

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Trade and Finance**



## **Bachelor Thesis**

**The importance of Foreign Trade for Ukraine**

**Yevhenii Reizov**

**© 2022 CZU Prague**



# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Yevhenii Reizov

Economics Policy and Administration  
Business Administration

Thesis title

**The Importance of Foreign Trade for Ukraine**

---

### Objectives of thesis

The main objective of this thesis is, based on the methods used, to assess the importance of foreign trade for Ukraine.

The sub-objectives include:

1. to discover qualitative and quantitative changes in the country's business structure,
2. to examine the volume and dynamics of Ukraine's foreign trade,
3. to suggest ways to optimize trade turnover.

### Methodology

The theoretical part will be based on the collection and study of secondary data obtained from relevant sources: literary, electronic, scientific journals, official statistics. The obtained data will be analyzed, compared and synthesized. In the practical part, based on the processing of relevant sources, there will be a description of the issue, data synthesis, data comparison, data analysis, forecast, time series, own suggestions, and comments and controversies.

**The proposed extent of the thesis**

30-40 pgs

**Keywords**

Export, GDP, Goods, Import, Product, Services, Trade, Ukraine

---

**Recommended information sources**

DOW, S C. – HILLARD, J. *Post Keynesian econometrics, microeconomics and the theory of the firm : beyond Keynes, volume 1*. Cheltenham ; Northampton, MA: E. Elgar, 2002. ISBN 1858985846.

FEENSTRA, R C. – TAYLOR, A M. *International trade*. New York: Worth Publishers, 2017. ISBN 978-1-319-12763-3.

HARDING, B T. *The international trade balance : in theory and practice*. New York: Bamboo Books, 2020. ISBN 978-5519702867.

HELPMAN, E. – KRUGMAN, P R. *Market structure and foreign trade : increasing returns, imperfect competition, and the international economy*. Cambridge: The MIT Press, 1999. ISBN 0-262-58087-.

KING, J E. *A history of post Keynesian economics since 1936*. Cheltenham, UK ; Northampton, MA: E. Elgar, 2002. ISBN 1840644206.

ROBINSON, E. *World economy : international trade, economic systems and development*. New York: Clarye International, 2019. ISBN 978-1632408945.

---

**Expected date of thesis defence**

2021/22 SS – FEM

**The Bachelor Thesis Supervisor**

Ing. Olga Regnerová, Ph.D.

**Supervising department**

Department of Trade and Finance

Electronic approval: 27. 2. 2022

**prof. Ing. Luboš Smutka, Ph.D.**

Head of department

Electronic approval: 2. 3. 2022

**doc. Ing. Tomáš Šubrt, Ph.D.**

Dean

Prague on 03. 03. 2022

---



### **Declaration**

I declare that I have worked on my bachelor thesis titled "The Importance of Foreign Trade for Ukraine" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15/03/2022

---

## **Acknowledgement**

I would like to thank Ing. Olga Regnerová, Ph.D. for her advices and support during my work on this thesis.

# **The importance of Foreign Trade for Ukraine**

## **Abstract**

This bachelor thesis analyses the importance of Foreign Trade in Ukraine. The work is split into two parts. The first part is theoretical, it focuses on theoretical aspects of trade development, its main characteristics and concepts. This part is based on information from primary and secondary academic sources. The second chapter provides a deeper analysis of trade in Ukraine, including the quantitative and qualitative changes, the volume and dynamics of trade and finally, the chapter offers methods how to improve and optimize the trade turnover.

**Keywords:** Export, GDP, Goods, Import, Product, Services, Trade, Ukraine

# Významnost zahraničního obchodu na Ukrajině

## Abstrakt

Tato bakalářská práce analyzuje významnost zahraničního obchodu na Ukrajině. Práce je rozdělena do dvou částí. První část je teoretická, zaměřuje se na teoretické aspekty rozvoje obchodu, jeho hlavní charakteristiky a pojmy. Tato část vychází z informací z primárních a sekundárních akademických zdrojů. Druhá kapitola poskytuje hlubší analýzu obchodu na Ukrajině, včetně kvantitativních a kvalitativních změn, objemu a dynamiky obchodu a konečně, kapitola nabízí způsoby, jak zlepšit a optimalizovat obchodní obrat na Ukrajině.

