by easy loans for real estate and an increase in production through business lending.

Consumer loans have become one of the most important areas of lending growth. In 2002, they accounted for about 4% of the Turkish economy, but in recent years the figure has increased to 18% (Invest, 2020). Cheap credit was a huge structural shift and led to rapid growth in almost all sectors of the economy.

Rapid growth driven by easy money is a process that has taken place in the history of economics since ancient times. In the case of Turkey, there was a dangerous shift: loans were denominated in foreign currencies. Unlike the US or Europe, where borrowers almost always have debts that can be repaid in their own currency, borrowers in emerging markets often borrow in foreign currencies. As a result, emerging markets become vulnerable to changes in the value of currencies. Then they must hold reserves of foreign hard currency in order to pay off foreign debts.

The mechanism of this problem can be seen in a simple example. A consumer in Istanbul takes a loan for 1,000 Turkish lira from a commercial bank. The bank gains access to the capital required to issue this loan by borrowing funds on international markets in euros or US dollars. The consumer returns the loan in Turkish lira, but if the value of the lira falls, then the 1,000 lira that the bank will receive upon repayment of the loan may no longer be enough to pay off the external debt.

This is happening now in Turkey. A year ago, 1 lira was equal to about 26 cents. Today it is equal to about 19 cents. This is a significant reduction of 27%. By the beginning of 2018, Turkey's external debt grew to almost \$ 450 billion, which is 18% more than in the summer of 2016 (Figure 1.2). After a difficult year of reduction in the share of borrowed funds, Turkey's external debt still stands at \$ 450 billion, more than 50% of the size of the entire Turkish economy (World bank, 2021).



*Fig. 1.2.External debt (USD)*

*Source: World Bank, 2021*

This situation can hardly be called unforeseen, since currency fluctuations are completely predictable. This is why most emerging economies make sure that their central bank has a healthy reserve of foreign hard currency so it can continue to import essential foreign goods. Unfortunately, Turkey does not have sufficient foreign exchange reserves. As of August, Turkey had enough foreign exchange to cover imports in just 75 days. This has become a tough choice for Turkey. The central bank had to raise interest

rates to control runaway inflation and stabilize the lira. This has led to gaps in Turkey's economic growth.

Turkey is vulnerable to a balance of payments crisis due to its large external debt and depleted foreign exchange reserves. However, one of the beneficial consequences of the economic problems is that Turkish consumers have reduced their spending on imported goods. Lower spending and falling oil prices have driven Turkey to a modest current account surplus in recent months. Turkey is slowly rebuilding its monetary position and expanding foreign exchange reserves instead of depleting them.

Nevertheless, thanks to the growth in gross domestic product financing from banks, which were not available until the 2000s, the Turkish population saw massive transformations in urban infrastructure. Large projects made it possible to reconstruct existing highways, which had been neglected for a long time, new bridges and roads made it possible to quickly transport goods and people. The real estate sector has also undergone major changes. Thanks to the fact that mortgage credit lending has become accessible to ordinary people, and the reforms that affected foreign buyers created favorable conditions for buying people began to buy real estate in modern housing complexes. The development of urban infrastructure is observed throughout Turkey, but the most obvious are the skyscrapers of Istanbul. The combination of a wide selection of public amenities with spacious property layouts has made Istanbul a popular home buying city for domestic and foreign buyers.

Turkey's economy is tightening in Q3 of last year's records after the rapid recovery in the last quarter, despite the restrictive monetary policy and measures taken against the epidemic showed high performance with domestic demand remain strong. Although the expectations for the upcoming period may change depending on the course of the epidemic and the speed of vaccination practices, it draws a moderately positive picture. On the other hand, expectations that the determination to fight inflation will be maintained and a prudent fiscal policy will pose downside risks on growth forecasts.

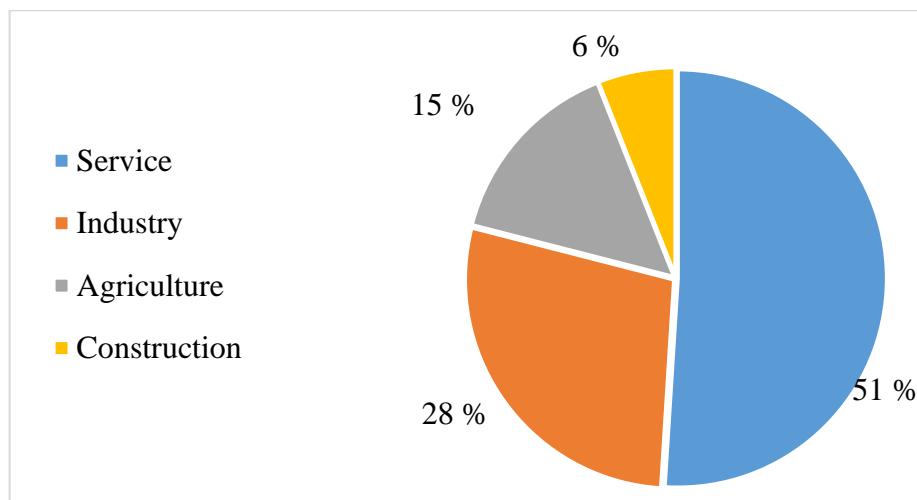
Rising oil and other commodity prices indicate that the pressure on the current account deficit will continue. In addition to being the main export market, it is expected the impact of vaccination practices and the decisions to be taken regarding travel

arrangements in European countries, which also have an important share in terms of foreign visitors to the country, to determine the outlook of the current account balance in the coming months.

### 1.3 INDUSTRIAL AND SERVICE SECTORS AS MAIN SOURCES OF COUNTRY'S INCOME.

Turkey's economic and social development performance since 2000 has been impressive, leading to increased employment and incomes and making Turkey an upper-middle-income country. For most of the period since 2000, Turkey maintained a long-term focus on implementing ambitious reforms in many areas, and government programs have targeted vulnerable groups and disadvantaged regions. Market relations with a large share of the private sector have been established in the Turkish economy after a series of reforms. The government is liberalizing the economy, privatizing state-owned enterprises and enabling foreign investors to invest in the domestic market.

The share of services in the Turkish economy is 51%, industry - 28%, agriculture - 15%, and construction - 6% (Figure 1.3). The most developed industries are manufacturing, textiles, food, pharmaceutical, leather, chemical industries, metallurgy, energy, automobile and shipbuilding, and the production of household goods.



*Fig.1.3. Share of services, 2020*

*Source: Bloomberg / Turkey, 2021*

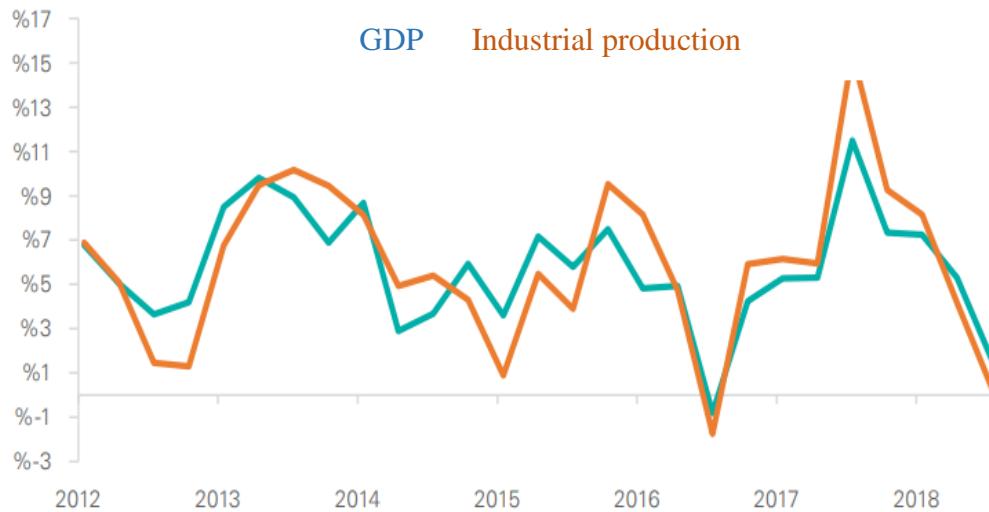
The Republic of Turkey ranks sixth in car production in Europe. World famous car brands such as FIAT, Ford, Toyota, Renault, Opel, Honda, Hyundai, Mercedes-Benz and MAN are assembled here. In addition, Turkey also produces local brands such as BMC

and Otokar. Tourism is a rapidly and actively developing industry, which has created new jobs for Turkish citizens and has become a source of foreign exchange in the country. Regarded service sector, Healthcare is also one of the fastest growing service sectors in Turkey. Medical services provided by the public and private sectors, thanks to the health care reform policy in Turkey, in terms of both technology and quality of services and conditions of international accreditation, have reached a competitive level in the world. Small and medium-sized enterprises are also part of the Turkish economy, which are actively supported by the state. They are provided with soft loans and minimal taxes. But only those firms that are engaged in production receive this status.

The share of industry grew steadily from 17% in 1960 to 35% in 1999, after which it began to gradually decline. The growth is largely attributable to the movement of manufacturing from Europe and North America to developing countries with cheap labor (which Turkey was and is part continues to be). The mining industry brought in \$ 12.8 billion in revenue in 2013. Since Turkey is located in a tectonic fault zone stretching from the Himalayas to the Pyrenees, its bowels are rich in metal ores. Gold reserves are small, 700 tons (production of 29 tons in 2012).

An average of 6.6 % during 2011-2020, pursued a fluctuating Turkey's economy had an annual growth pace capture (Figure 1.4). During this period, the growth rate of gross value added of industrial production in Turkey had reached to 7.8 per cent. In industrial production, the growth rate in the manufacturing industry increased to 8.2 % (Turkstat, 2021). The fact that the turnover increase of the sector remained above the unit production costs with the support of foreign demand was effective in this strong performance. In other words, Turkey industry sector has had a positive period in terms of growth and profitability. In 2018, the sector began to be affected by negative developments in the world due to its important role in the global supply chain, as well as the weakening of domestic demand. In addition, the rapid increase in production costs could not be reflected in prices in this environment where demand remained weak, while the gross value added rate of increase was stronger than the slowdown in the general economy. For this reason, in the first three quarters of 2018, while the annual growth rate of total GDP was 4.7 %, the rate of increase in the gross value added of the sector was

4.2 %. In particular, despite the 1.6 % result in total GDP growth in the third quarter, a gross value added increase of only 0.3 % was recorded in the industry. As of the first quarter of 2019, the value added of the industrial sector decreased by 4.3 % compared to March of the previous year.