**Klíčová slova:** Export, HDP, Zboží, Import, Produkt, Služby, Obchod, Ukrajina

# Table of content

<b>1</b>	<b>Introduction .....</b>	<b>11</b>
<b>2</b>	<b>Objectives and Methodology .....</b>	<b>13</b>
2.1	Objectives.....	13
2.2	Methodology .....	13
<b>3</b>	<b>Theoretical Part.....</b>	<b>14</b>
3.1	The concept and stages of the formation of foreign trade.....	14
3.2	Modern organizational forms of export and import.....	16
3.3	Types and means of foreign trade policy of the state.....	19
3.3.1	Non-tariff barriers.....	20
3.4	Multilateral regulation of international foreign trade relations and its problems.....	22
3.5	Foreign trade multiplier.....	24
3.6	Selection and study of partners when entering foreign markets .....	24
<b>4</b>	<b>Practical Part.....</b>	<b>27</b>
4.1	Trends and structure of trade in Ukraine over the years of independence.....	27
4.2	Time series development forecast.....	32
4.2.1	First difference .....	32
4.2.2	Time series growth rate.....	32
4.2.3	Seasonality .....	33
<b>5</b>	<b>Conclusion.....</b>	<b>40</b>
<b>6</b>	<b>References .....</b>	<b>41</b>

## List of figures

Figure 1 - Dynamics of foreign trade in Ukraine (in USD).....	28
Figure 2 - Balance of Ukraine's foreign trade between 2006 - 2021 .....	30
Figure 3 - Export/Import dynamics in Ukraine, 2006 - 2021 (mln.USD) .....	31
Figure 4 – Table of Exports in Ukraine 2003 - 2021 .....	33
Figure 5 - Graph of Exports in Ukraine 2003 - 2021 .....	35
Figure 6 - Table of Imports in Ukraine 2003 - 2021 .....	35
Figure 7 - Graph of Imports in Ukraine 2003 - 2021 .....	36
Figure 8 - Seasonally adjusted monthly volumes of exports in Ukraine, 2017 – 2021 .....	37
Figure 9 - Seasonally adjusted monthly volumes of exports in Ukraine, 2017 – 2021 .....	37
Figure 10 - Seasonally adjusted monthly volumes of imports in Ukraine, 2017 – 2020.....	38
Figure 11 - Seasonally adjusted monthly volumes of imports in Ukraine, 2017 – 2020.....	38
Figure 12 - Forecast for volume of exports and imports in Ukraine for 2022.....	39

## List of abbreviations

BTN - Brussels Customs Nomenclature
CEFTA - Central European Free Trade Agreement
CIS - Commonwealth of Independent States
GATT - General Agreement on Tariffs and Trade
GDP - Gross domestic product
GNP - Gross National Product
EU - European Union
HS - Harmonized Commodity Description and Coding System
IDL - International Division of Labour
IMF - International Monetary Fund
MPC - Marginal propensity to consume
MPS - Marginal propensity to save
NAFTA - North American Free Trade Agreement
NIC - Newly industrialized country
PTA - Preferential Trade Agreements
UN - United Nations
US - United States
WTO - World Trade Organization
WWII - World War II

# 1 Introduction

The general condition, features and trends in the development of trade are essential for any country to interact, cooperate, and compete with other countries in world markets.

International trade is currently developing under the influence of the leading trend in the world economy, which is called "globalization" and will determine its development throughout the 21st century.

This trend is expressed in the ever-greater expansion and deepening of international relations in the field of investment, production, circulation, supply and marketing, finance, scientific and technological progress, and education. Gradually, based on transnational corporations (TNCs), powerful international economic complexes are emerging that operate on an all-encompassing, global scale and compete for sales markets, material and financial resources on the world stage.

Scientific and technological progress has an increasing influence on international trade. In the post-industrial society that the developed countries have already entered, economic growth is becoming more and more intense (rather than extensive) and innovative. New discoveries, inventions, technologies, fundamentally new goods and services do not arise occasionally and spontaneously, but become a constant component of the economic process, which is predicted, planned and organized. Therefore, trade between industrialized countries is growing most rapidly, and only secondarily, this growth captures developing countries, such as Ukraine (IMF)

The relevance of the thesis lies in the study of international trade and its modern forms, which is one of the main directions of the globalization of economic activity along with the international movement of capital. The objective basis for the international exchange of goods, services, knowledge, the development of industrial, scientific, technical, trade and other cooperation between all countries of the world, regardless of their economic development and the nature of the social system, is the international division of labour (IDL). The essence of IDL is to reduce production costs and maximize customer satisfaction. IDL is the most important material prerequisite for establishing fruitful economic cooperation between states on a global scale. IDL is the cementing basis of the world economy, allowing it to progress in its development, to create prerequisites for a more complete manifestation of general (universal) economic laws, which gives grounds to talk about the existence of a world economy.

The purpose of the thesis is to analyse the trade in Ukraine, including:

- Theoretical foundations of trade;
- Qualitative and quantitative changes in the commodity structure of trade in Ukraine;
- Volume and dynamics of Ukraine's foreign trade;
- Methods of optimizing the trade turnover in Ukraine.

The theoretical part of the thesis the theoretical foundations of foreign trade.

The practical part reveals the structure of trade in Ukraine, its qualitative and quantitative changes over the past years and the methods of optimizing the trade turnover in Ukraine.

The method of collecting statistical information and analysis was used as the main research method.



## **2 Objectives and Methodology**

### **2.1 Objectives**

The main objective of this thesis is, based on the methods used, to assess the importance of foreign trade for Ukraine.

The sub-objectives include:

1. to discover qualitative and quantitative changes in the country's business structure,
2. to examine the volume and dynamics of Ukraine's foreign trade,
3. to suggest ways to optimize trade turnover.

### **2.2 Methodology**

The thesis consist of introduction, theoretical part, practical part and conclusion. The theoretical part will be based on the collection and study of secondary data obtained from relevant sources: literary, electronic, scientific journals, official statistics. The obtained data will be analyzed, compared and synthesized. In the practical part, based on the processing of relevant sources, there will be a description of the issue, data synthesis, data comparison, data analysis, forecast, time series, own suggestions and comments and controversies. Recommendations and conclusion are formed based on the summarized information from theoretical and practical parts of the thesis.

### **3 Theoretical Part**

#### **3.1 The concept and stages of the formation of foreign trade**

Foreign trade refers to trade between countries that includes the export and import of products and services. It is the primary type of international economic interactions for the vast majority of countries.

Foreign trade in ancient times was related to the exchange of material values due to differences in natural conditions between countries. However, when the economy was mostly subsistence-based, only a small portion of the products were exported, primarily for the personal consumption of the ruling classes (O'Rourke, 2005).

Foreign trade flourished with the disintegration of feudalism, and it was one of the historical prerequisites for the formation of the capitalist mode of production (Hilton, 1978).

Trade develops greatly during the capitalist age, particularly in connection with the transition to machine manufacturing. Firstly, it emerges as a result of disparities in natural circumstances across countries, requiring the import of foreign raw materials and food, particularly when the demand for various types of raw materials, as well as food, grows in the machine industry. Secondly, because of the differences in costs across countries, it is possible to obtain cheaper items from overseas than in one's own country, and to sell things that are more expensive in other countries abroad. If all items are produced at lower costs in a particular country than in other countries, it is beneficial to focus production in those industries where the advantage over other countries is higher, and to buy goods where the lag is smaller, according to the theory of comparative costs. For international partners, such an exchange will be profitable since they will be able to buy items in exchange for their commodities, which will require much more money to produce in their own country. Finally, because machine manufacturing is so large, it requires large marketplaces. As a result, the most established sectors expand beyond national markets, and the increased scale of production helps them to lower the cost of their products. The increase of worldwide delivery leads to the formation of an international division of labour, its evolved forms, in turn, contribute to the growth of individual countries' foreign commerce (Chang, 2009).

Foreign trade has been heavily influenced by the export of capital, as well as the world's economic and territorial divide, since the end of the nineteenth century. The export of money contributes to a rise in the export of products in and of itself. At the same time, enterprises founded on capital exports are export-oriented, selling raw materials to foreign

markets and, more recently, industrial goods and parts, while collaborating with other parent companies' businesses. The activities of international corporations and the establishment of colonial systems gave the international division of labor a revolting character, contributed to the strengthening of developing countries, the position of agrarian and raw material appendages of developed states, which was reflected in the structure of foreign trade. Raw materials and foodstuffs dominated the exports of colonies, semi-colonies, and dependent countries, and most of these countries had up to two or three units of exports per one or two units of goods due to the monoculture imposed on them. At the same time, they were compelled to import industrial products, frequently including the most primitive products and foodstuffs, over the border, primarily from metropolises, due to a lack of their own industry and the backwardness of mono-cultural agriculture. Following the demise of colonialism, nation-states sought to restructure their economies and foreign trade in order to utilise it for national development (Hirschman, 1980).

The entry of developing countries onto the path of industrialization, as well as the pressing need to diversify their exports in the face of a drop in global demand for a wide range of mineral and agricultural raw materials, has resulted in an increase in the share of manufactured products in exports in this group of countries, though raw materials and food continue to dominate most of their exports. Only a few developing countries, mostly in the so-called "newly industrialized countries" (NICs), relied heavily on manufactured goods for export (Haggard, 1990).

Significant changes in the structure of industrialized countries' overseas commerce are occurring as a result of the scientific and technological revolution. Particularly in the disciplines of mechanical engineering and the chemical industry, international specialization and cooperation are increasing. As a result, manufactured products, especially engineering products, are becoming more prevalent in these countries' exports. In developed countries, it is higher than 40%. In terms of exports, the chemical industry is gaining ground. The increase in the share of engineering products and chemicals in developed countries' imports is an indicator of the growth of international specialization and collaboration. The major exporters of engineering products (the United States, Germany, the United Kingdom, France, and Italy) are now also the largest importers. The percentage of raw materials and foodstuffs in the imports of the major industrialized countries has declined due to high growth rates of engineering and chemical goods, a large increase in domestic food production, and more efficient use of raw materials (Jhinagn, 2017).

With the growing importance of international markets, countries are increasingly competing not only on price (dumping, for example), but also on non-price factors. These include quality competition, maintenance organization, customer credit expansion, and equipment rental, among many other things. Companies are directed by the notion of marketing in their efforts to expand sales in foreign markets, which enables the management of the entire production and marketing of goods based on market research (Davidson, 2009).