*Fig 1.4. Comparison of GDP and industrial production (% annual)*

*Source: Turkstat, 2019*

By the end of the year, industrial production decreased by 9.8 % in December compared to the same month of the previous year. Industrial production fell 1.4 % compared to the previous month. When the sub-sectors are analyzed, the mining sector index decreased by 2.1 %, the manufacturing industry index decreased by 10.8 % and the electricity, gas, steam and air conditioning production and distribution sector index decreased by 1.2 % in the mentioned month . This results in the decline in industrial production in the fourth quarter of 2018, Turkey's economy shrinking by 3 %, while 2.6 % growth throughout the year, recording a growth rate of the sector was limited to 1.1 %. However, the loss of blood in industrial production, which is the leading indicator of growth, continued in the first quarter of 2019. While the slowdown in production wheels is expected to slow down to the first quarter of 2019, according to March 2019 data, industrial production increased by 2.1 % compared to the same month of the previous year, contracted by 2.2 % annually and performed better than expected. On the basis of sub-sectors, the mining and quarrying sector increased by 4.1 % and the manufacturing industry by 2.2 % in March compared to the previous month, while the electricity, gas

and steam sector decreased by 0.6 %. Looking at the general picture, industrial production decreased by 4.8 % in the first quarter of 2019 compared to the first quarter of the previous year. Seasonal and calendar adjusted industrial production increased by 1.7 % compared to the previous quarter (Turkstat, 2021).

The Turkish industrial sector is also a sector that attracts the attention of foreign investors. Between 2004 and 2019, foreigners' direct investment inflow to the sector was over \$ 58 billion (Turkstat, 2019). On the other hand, the total of \$ 29.7 billion of stocks of non-residents 8.7 billion dollars of their investments are also found in companies in this sector. In other words, the sector has a strong foundation not only in terms of production structure and market but also in terms of capital structure. Manufacturing industry is the most important and dynamic sub-sector within the industrial sector. In the manufacturing industry sub-sector, there are three industrial branches: consumer goods (food, tobacco, ready-made clothing, furniture), intermediate goods (paper, leather and small processing, rubber, plastic chemistry, petrochemical, petroleum products, cement, iron and steel, non-ferrous metals) and investment goods (metal goods, non-electric machinery, agricultural machinery, electrical machinery, highways and rail vehicles, shipbuilding, aircraft manufacturing and other industries).

While the sector is experiencing a golden age in terms of productivity gains and limiting costs, the trends that emerged in 2019 negatively affect the outlook in industrial production. However, the weakness in domestic demand and the high level of interest in Turkey, where industrial production is seen as an insider compressing element. Therefore, the existing potential of domestic demand in Turkey considers that the future of the industrial production could expand demand conditions.

Service sector in Turkey shows a very rapid development. While the share of this sector in national income increased continuously between 1990 and 2019, it was observed that the share of the industrial sector in national income remained constant or decreased (Figure 1.5).

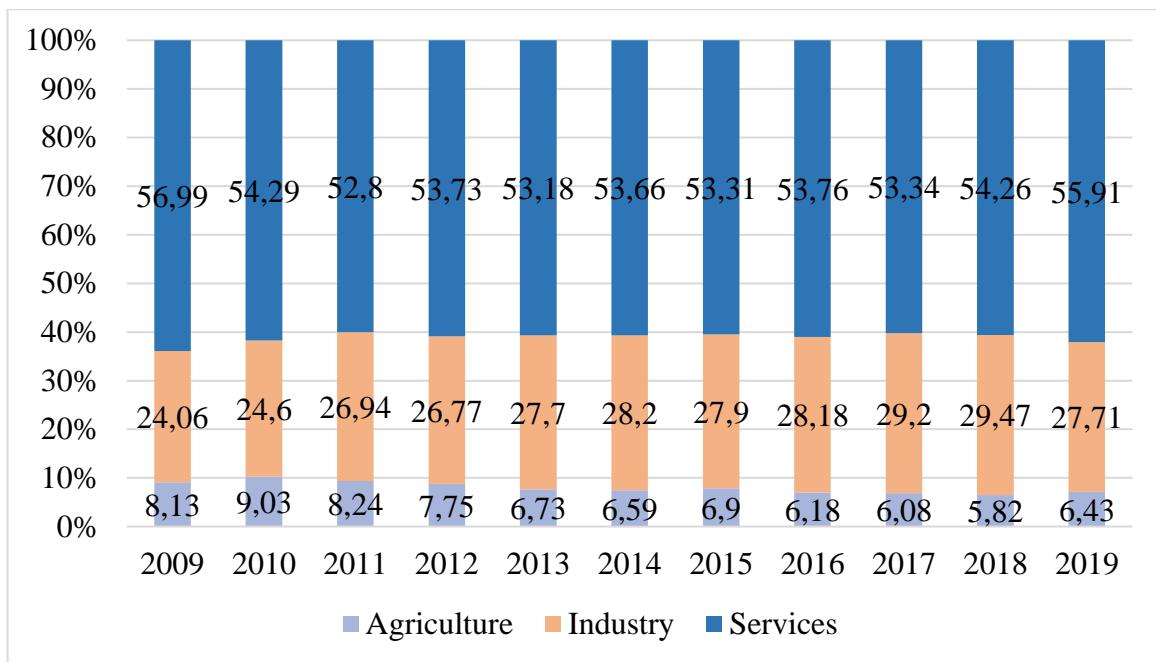


Fig.1.5. Share of economic sectors in GDP (2009-2019)

Source: Statista, 2020

Turkey trade in services, payments is an important factor in Turkey's foreign economic relations is a known fact that permanent deficit in the balance. However, it is known that services trade has a large share in reducing these deficits. Especially in Turkey's trade in services increased significantly since 1997, services exports have been on all imports. Tourism, construction, transport services, foreign currency Turkey are providing important services pens income (TurkStat, 2005). For example, in the tourism sector by the year 2010, Turkey's foreign currency income was 20.8 billion dollars. This figure is proportioned to the total export earnings of Turkey's rate of export income from tourism which is known to be around 20%. In this case, Turkey's strategic importance and other services sub-sectors leading position in the industry, which include a number of incentives and support given should be sought to increase the income of service trade. Looking at the firm-level data published by Turkey's Statistics Institute, the share of the total number of enterprises as of 2019, excluding agricultural enterprises in industry and services was 12% and 88%, respectively, their share in the production of these enterprises have been realized as 48 and 52%, respectively. Looking at employment, the share of employees in the total number of enterprises excluding agriculture is 27% in industry and 73% in services.

Although the share of both firms and employment in the services sector are very dominant, it is seen that the contribution of the production of this sector to the economy is limited. While the ratio of services sector production to industrial production was only 28% in 2003, this ratio increased significantly especially during the years of the global financial crisis and reached the level of 80% in 2019. During these 16 years, the current production of the manufacturing industry increased by 6% each year on average, while the production in the services sector increased by 24% per year(Turkstat,2019).

## CHAPTER 2

### FOREIGN ECONOMY OF TURKEY

#### 2.1. IMPORTING AND EXPORTING IN TURKEY

The crisis in 1994, and the 1999 earthquake in the next five years (August 17, 1999 İzmit earthquake and November 12, 1999 Düzce earthquake) has affected Turkey's economy. In addition to this situation, the political crisis (Black Wednesday) experienced at the National Security Council meeting on February 21, 2001 triggered the economic crisis. With 2002, global economic integrations were tried to be achieved. The economic crisis (mortgage crisis) that started in the USA in 2008 made its effects felt all over the world. The worst effects of this crisis were felt in the Euro zone and a serious contraction was experienced in the economy of the region. Reductions in exports to Turkey with countries in the region and the country in the current crisis environment had experienced decreases in capital inflows and thus faced with shrinking external demand. When it looks at the course of Turkey's foreign trade since 2000 from the previous year, according to a decrease in some years, though it is seen that in general increased in a stable manner. Foreign trade volume, which decreased with the 2001 crisis, increased until the global crisis period in 2008 (its effects were reflected in 2009).

The foreign trade volume, which increased again after this period, reached the level of \$ 530.3 million in January-August 2014 period. While there was a steady increase in foreign trade volume except for the global crisis period (2008), foreign trade deficits did not result in the desired levels. The most important reason for this situation is the high share of imports in the foreign trade.

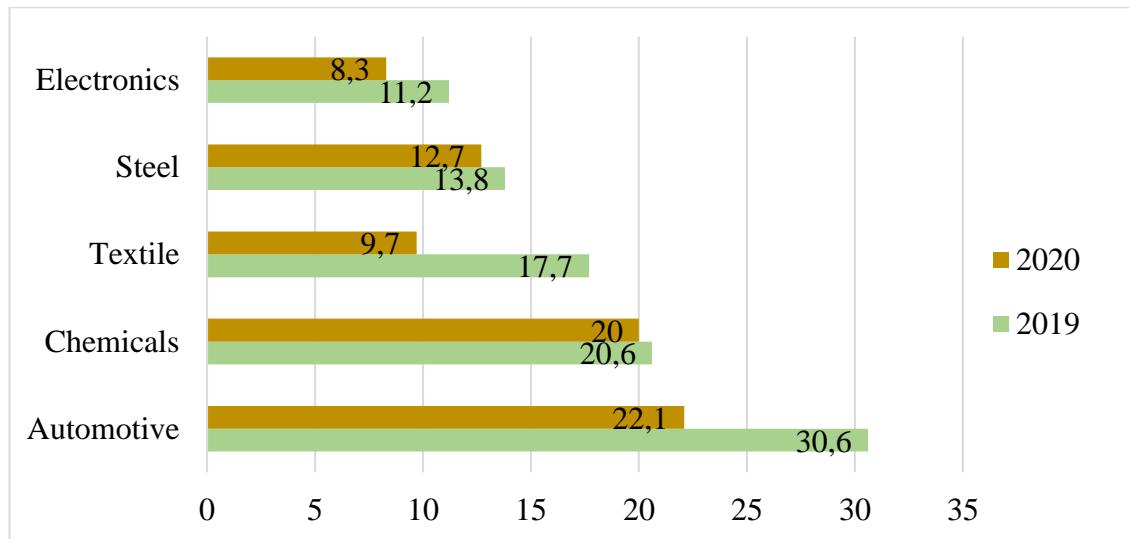
Turkey is the EU's 6th biggest trade partner, representing 3.6% of the EU's total trade in goods with the world in 2020. However, when the pandemic deeply affected the whole world trade, foreign trade in Turkey was slightly affected, too. Turkey's exports in 2020 was 169.5 billion dollars. Imports were recorded as 219.4 billion dollars in 2020. According to the data, the foreign trade deficit was 49.9 billion dollars in 2020. Exports fell 6.3 % in 2020 compared to the previous year. On the other hand, imports increased by 4.3 % in 2020 (Table 1.1).