Foreign trade policy, which is carried out by the operation of the customs tariff system, quantitative limits, and other non-tariff barriers, is critical for the development of any country's foreign trade. The government plays a key role in promoting goods exports by providing subsidies and export credits, distributing funds for market research, and assisting private enterprises in foreign exhibitions and fairs. International treaties and interstate trade agreements, which are signed on a bilateral and multilateral basis, play a vital role in regulating international trade. The most important of them is the General Agreement on Tariffs and Trade (GATT), reorganized on January 1, 1995 into the World Trade Organization (WTO) (Koul, 2018).

### **3.2 Modern organizational forms of export and import**

Foreign trade is a subset of international trade, which is defined as a specific type of goods transaction involving sellers and purchasers from other nations. The movement of commodities is divided into two categories: export and import. (Riezman, 2013)

Modern international trade uses the following organizational forms of export and import (Chikán, Kovács, 2018):

#### *1. Trading finished goods*

It is the most common form of trade, accounting for about half of all global trade volume. Finished goods are items that are ready to be consumed. It is traded by directly signing contracts between producers and consumers of goods, or through intermediaries. This does not rule out the provision of pre-sale service and pre-sale refinement by intermediaries, as well as the provision of Machinery Goods and maintenance by intermediaries. The pre-sale service does not alter the technical qualities of the items; instead, it is a combination of services for re-preserving goods after transit and giving them a marketable appearance. The goal is to improve the qualities of the goods for sale while also increasing their competitiveness by taking into account the individual tastes of consumers.

#### *2. Trading complete equipment*

An industrial enterprise's complete equipment is defined as equipment that represents a single entire technological cycle of industrial production. Its most important component is turnkey facility building, which includes the design, construction, and equipment of businesses, as well as the training of local workers and ensuring the facility's operation during the guarantee term. Until the mid-1990s, this type of marketing accounted for roughly 30% of overall commerce volume.

### 3. *Trading disassembled items*

Exporting products in disassembled form is done to improve competitiveness and to break into markets where countries prohibit the import of specific products in finished form to protect similar products or to encourage the development of related industries in their country. Exporters also save on transportation costs, as finished product shipment is more expensive than the transportation of components and parts; they also save on customs fees. However, to ensure a continuous assembly process, this form of trade needs strict attention to delivery regularity and completeness.

### 4. *Trading items in use*

It is a supply of old equipment as well as a type of product sale. Aircraft, automobiles, and specific technological equipment may be the targets of such deliveries. For a long period, the use of such a product is economically advantageous in small businesses or developing countries.

### 5. *Trading raw materials*

Mineral raw materials, as well as their processing and enrichment products, agricultural raw materials of plant and animal origin, as well as chemical and food products, are all included in the broad term "raw materials." Commodity exchange is carried out in the following ways:

A) *International commodity agreements* are used to regulate trade in raw materials in order to stabilize the market and reduce speculation. International commodity agreements concern cereals, grain legumes, coffee, cottonseed, and so on.

B) *Exchange trading*. Exchanges are permanently operating markets where large quantities of homogeneous goods are traded. Transactions on the stock exchange are carried out on standard lots of goods. This makes it possible to make transactions on the stock exchange not only without examining the goods, but also for goods that do not yet exist.

C) *Auction trading* is specializing in the sale of certain goods at certain times of the year.

### 6. *Trading cooperative products,*

It considers products manufactured in cooperation, together with any object of relations. Among them are:

A) *Industrial cooperation*, when components and parts of cooperating products are manufactured not for the market, but on the instructions of specific customers.

B) *Sales cooperation*, which is the cooperation of economically independent producers who organize a joint venture to sell their products.

C) *Compensatory operations*, One of the directions of cooperative cooperation with foreign enterprises, which is an agreement on the purchase of products manufactured at enterprises established with their financial assistance, to repay the loan.

#### 7. *Direct Sales*

Their increase in the sale of products are attributed to an increase in the technical level and complexity of machines and equipment, as well as an increase in the share of unique and complete equipment. Direct sales allow the manufacturer and the end user to communicate directly. In order to take into account the buyer's requirements, direct contacts are formed during the design and development of technical and economic features of the items.

#### 8. *Countertrade*

It comprises overseas trade activities in which exporters and importers' commitments to make a full or partial exchange of goods are fixed in a single document (contracts or agreements). The gap in value is covered by cash payments in a partial exchange. The exacerbation of the sales problem is the reason for the emergence of countertrade. Sellers go to their buyers for a commodity equivalent of value, which they use in their own production or sell on the foreign market, rather than a monetary equivalent of value, in order to sell their goods; buyers who do not have money receive the necessary products while also influencing the development of national exports. Countertrade can take the form of a barter arrangement, the repurchase of outmoded items, the counter-purchase of commodities at the cost of delivered goods, and so on.

#### 9. *International bidding*

This is a way of concluding purchase and sale agreements in which the buyer advertises a competition for sellers of products and, after comparing the offers received, signs a contract with the seller who supplied the goods at a better price.

#### 10. *Rent of vehicles and equipment*

It considers the transfer of products to the consumer for a fee for a set length of time.

### **3.3 Types and means of foreign trade policy of the state**

Expanding countries' engagement in international trade relations requires not only a thorough understanding of foreign trade policy and practice, but also the ability to react rapidly to changing global market conditions.

The state's foreign trade strategy is shaped by internal political, economic, and social issues on the one hand, and continual developments in the global economy and international economic relations on the other. Two forms of foreign trade policies have emerged as a result of the globalization process: protectionism and free trade (Robets, 2006).

A protectionist policy is designed at preserving domestic producers from international competition. Various limits on access to the country's domestic market are imposed as part of the implementation process. Protectionism was prevalent during the early stages of capitalism's development.

Free trade is a policy of liberalizing international trade relations by removing trade restrictions. During the age of British industrial superiority in the mid-nineteenth century, the English bourgeoisie proposed the historical slogan of free trade. In its purest form, protectionism and free trade do not exist. In general, liberalization and protectionism tendencies exist simultaneously in any country's foreign trade policy. However, at each historical stage of growth, one of them triumphs. As a result, international trade liberalization procedures occurred after WWII, and protectionism dominated state foreign trade policies in the 1930s (Robets, 2006).

Some countries' foreign trade policies have altered several times in response to shifts in the global power balance. During the American Revolution, for example, protectionist policies were adopted to safeguard the United States' market against cheap British goods. After becoming the world's most powerful economic force in the 1940s, the United States advocated for free trade. Nonetheless, beginning in the 1970s, in response to intense competition in the global market from Japan and Southeast Asian NICs, the US began to pursue a strategy of "neo-protectionism," employing a variety of new tactics in the battle for sales markets (Sassoond, 2016).

The control of international commercial relations is accomplished using a variety of mechanisms, the most important of which is the customs tariff. States are guided by the broad principles outlined in the Brussels Customs Nomenclature (BTN) and the Harmonized

Commodity Description and Coding System (HS) when drafting customs tariffs (Asakura, 2003).

The customs tariff is a systematized set of customs duties on products moved through the country's customs border (both imported and exported). Items are divided into categories and sections in accordance with international agreements, and tax rates are normally listed in three columns, depending on the country of origin of the goods. There are maximum, minimum, and preferential duties in this regard. Goods from countries with which there are no trade agreements are subject to maximum rates. Minimum tariffs are set with countries that receive most favoured country treatment, as well as special tariffs on commodities imported from developing countries (Asakura, 2003).

There are three types of duties: ad valorem (percentage of the price of goods), specific (charged in the form of a certain amount of money based on the weight, volume, and/or piece of goods), and mixed (simultaneous application of ad valorem and specific duties). Ad valorem taxes are the most common of these types of taxes.

Customs duties can serve a variety of purposes. As a result, in many nations, fiscal duties are used to refill the revenue side of the state budget. For commodities that are not produced in a certain country, they are frequently fixed at low rates (coffee, citrus fruits, etc.). Protectionist tariffs are a powerful weapon for regulating international trade. The tariff amount must be such that the selling price of imported items exceeds the domestic producer's pricing. In the event that a high price is imposed, it serves as a deterrent. A similar situation developed in the United States in the 1990s, when a customs tariff on uranium raw materials from Russia was placed at more than 100%. In recent years, states have begun to actively use anti-dumping and countervailing duties in regulating imports. The rates for these types of duties are established after proof of the fact of dumping (sales of goods below the estimated costs, i.e. artificial price reduction below the cost of imported products) (Asakura, 2003).

### **3.3.1 Non-tariff barriers.**

Non-tariff barriers include measures aiming at indirect and administrative limits on imports in order to protect certain sectors of national production, according to the UN classification (UN, 2019). There are around two thousand different species among them. They are currently the most significant impediment to international trade liberalization. Quantitative



constraints, such as licensing, contingencing (quotas), and "voluntary" export restrictions, are the most common non-tariff barriers (UN, 2019).

The issuing of a permit for international trade operations by a state entity is known as licensing. The licensing system emerged during the mercantilism period and was used to regulate the trade balance. The passage of time has altered her personality. The relevance of the license grew during the global crises of the 1930s, and then again during WWII. Foreign trade liberalization was witnessed in the postwar years, which resulted in a weakening of the role of licenses in export and import regulation, as well as a reduction in the number of licensed items (Francois, Hoekman, 2019).

A license, as a type of international trade regulation, is a document that grants an importer or exporter the authority to import or export products and is issued by a government agency. Its use allows the government to exert direct control over the country's foreign trade, limiting its scale and, in certain situations, outright barring the import of specific items. There are two types of licenses: open (general) – with common access to lists of goods that can be exported or imported without restriction for a specified period of time – and special (individual), which require documentation that includes the type of trade operation, quantity and price of goods, country of destination or origin, and so on. Import licenses are generally distributed by an auction or a system of stated preference. In the latter instance, the government issues licenses to specific businesses (Francois, Hoekman, 2019).