*Tab. 2.1. Foreign Trade Data (2001-2020)*

| <b>Year</b> | <b>Import</b> | <b>Export</b> | <b>Foreign trade balance (mln \$)</b> | <b>Foreign trade volume (mln \$)</b> |
|-------------|---------------|---------------|---------------------------------------|--------------------------------------|
| 2001        | 31,334        | 41,399        | -10,065                               | 72,733                               |
| 2002        | 36,059        | 51,553        | -15,494                               | 87,612                               |
| 2003        | 47,252        | 69,339        | -22,087                               | 116,591                              |
| 2004        | 63,167        | 97,539        | -34,372                               | 160,706                              |
| 2005        | 73,476        | 116,774       | -43,298                               | 190,25                               |
| 2006        | 85,534        | 139,576       | -54,042                               | 225,11                               |
| 2007        | 107,271       | 170,062       | -62,791                               | 277,333                              |
| 2008        | 132 027       | 201 963       | -69936                                | 333990                               |
| 2009        | 102,142       | 140,928       | -38,786                               | 243,07                               |
| 2010        | 113,883       | 185,544       | -71,661                               | 299,427                              |
| 2011        | 134,906       | 240,841       | -105,935                              | 375,747                              |
| 2012        | 152,461       | 236,545       | -84,084                               | 389,006                              |
| 2013        | 151,802       | 251,661       | -99,859                               | 403,463                              |
| 2014        | 157,610       | 242,177       | -84,567                               | 399,787                              |
| 2015        | 207,206       | 143,850       | 63,356                                | 351,056                              |
| 2016        | 198,618       | 142,529       | 56,089                                | 341,147                              |
| 2017        | 233,739       | 156,992       | 76,747                                | 390,731                              |
| 2018        | 223,039       | 168,023       | 55,016                                | 391,062                              |
| 2019        | 210,343       | 180,835       | 29,508                                | 391,178                              |
| 2020        | 219,400       | 169,500       | 49,9                                  | 388,9                                |

*Source: Turkstat | TÜIK*

For the period January-March in 2020, there was a decrease in exports due to the coronavirus, showing a 4 % increase in the first two months of the new year (Figure 2.1). The numbers were thus down 3.9% year on year to \$ 42.8 billion in the first three months of 2020. There was an increase in imports by 10.3% (almost \$ 55.7 billion) and, at the same time, a deficit of foreign trade over the same period of \$ 12.9 billion.



*Figure 2.1. Export by sectors in 2019-2020 (bln \$)*

*Source: Turkstat, 2021*

So, in 2020 the main markets for the sale of Turkish goods were Germany (exports at \$ 1.3 billion), the United States (\$ 880 million) and the United Kingdom (\$ 802 million) (Figure 1.2). Exports to EU member states, where Turkey's main trading partners are concentrated, totaled US \$ 6.2 billion in March, increasing the country's total sales by 46.2 %. The automotive industry has maintained its position as the leading export sector in the Republic of Turkey.

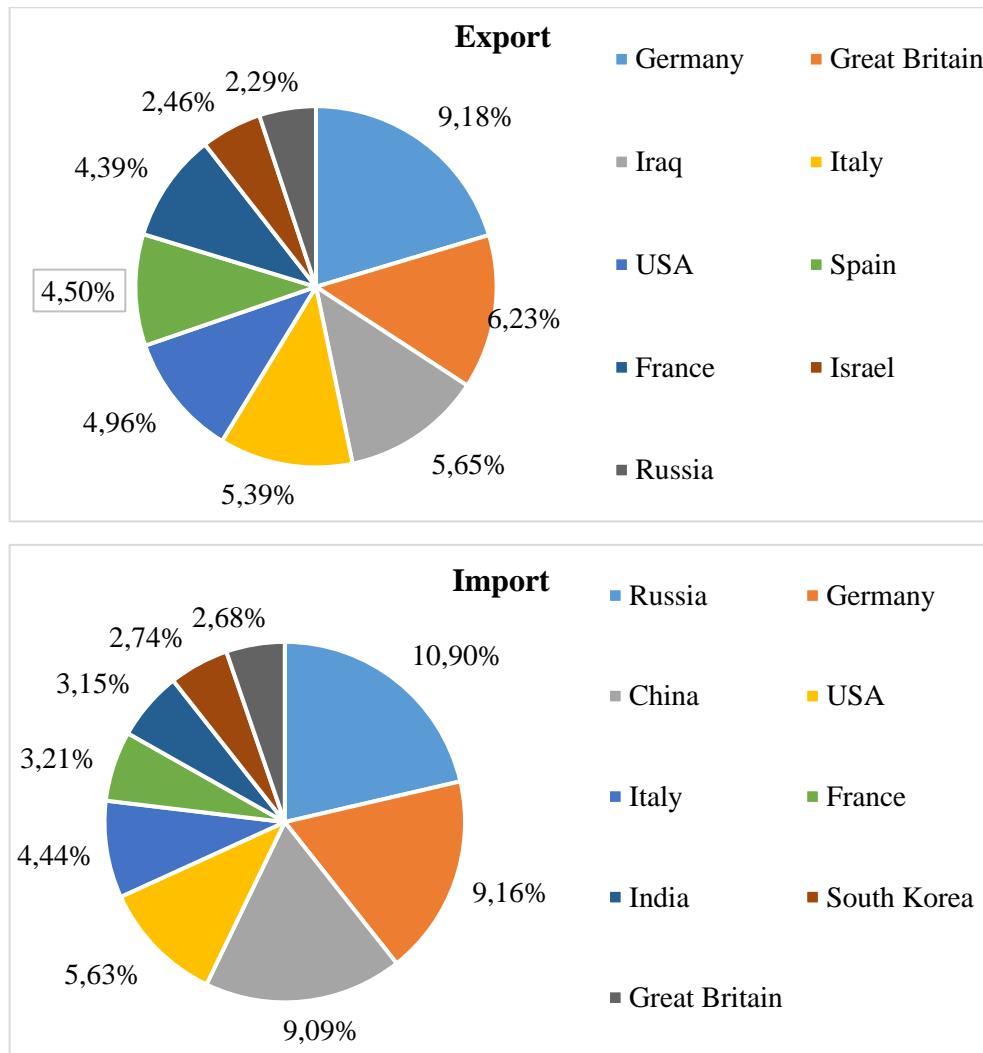


Fig. 2.2. Export and import directions of Turkey in 2020

Source: Trend economy, 2021

## 2.2. FOREIGN DIRECT INVESTMENT ACTIVITY

With the implementation of Foreign Direct Investment Law in 2003, foreign investments have become an integral part of the country's macro-economic program. The purpose of this Law is to encourage foreign direct investments, to protect the rights of foreign investors and to comply with international standards in investment and investor definitions, to transform the permit and approval system into an information system in the realization of foreign direct investments and through the determined policies. To regulate the principles regarding the increase of foreign direct investments. This Law will apply to foreign direct investments covers treatment.

Turkey, among OECD (Organisation for Economic Co-operation and Development) member countries, has one of the most competitive corporate tax rates.

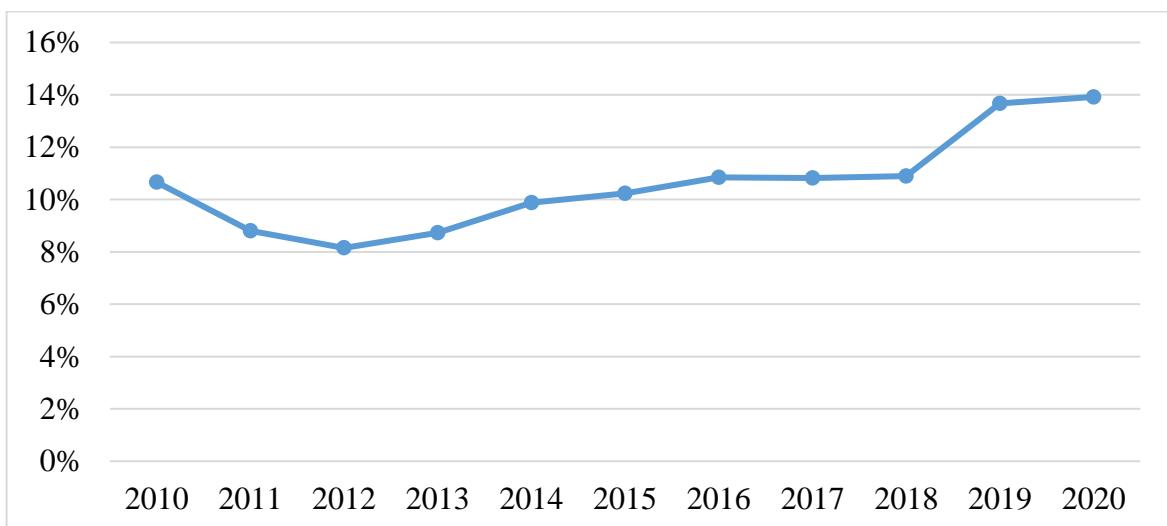
Turkish corporate tax legislation is clear, objective and regulated with provisions in line with international standards. Turkish tax legislation can be grouped under three main headings: Income Taxes, Taxes on Expenses, Wealth Taxes.

Real persons' income is subject to personal income tax. Income is the net amount of earnings and revenues earned by a natural person in a calendar year. Personal income tax rates vary between 15% and 35%. In the event that the income elements defined in the Income Tax Law are obtained by the institutions, the taxation is made through the legal personality of these institutions. The corporate tax rate levied on business profits is 20% in Turkey. The corporate tax rate has been increased to 22% for the years 2018, 2019 and 2020; however, the Council of Ministers has the authority to reduce the said rate of 22% to 20%.

If we look at Taxes on Expenses, generally applied VAT rates; 1%, 8% and 18%. Commercial, industrial, agricultural and independent professional goods and services; All deliveries of goods and services created through goods and services that have been imported into the country and other activities are subject to VAT. Although transactions made by banking and insurance companies continue to be exempted from VAT, these transactions are subject to Banking and Insurance Transactions Tax. This tax is levied on income earned by banks, such as loan interest. The tax rate is generally 5%, but it is 1% for the interest applied in some transactions such as deposit transactions between banks. Since 2008, no tax has been applied to sales amounts from foreign exchange transactions. Stamp duty applies to a variety of documents, including contracts, debt securities, capital shares, letters of credit, letters of guarantee, financial statements and payrolls. The stamp tax is levied at rates varying between 0.189% and 0.948% of the document price, as well as collected as a fixed price (a predetermined price) for some documents.

There are also Wealth Taxes. Buildings, apartments and land owned in Turkey are becoming subject to property taxes at rates ranging from 0.1% to 0.6%. Motor vehicle taxes, on the other hand, are collected annually according to the fixed costs determined according to the age and engine volume of the vehicles. Inheritance and gift taxes are collected at the rate of 1-30%.

Unemployment declined compared to July, 2019. Without taking into account the unemployed, who stopped actively looking for work due to despair. The number of those who are over 15 years old and do not work has decreased by 369 thousand workers since July 2019, reaching 4 million 227 thousand (Turkstat, 2020). The unemployment rate was reportedly down 0.5% to 13.4%, while unemployment except agriculture fell 0.6% to 15.9%. Meanwhile, taking into account seasonal fluctuations, unemployment fell by 0.5% and reached 13.6%, which led to the loss of jobs about 4 million 207 thousand jobs. In direct contradiction with the reduction in unemployment, the number of unemployed also decreased by 1 million 254 thousand people and reached 27 million 263 thousand people (Figure 2.3)



*Fig. 2.3. Unemployment rate in Turkey ( % from total labor force) (2010-2020)*

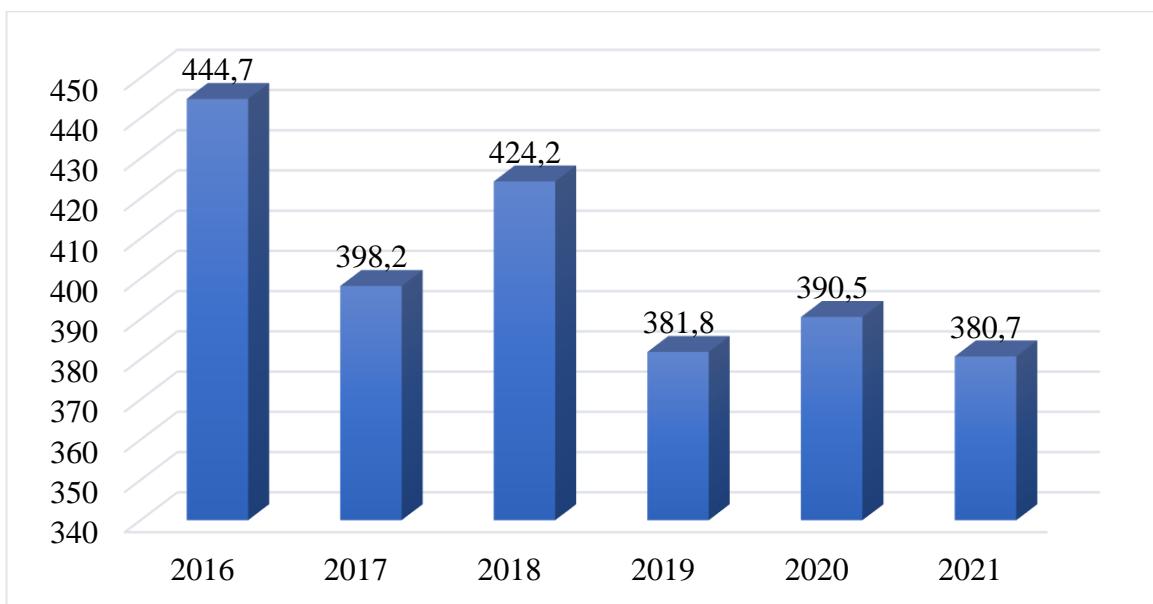
*Source: Worldbank, 2021*

Furthermore, there is a 1.62 million reduction in the workforce since July 2019, resulting in a 3.5 percentage point decrease in labor force participation to 50.3%. However, on a seasonally adjusted basis, the labor force participation rate jumped 0.7 percentage points to 49.3% (Turkstat, 2020) . Youth unemployment stood at 25.9% after falling 1.2%, while youth employment also fell 4.5% to 30.4%. It is also noted that in the service sector in July there was the largest loss of workers compared to last year: about 761 thousand people were laid off or quit.

About 361 thousand workers left their jobs in agriculture, in industrial production the number of dismissed amounted to 246 thousand, but in construction the number of workers increased by 114 thousand. Although the service sector was hit hardest last year,

it still accounted for 54.9% of employment. Agriculture accounted for 19.4% of employed workers, 19.6% were employed in industrial production and only 6.1% in construction.

The minimum wage has been increased at or above inflation rate for years (Figure 2.4) . However, the great depreciation of the Turkish Lira in recent years has caused a serious decline in the purchasing power of the minimum wage earners. The gross salary of a minimum wage in the beginning of the year 2016 in Turkey is nearly \$450, at the end of 2020 this amount fell to \$390 level. The cost of most products that are produced and consumed in Turkey in foreign currency input (electricity, petroleum, such as imported raw materials and intermediates) increase in the exchange rate because it has increased the price of these products has reduced the value of the minimum wage (Evrensel,2021).



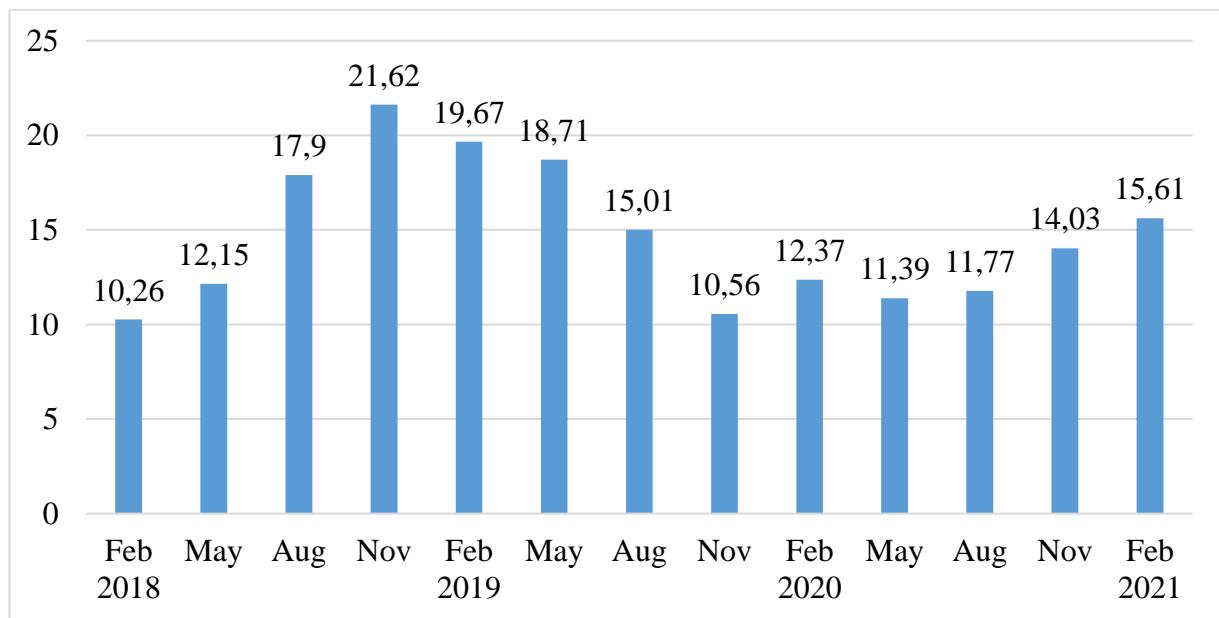
*Fig.2.4. Minimum salary (USD) (2016-2021)*

*Source: Turkey / Evrensel, 2021*

Measures taken regarding Covid-19 outbreak, along with rising unemployment and rising foreign currency exchange rates also one of the most important agenda in Turkey in recent months consumer prices. Inflation rates, which showed a significant increase as a result of the negative course in macroeconomic indicators in the second half of 2018, displayed a better performance in the second half of 2019, but remained in double digits again in 2020.

The annual inflation rate for 2020 is 14.6% in January, 2021 basis. (Turkstat,2020). However, 2020 estimates on Turkey's inflation rate was also in quite altered state. The

IMF report in October 2019 while in a 12.6% inflation forecast in Turkey about the year 2020, this estimate in 2020 to 12% in April, while in October 2020 dropped to 11.9%. CBRT, on the other hand, increased its inflation forecast from 8.2% for 2020 to 7.4% in its second inflation report in January, but increased to 8.9% in its report in July. While the inflation expectation for the end of 2020 was 8.5% in the 2019, this rate was 10.5% in the 2020(Figure 2.5).

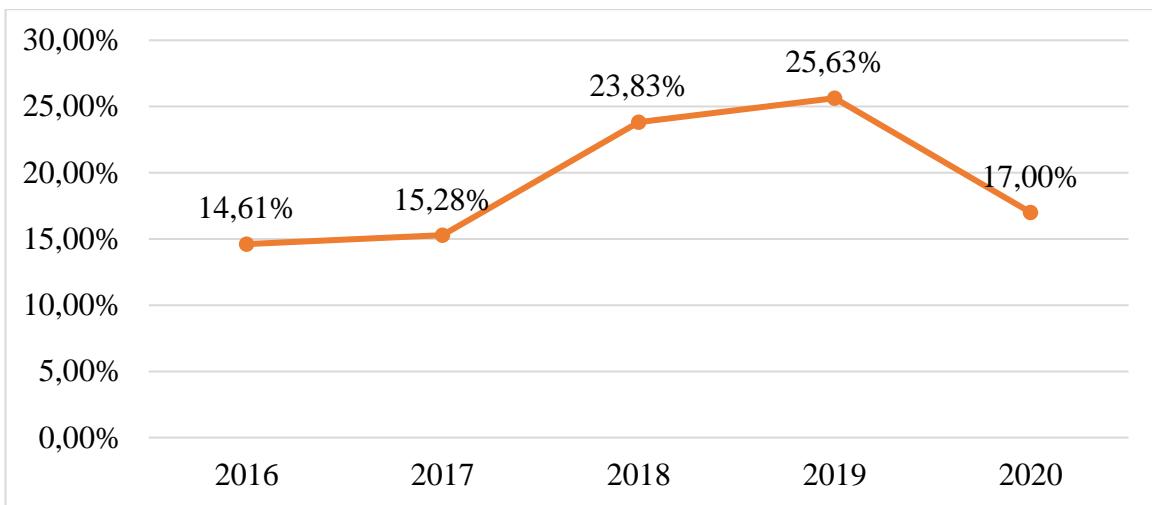


*Fig.2.5. Inflation rate (%, y-o-y) (2018-2021)*

*Source: Turkstat, 2021*

The inflation rate for the end of 2020 was at the level of 14.6% compared to the same month of the previous year. In February 2021, the inflation rate was announced as 0.91% compared to the previous month and 15.61% compared to February 2020. Considering the annual inflation rates since 2018, it is seen that this rate announced for February 2021 is the 12th highest annual inflation rate during this period and the highest inflation rate announced since August 2019.