Along with licensing, quoting (contingencing) is used as a quantitative constraint. A quota is a limit on the quantity of goods imported and exported of a specific name and kind that is valid for a set period of time. Quotas, like protectionist tariffs, restrain foreign competition in a specific industry's home market. Quotas may be:

- Individual, restricting import (export) to one particular country;
- Group, establishing the volume of import (export) to a certain group of countries;
- Global, when imports (exports) are restricted without specifying the countries to which this restriction applies.

Sometimes things occasionally come to the establishment of the embargo. An embargo prohibits all trade with a specific country or the import of a specific product. Following the radical events and hostages in Tehran in 1979, for example, UN member states opted to impose a trade embargo on Iran. (Richter, 2020).

Agreements on "voluntary" export limits became common in the 1960s. Those are bilateral agreements that require the exporting country to limit its supply of products. Typically, such agreements are reached under the threat of sanctions on the exporting country, either explicitly or implicitly. Steel, aluminum, textiles, consumer electronics, autos, and other items are subject to "voluntary" export restrictions. In Japan, for example, automakers have agreed to impose "voluntary" export limitations on their US exports in order to avoid higher US tariffs or low import quotas. The distinction between "voluntary" export limitations and the imposition of minimum import prices is that the exporting, not the importing, country sets up a trade barrier at the border to protect the importing country. In this case, for example, if the export price falls below the minimal level, the importing country imposes an anti-dumping charge, which may make it impossible to continue exporting goods to this country's market (Asakura, 2003).

### **3.4 Multilateral regulation of international foreign trade relations and its problems**

The world economy's most essential elements are the growth of international economic cooperation and the strengthening of state interdependence. As a result, conflicts and inconsistencies between countries cannot be remedied solely on a national basis. To fully exploit the benefits of internationalization, it is necessary to regularly coordinate foreign trade policy instruments and develop mutually acceptable rules and procedures that define the framework for states and other economic entities' behavior in all forms of international economic relations. Such challenges are solved on a multilateral basis in the postwar period within the framework of international economic organizations.

The practical need for international trade regulation through rules and regulations arose during the postwar period, when tariff competition frequently resulted in lower trade volumes and lower wellbeing. The General Agreement on Tariffs and Trade (GATT) was signed in 1947 as a result of it. It was intended to guarantee global trade liberalization and adherence to the rules of the game. In international trade, the Agreement upheld two key principles: freedom and non-discrimination. The essence of these principles is the condemnation of all trade barriers and the provision of most favoured nation treatment, which requires participating countries to extend the benefits conferred in the field of foreign commerce to all others (Dür, Elsig, 2015).

The GATT's working process was based on important international discussions. Each round of negotiations took a long time to complete. The objective of eliminating or cutting customs duties was a major focus of the GATT's operations. The average value of customs charges in industrialized countries has been reduced thanks to constant active action in this regard. GATT brought together 125 countries from around the world, and its authority was growing all the time, even as the ability to check compliance and make effective judgments was dwindling. In this regard, the Marrakesh Agreement was signed at the conclusion of the "Uruguay Round," in which 117 countries participated, on the creation of the World Trade Organization (WTO) within the GATT, capable of providing effective regulation of international trade relations and overcoming regionalism, which destroyed GATT in the 1970s (Koul, 2018).

The GATT aimed to execute a multilateral reduction of tariffs from the date of signing in 1947. The World Trade Organization (WTO) has continuing this task (WTO). The World Trade Organization is working hard to resolve trade disputes. It has also broadened its scope of operations. Much of the criticism leveled at the GATT was that tariffs were decreased only in some areas, while others, such as textiles, were overlooked or given less attention. However, the Uruguay discussions resulted in the WTO expanding into other areas, including the intellectual property rights. In general, the WTO's jurisdiction is significantly larger than the GATT's (McWhinney, 2000).

The adoption of the North American Free Trade Agreement (NAFTA) by the United States, Canada, and eventually Mexico demonstrates regional integration, putting WTO efforts to reduce global tariffs in risk. The tendency to form preferential trade agreements between multiple countries in a given region is known as regionalism. Free trade zones and customs unions are included under the phrase Preferential Trade Agreements (PTAs). The PTA countries belong to a specific region, which is one of the key characteristics of regionalism. Furthermore, smaller countries have a tendency to join unions with larger neighboring countries in order to acquire a trading advantage. The entrance of Mexico to NAFTA and Austria, Finland, and Sweden to the EU are examples of this (Das, 2004).