An increase in interest rates is used to slow down inflation and protect the currency. This change is the first to have taken place since on December 25th 2020, when the Central Bank increased interest rates by 2 percentage points to 17%. Here is the progression of interest rates in Turkey (Figure 2.6)

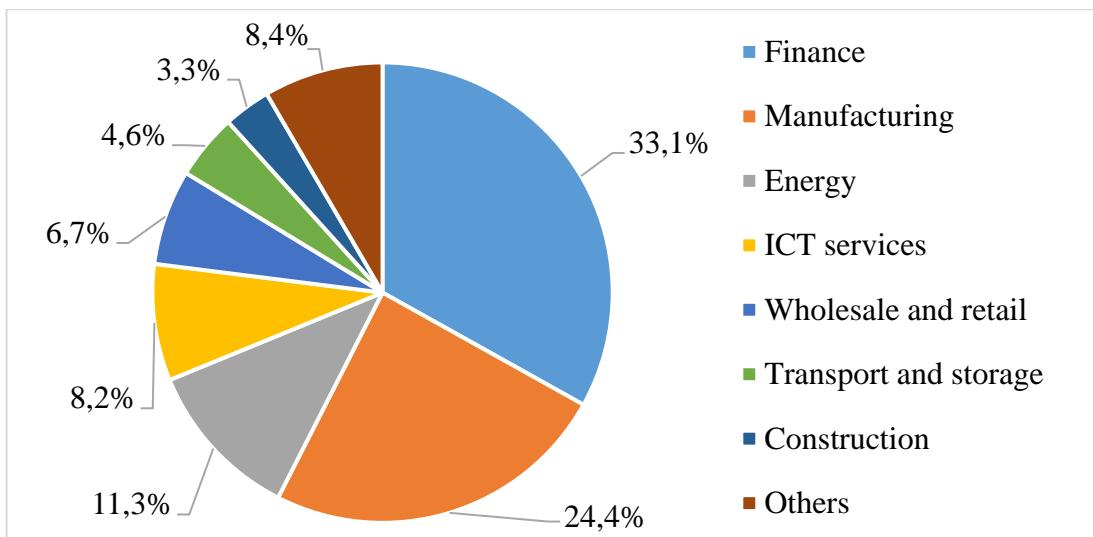


*Figure 2.6. Deposit interest rate (%) in Turkey (2016-2020)*

*Source: Worldbank, 2020*

With globalization, the importance of exchange rates, which are the main determinants of economic relations in countries, has increased. Since the instability in the currency of any country among trading countries will affect other countries negatively, the uncertainty of exchange rates is very important. Businesses that want to determine the strategies to be used in currency risk and to eliminate or minimize the currency risk have to manage this situation in the best way. Measuring and correctly managing exchange rate risk for businesses is extremely important in determining the weaknesses of businesses and countries in general and getting rid of them.

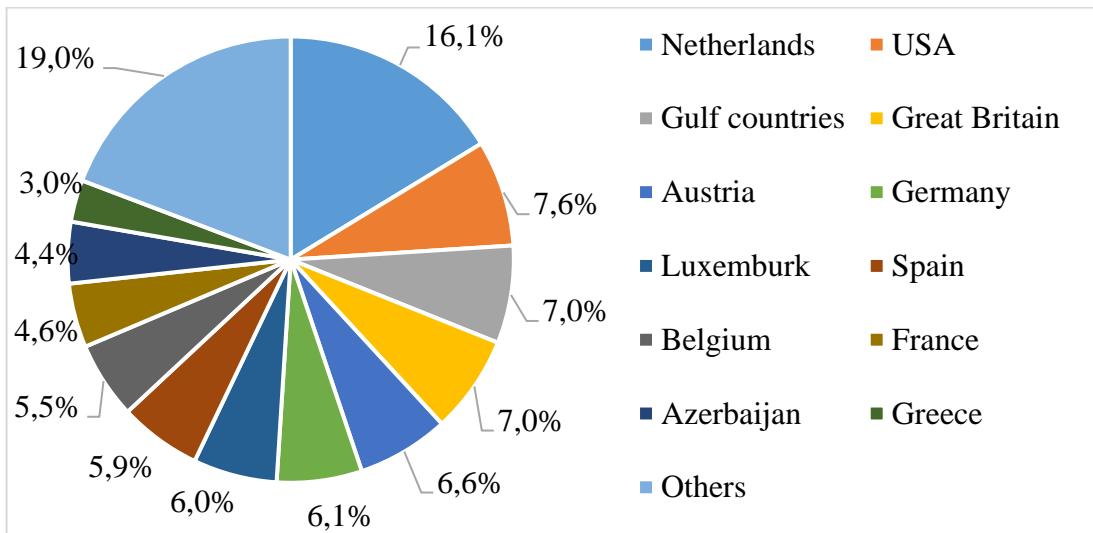
Turkey's impressive growth performance and structural reforms that get the last decade has attracted many international investor's of the country. In 2019 in Turkey, FDI terms has become the most popular 7th country in Europe. By hosting 211 projects, Turkey has been realized with 3.5% share in FDI projects in Europe. While total FDI inflows in Turkey only at the level of USD 15 billion by 2002, this figure rose to 217 billion US dollars during the period of 2003-2020. Finance and manufacturing, are the most FDI attracting sectors for the last 17 years (Figure 2.7).



*Fig.2.7. The most FDI attracting sectors (2003-2020)*

Source: Turkey investment office / TCYO, 2021

A large part of FDI inflows in the last 17 years are in Europe, North America and the Gulf countries, however the share of Asia is also increasing significantly (Figure 2.8).



*Fig.2.8. Main FDI resources (2003-2020)*

Source: Turkey investment office/ TCYO, 2021

Increasing over \$ 1 billion for the first time in 2000, FDI continued its upward trend in the following years, except for 2003 and 2004, reaching its highest level in 2009 with \$ 19 937. FDI has followed a continuous decline since 2015. Foreign investments, which were 12.2 billion dollars in 2015, decreased to less than 7 billion dollars in 2018. In the 20 years that have passed since 2000, when FDI inflows accelerated, the total investment amount was at the level of \$ 165.7 billion. Nearly 62% of this amount with 102.5 billion dollars was made up of investments in the services sector. Investments in the industry

accounted for 38 % of the total inflows, with \$ 62.7 billion. In terms of sub-sectors, while finance and insurance services have attracted the most investment in the last 20 years with \$ 53.3 billion, the highest investment in the manufacturing industry was food, soft drinks and tobacco products with \$ 9.2 billion (Figure 2.9).

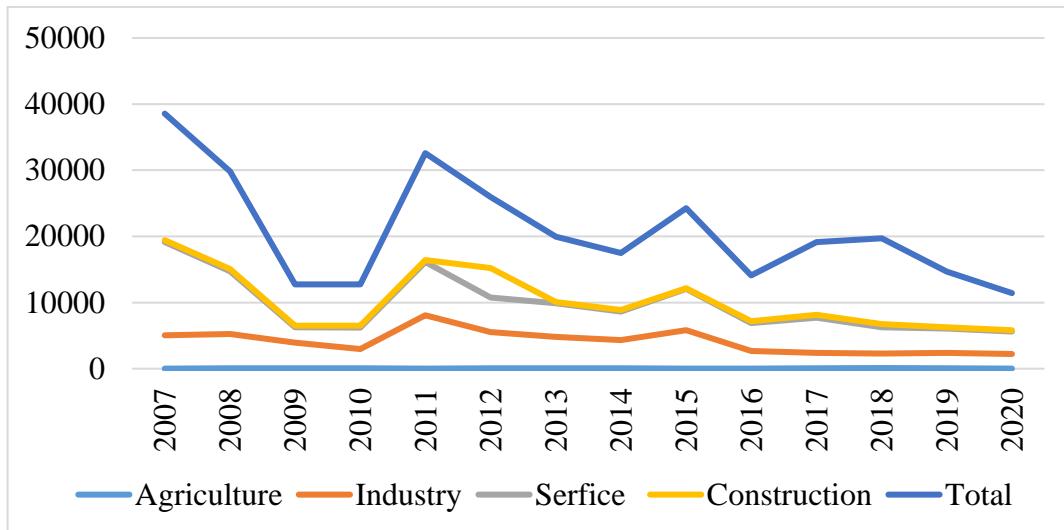


Fig.2.9. FDI by sectors, net inflows (mln \$) (2007-2020)

Source: UNCTAD, 2021

As in many other economies, the construction sector in Turkey also has the distinction of creating the driving force of growth, besides being a leading indicator of the overall economy. Acceleration and slowdown in the construction sector is occurring earlier than the general economy. However, apart from the recent slowdown, the sector seems to be one of the sectors that contributed to the overall economic growth both directly and indirectly with its high growth pace. The construction industry contracted 5.3 % in the third quarter of 2018 compared to the same period of 2017 and became one of the sectors that limited growth. When we look at the long-term trends of the Turkish construction industry, we can say that it is one of the sectors most susceptible to fluctuations in the general economy. Turkey in the 2003-2007 period above 7 % growth pace in capturing growth in the construction sector had realized much faster. However, Turkey's economy is also shrinking due to the global crisis that the sector had shrunk sharply in 2008-2009. After performing well above the general economic growth in the 2010-2014 period, the sector came closer to the general economic performance in 2015. In fact, with the last quarter of 2017, it started to grow slower than the general economic growth (Figure 2.10).