The GATT and WTO coined the phrase "multilateral trade" to describe unilateral tariff reductions based on the principles of equality and freedom of trading countries, as well as the principle of reversibility. The principle of reversibility (reciprocity) means that countries that benefit from tariff reductions must also lower their tariff barriers. This premise assures that the system is free of political divisions over "free trade." The final concept allows for

compromises. Exceptions are made for countries that desire to establish free trade zones or customs unions, as well as poor countries. In reality, by permitting the PTA to exist, the GATT paved the way for the rise of "regionalism.". The world has been divided into three competing blocs tied to the US, the EU, and East Asia, which is causing anxiety. There are now 38 PTAs in the world, according to the World Trade Organization. It appears that regionalism is a challenge to the international trading system. Economists' studies are now looking for ways to mitigate the risk (Das, 2004; Glania, Matthes, 2005).

### **3.5 Foreign trade multiplier**

The intensive expansion of international economic relations requires determining their impact on the country's economic development. Like other components of overall spending, exports and imports have a multiplier effect. As a result, economic theory has developed and employs in reality the model of the foreign trade multiplier to measure the influence of foreign trade on the increase of national income and GNP. J. M. Keynes, R. Robinson, R.F. Kahn, and other economists made significant contributions to its inception and growth. (Polak, 1947)

A multiplier is a coefficient in Keynesianism that describes the relationship between a change in income and a change in investment. The initial change in exports, like the initial change in investment, starts a chain reaction that gets shorter with each cycle. The impact is that the initial alteration is multiplied. The export multiplier ( $M_x$ ), like the investment multiplier, is influenced by internal consumption processes and can be described using the marginal propensity to consume (MPC) or the marginal propensity to save (MPS) (Maynard, 1951).

The foreign trade multiplier's effect isn't endless. Because the marginal propensity to consume imported commodities is smaller than one, multiplication is fading in nature, and the magnitude of subsequent increments is continuously falling (Robinson, 1952).

After a period of time, the disturbance generated by an increase in investment in one of the countries is smoothed out, and the systems return to equilibrium. Active state regulation is required to play a significant role in restoring the trade balance and removing barriers to international trade development.

### **3.6 Selection and study of partners when entering foreign markets**

The selection of a suitable partner is one of the most important factors for the effective implementation of overseas trade activities (counterparty). The examination of the counterparty's activities is a widely recognised component of the conduct of a foreign trade transaction, and it is something that all participants in international commerce pay attention to. The selection of a foreign partner company, especially in long-term operations, is treated extremely cautiously in the context of an uncertain world conjuncture and the occurrence of sudden, unexpected developments.

Parties in a contractual relationship for the sale of goods or the supply of other types of services are known as counterparties in international trade.

The counterparties may be private companies or government agencies and groups, depending on the purpose and nature of the activity. Private firms are frequently used as counterparties in the execution of certain foreign trade transactions. A firm is defined as a business that engages in economic operations for the aim of profit.

Many unique circumstances influence the choice of a trading partner, but there are some fundamental guidelines that all merchants should follow while carrying out export and import transactions.

The nature of the foreign trade transaction (export, import, compensation, etc.) as well as the subject of the transaction influence the choice of a counterparty. In this instance, two questions arise: where should the essential commodities be purchased (sold) and from which foreign counterparty?

In addition to economic considerations, the nature of trade and political connections is taken into account when choosing a country. Preference is given to countries with which there are regular economic contacts that are backed up by a contractual and legal framework.

The research of many areas of possible partners' operations comes first when choosing a corporation. These elements could include:

- a) *technological* - technical level of the company's products, its technological base and production capabilities;
- b) *scientific and technical* - the organization of research and development work and the costs of them;
- c) *organizational* - the organization of the company's management;
- d) *economic* - assessment of the financial position and capabilities of the company;
- e) *legal* - the study of the norms and rules that are in force in the country of a potential partner that are directly or indirectly related to cooperation.

Many countries' trading enterprises sometimes combine purchases with simultaneous sales of their goods. Such a relationship between imports and exports is vital not just for increasing sales, but also for providing a more acceptable form of payment for imported goods, particularly if a convertible currency is required. As a result, a foreign supplier who is also a consumer of export goods gets a certain preference.

The lists (rankings) of the largest corporations issued in various nations are a valuable source of information. Such selections enable to determine a company's rank within the country's or industry's companies based on one or more indicators.

The annual reports of the companies themselves are the most interesting. They are released every year by companies that operate as both joint-stock companies and limited liability companies. Annual reports summarize and assess the company's operations for the year, allowing readers to learn about the amount and direction of capital investments, production optimization goals, employed and applied technologies, and scientific and technical potential. The reports include information on previous and anticipated modifications in the product line. They give quick summaries of the current state of business in their respective industries or product markets, highlighting numerous aspects that influenced the firm's outcomes.

Financial reporting records, such as the balance sheet, profit and loss account, and revenue and expenditure account, are an important aspect of annual reports. Their examination allows to determine the company's effectiveness, financial position, and solvency.

## **4 Practical Part**

### **4.1 Trends and structure of trade in Ukraine over the years of independence**

Two periods may be distinguished in the development of Ukraine's foreign trade during the years of independence: from 1991 to the first half of 1994, and from the second half of 1994 to the present days.