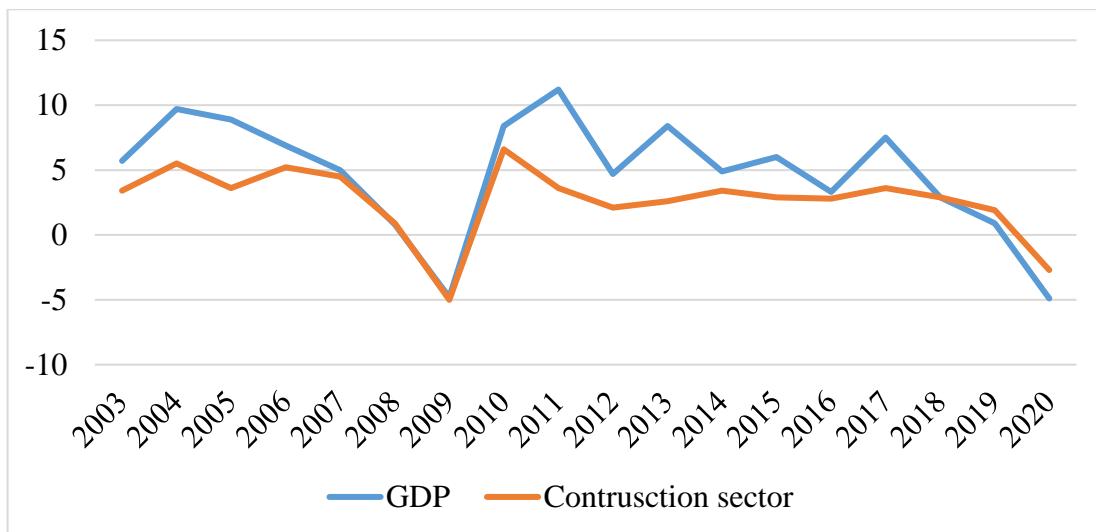


Fig. 2.10. Comparison of annual growth of GDP and construction sector

Source: Worldbank, 2021

On the other hand, it is observed that the share of the sector in GDP has followed a negative course due to the weakening performance in the recent period. Despite the sharp contraction in the 2008-2009 period, the share of the sector in GDP increased rapidly in the 2013-2014 period.

Looking at the forecasts of international organizations, the cost comes to 11 % in the case of a second wave of contraction is expected in the case of between 5 and 3.8 % for Turkey. However, the fact that the package is mainly based on credit expansion and the weight of direct transfer payments in the package is limited to 5 % may limit its effectiveness on growth. Direct transfer of resources especially in the reduction of demand revival and crisis impoverishing effect in a country with a high weight of the informal economy, such as Turkey will be more effective.

### 2.3. COOPERATION BETWEEN UKRAINE AND TURKEY TOWARDS INCREASING MUTUAL INVESTMENT.

Turkey covers a huge territory and a wonderful geographical position, which means a huge potential for development. Over the past ten years, the real estate sector in the Turkish market has experienced a dramatic growth. Despite the fact that the real estate market in Europe, America and many other countries has experienced a recession due to the recent economic crisis, statistics show that the property market in Turkey grew by 18 % (Turkstat,2012) in 2011 compared to the same period in 2010, thus showing that this the sector proved to be almost immune to the global economic downturn. Dynamic

demographic factors and good economic performance have made Turkey the choice for overseas investors looking to start their own businesses and buy real estate. In recent years, the country has increased the demand for housing and offices as more and more international companies and foreigners are in need of commercial and residential real estate. The comparison of Turkey with other developed and developing countries can give an in-depth analysis and why this country is an ideal place for investment in real estate development as well as private buyers of overseas property, like UK or the USA. France, Russia and Greece are countries that vie with Turkey for investment opportunities.

Turkey opened the doors to other countries for investment, which in turn allowed attracting more foreign capital and direct investment. In the field of globalization and international trade, Turkey has proven to be more promising and efficient than comparable countries. Bridging Turkey is the simplest process compared to the USA, Russia, Great Britain and Greece. The new Turkish Commercial Code (ECC) has made it easier to register a company and start a business. Clause 6102 of the new code, published in the official edition on July 1, 2012, introduces a corporate approach that is in line with international standards an investor can register a joint stock company or limited liability company with one shareholder. The new code also removes the need for foreigners to insure a minority of shareholders before registering their companies. You can register your company in one day and it becomes an official entity allowing you to submit documents to the Trade Registration Department.

Since the establishment of diplomatic relations between Ukraine and the Republic of Turkey on February 3, 1992, relations between the countries have developed quite steadily and intensively. Given the absence of any serious interstate contradictions, Ukrainian-Turkish relations are often characterized as strategic. Ukraine and Turkey, two significant regional players, have accumulated a significant "capital" of bilateral cooperation.

There are about 700 Turkish companies operating in Ukraine. Investments amount to \$3.6 billion. Turkish investors are among the TOP-3 players on the market in at least 10 sectors (Conexio, 2021). At the end of 2020, Turkey ranked first among the countries of the Middle East region in terms of trade with Ukraine. Among the leading Turkish

companies from various sectors operating in Ukraine are ONUR Group, Limak, Beko and Viko.

In the first half of 2020, trade between the two countries reached \$ 2.27 billion, which is 1.7% more than in the same period last year (Table 2.2). At the same time, Ukraine is interested in increasing the export of finished products. In addition, among the main directions for the development of bilateral cooperation are IT, innovation, industry, energy and energy efficiency, logistics, transport infrastructure, tourism.

*Tab.2.2. Dynamics of import and export from Turkey to Ukraine (2014-2020) ( mln\$)*

| Year | Import | % from total amount | Export | % from total amount |
|------|--------|---------------------|--------|---------------------|
| 2014 | 1 248  | 2,4                 | 3 543  | 7,2                 |
| 2015 | 815    | 2,3                 | 2 750  | 7,9                 |
| 2016 | 1 055  | 2,9                 | 2 034  | 6,2                 |
| 2017 | 1 210  | 2,6                 | 2 485  | 6,4                 |
| 2018 | 1 656  | 3,1                 | 2 332  | 5,5                 |
| 2019 | 2 310  | 4,0                 | 2 585  | 5,7                 |
| 2020 | 2368   | 4,6                 | 2384   | 5,3                 |

*Source: Statistics of the external sector of Ukraine / Foreign trade, 2021*

Improvement of bilateral trade is important for Ukraine, and the signing of a Free Trade Agreement seems to increase significantly its volume. The fact that the volume of trade relations between the two countries has not decreased despite the pandemic indicates that the economies are complementary. The Free Trade Agreement between Ukraine and the Republic of Turkey will also allow to increase trade volume to \$ 10 billion.

Turkey has made large investments in the Ukrainian economy. Today, various Turkish companies are actively working in the country. From road to subway constructions, Turkey has contributed heavily in Ukrainian infrastructure over the past few years. Dnipropetrovsk region, as one of the leading regions, plays an important role in the partnership between Ukraine and Turkey. A significant part of the region's export / import is made up of ferrous metallurgy products, as well as food and chemical products. The volume of foreign trade over the past year reached \$ 566.8 million. In the Dnipropetrovsk region, 127 enterprises carried out export operations with Turkey, and 538 were engaged in imports. Among the main ones are ArcelorMittal Kryvyi Rih,

DneprAzot, ATB, Eva, Interpipe and others. In the period 2016 - 2020 the volume of imports of the Dnipropetrovsk region from Turkey more than doubled, reaching \$ 240 million (Statistics of the external sector of Ukraine | Foreign trade, 2021). Today, one of the largest Turkish companies, Limak İnşaat Sanayi Ve Ticaret AS, is building new metro stations in Dnipro. Limak, the winner of the international tender within the framework of the project "Completion of the construction of the subway in Dnipro", which started its activity on September 20, 2016. General Director of PJSC Kievmetrostroy (Kiev) signed a subcontract agreement with a Turkish company for UAH 3.962 billion for the completion of the construction of the subway in the Dnieper. The amount of the contract amounted to UAH 3,961,633,852 thousand, which is 14 times higher than the amount of Kievmetrostroy's assets according to the annual financial statements for 2017 (UAH 280,023 thousand). In the 2017 state budget, UAH 400 million was attracted from the European Investment Bank (EIB) as part of the project to complete the construction of the subway in Dnipro.

### 3. DEVELOPMENT OF AN INTERNATIONAL INVESTMENT PROJECT TO ESTABLISH REBAR MANUFACTURING ENTERPRISE.

#### 3.1 CRUDE STEEL PRODUCTION IN TURKEY

Metal products have been used for centuries to increase quality and durability. Metal products, which are among the indispensable needs of many sectors today, have a great importance in trade of many countries. Turkey is carried out in the manufacture of many products including metals sector and the expectations and demands of other sectors are met.

When we look at the birth of the metal industry, we see that metal was first used in heavy industry. Metal, which was used in the manufacture of many products in the past, is one of the indispensable products of today's industry. The most important reason for this is the necessity of using durable materials in the products manufactured by many sectors. Metal can be said to be the most efficient product in terms of durability. Metal industry in Turkey, is gradually developing in recent years with developing technology. In this sense, the quality of the metal used has also increased considerably. As a result of the researches, Turkey takes the lead with countries such as Germany, Italy and France in metal production quality. This situation can be said to be a result of Turkey's dedication and effort in metal production.

As of 2020, Turkish Steel Industry ranks 7th among 65 steel producing countries in the world, and 2nd after Germany among steel producers in Europe. This rank shows that Turkey maintains its position as resettled in 2019. The recovery in the global economy and domestic consumption since the second half of 2018 continued in 2019. However, it was slightly damaged in 2020 due to the pandemic. As a result of the survey of the Istanbul Chamber of Industry (ISO), Turkey's 500 Largest Industrial Enterprises, many companies from the iron and steel industry have increased and succeeded in entering the first hundred. The companies that produce iron and steel in the top 100 can be listed as follows (Table 3.1)

*Tab. 3.1. Top-10 Turkish crude steel producing companies*

| Company                                     | Capacity, thousand t (2019) |
|---|-----------------------------|
| 1. İskenderun Demir ve Çelik A.Ş.           | 1.355                       |
| 2. Ereğli Demir ve Çelik Fabrikaları T.A.Ş. | 2.567                       |

|     |   |       |
|-----|---|-------|
| 3.  | İçdaş Çelik Enerji Tersane ve Ulaşım Sanayi A.Ş | 2.810 |
| 4.  | Çolakoğlu Metalurji A.Ş.                        | 4.500 |
| 5.  | Tosçelik Profil ve Sac Endüstrisi A.Ş.          | 4.000 |
| 6.  | Borçelik Çelik San. Tic. A.Ş.                   | 1.100 |
| 7.  | KARDEMİR Karabük Demir Çelik San. ve Tic. A.Ş.  | 1.264 |
| 8.  | Kroman Çelik Sanayii A.Ş.                       | 2.183 |
| 9.  | İzmir Demir Çelik Sanayi A.Ş.                   | 1.500 |
| 10. | Koç Metalurji A.Ş.                              | 1.200 |

*Source: Worldsteel, 2020*

Flat products constitute 47% of the world consumption. Among flat products, HRC (hot rolled coil) takes the first place with a share of 35%. In long products, rebar takes the first place with a ratio of 55%. The term long product refers to the products made from billets and blooms, which are mainly used in the construction sector. Long steel products include rebar, wire rod, merchant bars, rails and sections.

Turkey traditionally exported rebar and imported flat products. Over the course of 2019, Turkish mills have managed to diversify export rebar sales destinations after the fall in demand from their traditional EU and US export markets, amid the situation connected with pandemic. Israel, Yemen and Ethiopia were also sources of rebar demand for Turkish sellers. Turkey's exports of rebar (3A category rebar, which is produced the most in Turkey and is in a high demand both in the domestic and international markets) in December, 2020 were 1.7% m-o-m and 28.7% in annual increase of 626 216 metric tons. Hence, the revenue from these exports was \$ 289.49 million, up 5.9% on a monthly basis and 40.9% y-o-y compared to December 2019 (Turkstat, 2019).

Global longs market becomes even more regionalized amid widespread protectionism. The global long steel products market is becoming even more regionalized. All the safeguard measures, tariffs and antidumping and countervailing cases are reducing the global exchange of products more and more. The Covid-19 pandemic gives producers in certain markets the pretext to lobby their governments with even more arguments to get their domestic markets protected for no reason, but politicians just go along and accept this constant pressure. Prices in the EU and US markets have been improving. Despite the recent slowdown, China is still a net importer and does not pose a real threat to exporters in the rest of the world. Even better news is that such an exporter country like Turkey can compete with the Chinese exporters in Asian markets.

Nevertheless, it is vital as never before to develop manufacturing and to have a place in the market with competitive prices, having previously calculated the production cycle in order to have a minimum of costs and a decent profit.

The capabilities of modern mini-factories in the ferrous metallurgy sector have gained recognition, which determines their further expansion. Lines for the production of rebar, which are in demand in the construction industry, have gained particular popularity. Analyzing the varieties of technological lines for the production of reinforcement, it can be determined that mini-factories in this direction can be of two types: An enterprise equipped only with a rolling mill, using cast billets to obtain reinforcement. These are the so-called "conversion" small plants without melting equipment. The second type is a full-cycle mini-plant, equipped with all the necessary equipment to receive the planned variety of rebars, from a smelter to a rolling mill.

### 3.2 EVALUATION OF THE EFFECTIVENESS OF THE INVESTMENT PROJECT

The construction and construction materials sector, which is among the locomotives of the Turkish economy, looks to the future with confidence, taking strength from its achievements. Over the next 5 years, both the rapidly growing domestic market and the infrastructure development-oriented economies of the countries located in nearby geography of Turkey and growing faster than the world average will create many opportunities. The construction industry is a developing sector not only in Turkey. While an infrastructure investment of 57 trillion USD is foreseen in the world until 2030, it is estimated that 2 trillion Euros will be invested in infrastructure only in Europe in the coming period (Ticaret, 2019). Metals, which are used in the construction industry, are chosen for their durability, weather resistance, serve a wide variety of functions. The most common of these is rebar.

There are two workshops in the structure of a modern small rebar enterprise. The steel scrap that is used as a raw material is sent to the rolling mill, where it is remelted in an electric arc or induction furnace. The further process of casting liquid metal is continuous. It enters the through-mold, cooled by water circulating through the channels in the walls. When the smelting process is completed and the billet is completely

solidified, it is cut into the required number of pieces of a given length, from which at the final stage of production rebar is made by rolling.

The popularity of mini-factories in the rebar manufacturing sector is due to a number of advantages that distinguish them from integrated large metallurgical plants. Firstly, it is the low costs due to small production areas. The ability to locate small factories in places where there is a sufficient amount of raw materials also helps to reduce the financial burden. If necessary, production lines can be equipped close to the main consumers of valves, receiving economic benefits by reducing transport costs and eliminating the need to have large warehouses for storing products. Secondly, it is flexibility in the use of equipment.

The main advantage of our enterprise among other existing rebar manufacturers in the Iskenderun region is that the initial material which is used for rebar production is billet. A full-cycle production demands scrap, which is a lack in Turkish market. Due to this, scrap is being imported to Turkey. Rebar prices in full-cycle manufacturers directly depend on the imported scrap prices, which complicates existence in the market. However, rebar that is produced from billet, will not increase production costs. Thus, the prices will not be as sensitive as the prices of competitors. For instance, let's analyze how did rebar prices of two rebar manufacturers change in accordance with scrap prices this year from February to April. Ovalı Demir Çelik A.Ş. produces long products; it doesn't have quite a big capacity and doesn't have a full-production cycle. İçdaş Demir Çelik A.Ş is one of the biggest crude steel and steel products manufacturing company. Both of these producers are established in Iskenderun. Let's see their offerings during February- April period and compare them in accordance with scrap prices (Table 3.2)

*Tab. 3.2: Comparison of Ovalı rebar, İçdaş rebar and scrap prices*

| Period    | Rebar prices, (\$/mt) |          | m-o-m change, % |       | Scrap prices, (\$/t) |
|-----------|-----------------------|----------|-----------------|-------|----------------------|
|           | Ovalı                 | İçdaş    | Ovalı           | İçdaş |                      |
| Feb, 2021 | 621,7143              | 644,7857 | 3,89            | 5,27  | 472,14               |
| Mar, 2021 | 642,6                 | 651,6667 | 3,36            | 1,07  | 468,67               |
| Apr, 2021 | 633,25                | 635,375  | -1,46           | -2,5  | 444,38               |

*Source: Steelorbis / Turkey*

We can observe that rebar prices in İçdaş are more sensitive towards scrap prices because offerings of İçdaş directly depend on scrap prices. Hence, it is more relevant for us to establish a mini-factory with incomplete production cycle.

Electric arc furnaces allow the production of the planned amount of products with their subsequent shutdown. The subsequent launch of production does not require additional investment. This circumstance allows to quickly respond to changing market needs. In addition, it is important to consider environmental issues. Such kind of mini-factory is less harmful to the environment. Due to such a short technological process, the mini-plant allows you to focus on a specific customer, releasing in small batches the range of fittings it needs.

The equipment of compact mini-factories intended for the production of a wide range of steel rebars, which are in demand in the construction of various objects, depends on the type of the factory. As this is not a full cycle factory and does not have a continuous technology for the production of fittings, then casting and rolling are performed separately. In this case, the installation of a heating furnace is required, in which the billets in front of the rolling mill are heated to the required temperature of about 1200 ° C.

### 3.3 SOURCES OF ATTRACTION, ECONOMIC ATTRACTIVENESS AND PROFITABILITY OF THE PROJECT.

When planning the purchase of equipment necessary for the production of rebar, it is essential to carefully analyze the type of the produced rebar and sources of raw materials. Literally, the type of the produced rebar is 3A category, which was mentioned before. It is also worth noting that the selected region is home to a good location for this project. The fact is that one of the largest producers of raw steel and steel products was established in this region- Iskenderun Demir Çelik. After developing its operations here, rolling and steel mills were established next to it.

It is taken into account that mini-factories working in this direction can use several categories of metal for processing. Hence, to establish a rebar producing mini-factory and count the costs, first of all there are some equipment that is needed for the first stage of production (Table 3.3).

*Tab. 3.3 Price of the equipment which is needed for billet processing*

| <b>Equipment</b>                         | <b>Price, USD</b> |
|--|-------------------|
| Bolong Machinery rolling mill            | 8 100             |
| Pirimer Makina heating furnace (1200 °C) | 4 000             |
| Multi-contact welding machine            | 200               |
| Cutting machine                          | 1 400             |
| <b>Total</b>                             | <b>13 700</b>     |

All supplies of goods and services carried out in Turkey within the framework of commercial, agricultural, industrial and professional activities are subject to VAT. Imported goods and services are also subject to VAT. The main VAT rate in Turkey is 18%. Social security payment in Turkey as for 2021 is 37,5%. Here is the total payroll (Table 3.4):

*Tab.3.4 Payroll*

| <b>Payroll</b>  | Number of people | Wage, USD/month | Total, USD/month |
|---|------------------|-----------------|------------------|
| Production supervisor                                       | 1                | 800             | 800              |
| Production worker   | 3                | 800             | 2400             |
| Production planner  | 1                | 800             | 800              |
| Electronic Repair engineer                                  | 2                | 700             | 1400             |
| Manager   | 3                | 1000            | 3000             |
| Financial specialist  | 1                | 1100            | 1100             |
| Accountant  | 1                | 900             | 900              |
| Driver  | 2                | 700             | 1400             |
| Loader  | 2                | 600             | 1200             |
| <b>Total payroll</b>  | <b>16</b>        |                 | <b>13000</b>     |
| <b>Total payroll with social security payments (37,5%)=</b> |                  |                 |                  |
| <b>13000*1.375=17 875</b>                                   |                  |                 |                  |

When registering an Ltd, it is desirable to include more than one person in the founders, by law, if the company has one owner, then immediately after registration they are required to pay taxes for themselves as an employee of the company (about \$ 300 per month). With two founders, there is no such need. The company can be managed by one person or several people. Both the co-founders of the company and other persons can be present in the board. Total cost for opening an Ltd in turkey is \$2500.

The area of workplace in the presence of only one welding and cutting machines should not be less than 25 square meters; therefore, we need to consider the option of renting a workplace. As Iskenderun is one of the regions in which the production of steel billets and steel products in general is concentrated. To simplify the supply of billets and

other logistic issues, it will be preferable to establish the factory in this region, too. The best option would be to rent a workplace with an area of 40 square meters in Iskenderun. The staff for a mini-factory provided with a high level of automation will not be very numerous. The staff should include a director, engineers, accountant, normalizer, as well as workers of various specialties. On average, the total number of staff is 40. Organization of work - 2 shifts, 12 hours each, 25 days a month.

The most important thing in estimation of production costs is to consider the material, which is going to be used: we definitely need steel billets for rebar manufacturing. Steel billets for rebar production are purchased from Turkish traders, who supply them at current prices. Prices may change with each purchase of a new batch. However, to calculate costs now, we will take prices that are actual in April 2021, which is 400 \$ per ton. For the manufacture of one ton of rebar, it is necessary to load 1057 kg of charge into the melting furnace, among which there is 900 kg of billets. To determine the average cost of finished products and payback, a mini-plant is considered with a production volume of rebar of 400 tons (360 t of billets needed) per month. Capital investments, taking into account the construction of workshops, which will require an area of about 40 square meters, the salary of the staff, which consists of 6 workers, who will install the equipment, and the purchase of equipment specified earlier, is shown below (Table 3.5).

*Tab. 3.5 Capital investment*

|   | <b>Price, USD</b>    |
|---|----------------------|
| Equipment   | 13 700               |
| Workplace rent for the first and the last months  | 2 000                |
| Billet  | 400\$/t*360t=144 000 |
| Additional materials (lumpy lime, fluoric spar, coke)   | 4 500                |
| Consumables needed for one usage (quartz sand, boric acid, ground quartzite, oil for hydraulic systems, grease) | 1 100                |
| Electricity, water supply, compressed air, oxygen   | 3 400                |
| Repair fund, depreciation   | 4 500                |
| Salary fund   | 5 000                |
| Ltd registration  | 2 500                |
| <b>Total costs</b>  | <b>180 700</b>       |

So the sum needed for initial investment is \$ 180 700. Here we also included the rent for the first and the last months of work, consumables and communal expenditures.

Now it is sensible to calculate the expected profit from the sale. As practice shows, the first month of work is not an indicator of further work of the enterprise. Therefore, I want to show the approximate income of the enterprise (without costs) in the current period of operations. Income is calculated based on the market value of one ton of 12 mm diameter rebar. The price of export rebar in Iskenderun is 740-750 \$/t FOB, but in domestic market the best price today is 4 820 TL, which is 602.5 \$/t. If to consider that the approximate volume of rebar orders per month will be 400 t, hence the approximate revenue is:  $602.5 \text{ \$/t} * 400 \text{ t} = \$241\,000$ .

*Tab. 3.6 Estimated revenue*

|                   | \$/t  | Expected volume of orders per month (t) | Total per month (\$) | Total per year (\$) |
|-------------------|-------|---|----------------------|---------------------|
| Estimated revenue | 602.5 | 400                                     | 241 000              | 2 892 000           |

| Estimated revenue            | Years     |           |           |
|------------------------------|-----------|-----------|-----------|
|                              | 1         | 2         | 3         |
| Estimated rebar price (\$/t) | 602.5     | 715.75    | 853.50    |
| Total                        | 2 892 000 | 3 435 600 | 4 096 800 |

According to the calculations, the revenue per year will be \$ 2 892 000. It is necessary to calculate the expenses of the production obtained during a year (Table 5,table 6):

*Tab. 3.7 Total expenses*

| Expenditures                                      | USD               | Data           |
|---|-------------------|----------------|
| Salary  | 17 875            | Monthly        |
| Workplace rent                                    | 1000              | Monthly        |
| Billet  | 144 000           | Monthly        |
| Additional materials (lumpy lime, fluorite, coke) | 4 500             | Monthly        |
| Electricity, water supply, compressed air, oxygen | 3 400             | Monthly        |
| Amortisation                                      | 376,75            | Monthly        |
| Transport costs and delivery                      | 300               | Monthly        |
| <b>Total</b>                                      | <b>171 451,75</b> | <b>Monthly</b> |
| <b>171 451,75*12 m</b>                            | <b>2 057 421</b>  | <b>Yearly</b>  |

*Tab. 3.8 Expenses per year*

| Expenses,USD | 1      | 2       | 3       |
|--------------|--------|---------|---------|
|              | Salary | 214 500 | 235 920 |

|  |                  |                  |                  |
|--|------------------|------------------|------------------|
| workplace rent   | 12000            | 14400            | 16 200           |
| Billet   | 1 728 000        | 2203200          | 2635200          |
| Additional materials (lumpy lime, fluorite spar, coke) | 54 000           | 56100            | 58200            |
| Electricity, water supply, compressed air, oxygen      | 40 800           | 42 840           | 45 840           |
| Transport costs and delivery                           | 3 600            | 4440             | 5 280            |
| Total  | <b>2 052 900</b> | <b>2 556 900</b> | <b>3 021 120</b> |
|  |                  |                  |                  |

Hence:

*Table 3.9. Investment effectiveness*

| Indicators                  | Years   |                  |                  |                  |
|-----------------------------|---------|------------------|------------------|------------------|
|                             | 0       | 1                | 2                | 3                |
| Investment, USD             | 180 700 |                  |                  |                  |
| Revenue of the sale,USD     |         | 2 892 000        | 3 435 600        | 4 096 800        |
| VAT 18%, USD                |         | 520 560          | 618 408          | 737 424          |
| Expenditures,USD            |         | <b>2 057 421</b> | <b>2 561 421</b> | <b>3 025 641</b> |
| Profit before taxation, USD |         | 314 019          | 255 771          | 333 735          |
| Tax 20%, USD                |         | 62803,8          | 51154,2          | 66747            |
| <b>Net profit,USD</b>       |         | <b>251 215</b>   | <b>204 617</b>   | <b>266 988</b>   |

### Payback Period

From the previous tables it is necessary to calculate the payback period of capital  
- the ratio of the average value of equity of the company to the value of net profit.

It is necessary to calculate the following indicators:

$$1. \text{ NPV} = \sum_{k=1}^n \frac{P_k}{(1+i)} - I$$

|   |        |
|---|--------|
| The interest rate in the Central Bank as of March 1, 2021 | 17%    |
| Inflation rate (2021)                                     | 11,93% |
| Predicted inflation rate (2022)                           | 11,37% |
| Predicted inflation rate (2023)                           | 11%    |
| Risks   | 10%    |

Discount rate:

$$i_{2021} = (1+0.1193) * (1+0.17) * (1+0.1) - 1 = 0.44$$

$$i_{2022} = (1+0.1137) * (1+0.17) * (1+0.1) - 1 = 0.43$$

$$i_{2023} = (1+0.11) * (1+0.17) * (1+0.1) - 1 = 0.42$$

Discount index

$$1 \text{ year} - 1/(1+0.44) = 0,6944$$

$$2 \text{ year} - 1/((1+0.44)*(1+0.43)) = 0,4856$$

$$3 \text{ year} - 1/((1+0.44)*(1+0.43)*(1+0.42)) = 0,3419$$

$$\begin{aligned} NPV &= \frac{-180700}{(1+0.44)^0} + \frac{259\ 353}{(1+0.44)} + \frac{212\ 755}{(1+0.44)*(1+0.43)} + \frac{275\ 126}{(1+0.44)*(1+0.43)*(1+0.42)} = \\ &= -180\ 700 + 180\ 106.25 + 103\ 319.25 + 94\ 090.28 = 196\ 815.78 \end{aligned}$$

We get  $NPV > 0$ , so the project is interesting for the investor.

Tab.3.10 Final calculations

| Year         | Investment,USD | Net profit,USD | Amortization,USD<br>(33,3%) | Cash inflow,USD | Discount rate | Discounted value |                         |
|--------------|----------------|----------------|-----------------------------|-----------------|---------------|------------------|-------------------------|
|              |                |                |                             |                 |               | Investments      | Discounted cash inflows |
| 0            | 180 700        |                |                             |                 |               | 180700           |                         |
| 1            |                | 254 832        | 4 521                       | 259 353         | 0,6944        |                  | 180094,7232             |
| 2            |                | 208 234        | 4 521                       | 212 755         | 0,4856        |                  | 103313,828              |
| 3            |                | 270 605        | 4 521                       | 275 126         | 0,3419        |                  | 94065,5794              |
| <b>Total</b> | <b>180 700</b> | <b>733 671</b> | <b>13563</b>                | <b>747234</b>   |               | <b>180700</b>    | <b>377474,1306</b>      |

2.PI

$$PI = \frac{NPV}{I}$$

$$PI = \frac{\frac{259\ 353}{(1+0.44)} + \frac{212\ 755}{(1+0.44)*(1+0.43)} + \frac{275\ 126}{(1+0.44)*(1+0.43)*(1+0.42)}}{180\ 700} = \frac{377\ 515.78}{180700} = 2.0892$$

3.PP

$$PP = I / \text{Average annual investment (AI)}$$

$$AI = (I+NPV)/3 = (180\ 700 + 196\ 815.78)/3 = 125\ 838.6$$

$$PP = (180\ 700)/(125\ 838.6) = 1.4$$

The estimated payback period of this project is 1.4 years. The basic costs during establishing the enterprise are \$180 700 (equipment costs and official registration of the enterprise). It is expected that in a year will be received a net profit of \$ 254 832.

Calculations show that rebar manufacturing mini-factory with large initial financial investments can be profitable if the general strategy of their operation is correctly defined.

## CONCLUSION

Having made all the necessary calculations, analyzed the market, competitors, finding the target audience to establish a rebar manufacturing enterprise, I can say that this investment project is very interesting, and that is equally important today.

The payback period of equity was about 1.4 years of operation of the Ltd, which is a good figure. In Ukraine it would be slightly bigger due to the fact that rebar market here is not as developed as in Turkey, hence the billet prices are higher. Ukraine and Turkey are barely equal in terms of tax payments . In Ukraine at the moment they are as loyal to small business. When registering the given company in Ukraine, we would choose the third group of taxpayers, in which case it does not matter how much money the enterprise has earned, the tax rate will not change. It will be approximately UAH 40 000.

The capabilities of modern mini-factories in the ferrous metallurgy sector have gained recognition, which determines their further expansion. Lines for the production of rebar, which are in demand in the construction industry, have gained particular popularity.

Given that Turkey is the seventh largest steel exporter in the world, metal trade is an important pillar of its economy. At the same time, the country plays a significant role in trade flows and pricing of several types of steel products in Europe, Asia, North America and parts of Africa.

Providing that demand for long products has been increasing, real estate and construction sector show rapid growth, hence there is also an increasing demand for construction steel, respectively rebar.

The paper analyzed the development of Turkey. It promotes business development, protects employees and employers. Turkey, among the fastest growing economies in the world, is one of the best places to expand your business. With its thriving economy, geopolitical position, promising growth opportunities, the hard-working business community, and a young population, the country attracts foreign investors from all over the world.

The country is actually advantageous in many aspects, according to this research. It has sufficient knowledge and infrastructure in terms of production. It is a candidate to become a regional center in terms of logistics. However, the share FDI flows from Turkey

in the world over the last decade fell by half. Similarly, there is a significant slowdown in merger and acquisition activity; both the political and military crises in the neighboring countries and the macroeconomic problems, which were experienced, have a large share in this decline.

Nevertheless, Turkey in the coming period to be a center of attraction for international investment, public and speedy implementation of the required reforms by working with the private sector and Turkey's brand value investors before in the importance of removing again to the fore.

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