The beginning of Ukrainian business entities' activity in international markets was marked by a lack of development in external economic relations, the retention of administrative barriers in their operations, and, as a result, minimal earnings.

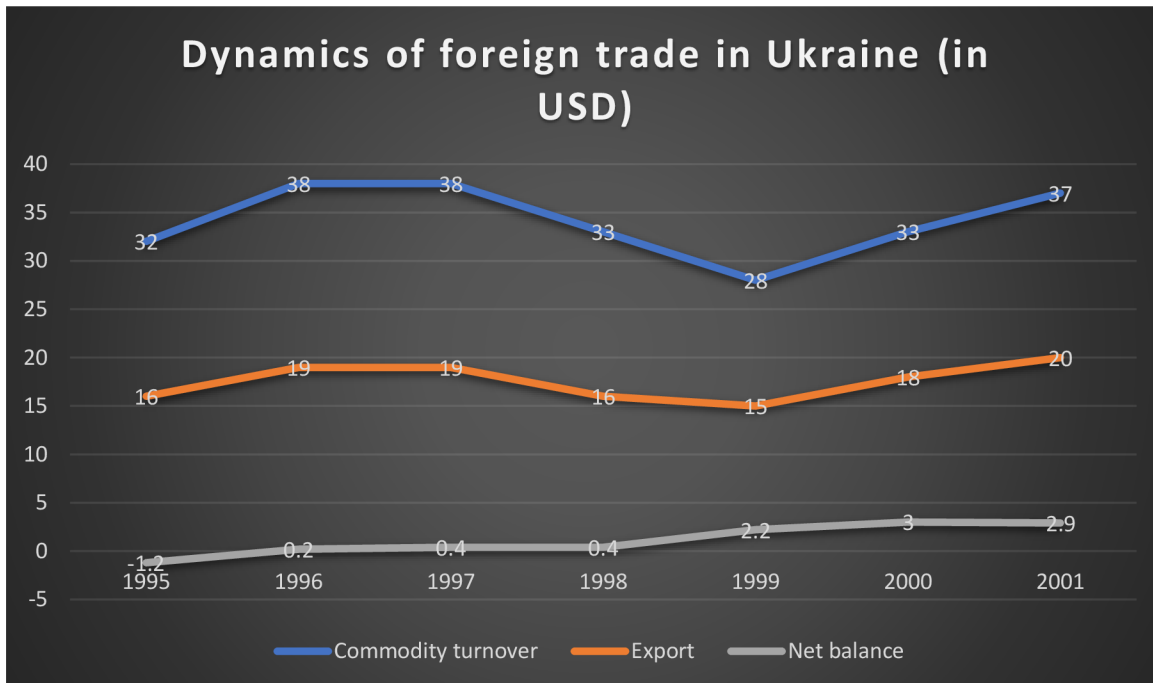
The liberalization of foreign economic activity has been a component of Ukraine's foreign trade strategy since 1994, with the goal of aiding the country's commodities producers. The rejection of inefficient quotas and export licensing, the implementation of an export tariff, and the elimination of the VAT (value added tax) on exports considerably stimulated the growth of international trade. It is worth noting that, since that year, foreign trade has been one of the most important compensating elements in reducing the negative effects of the economy's overall crisis, particularly in respect to domestic production, consumption, and key markets. Thus, the gross domestic product (GDP) of Ukraine fell by 39 percent in 1994, the foreign trade turnover increased by 60 percent, including its import component, which grew by 58 percent, while the growth rate of exports outpaced the rate of growth of imports in general by 20 percent, allowing the negative balance of foreign trade turnover to be reduced by nearly 30 percent.

Foreign trade was characterized by a steady increase in turnover and a positive balance of 425 million US dollars till 1997. These changes, however, happened against the backdrop of a dip in GDP, and the rapid growth of exports during this time was primarily due to a drop in domestic spending. At the same time, in the face of a fall in production, foreign commerce has become one of the most significant stabilizing elements in the development of the national economy.

Positive trends from previous years were not developed in the end of 90s due to a variety of external and internal issues. The biggest driver contributing to the decline in foreign trade turnover was a decrease in the volume of trade with Russia, the main trading partner by that time - an important market that resulted in a decrease in Ukraine's total

foreign trade turnover, which decreased by 30 percent in 2000 compared to 1997. The figure below illustrates this process.

Figure 1 - Dynamics of foreign trade in Ukraine (in USD).



Source: own modelling based on data from <http://www.ukrstat.gov.ua/>

Imports decreased in 1999 was a positive result. Imports of products and services have been decreased by more nearly 30% as a result of targeted funds to preserve the domestic market. Certain positive swings in the growth of foreign trade were identified in 1999 and continued in 2000. The growth in export volumes was attributed to the local industry's increased export potential and competitiveness. The experiment in the mining and metallurgical complex, the goods of which became the defining measure of export growth in 2000, was supported by Ukraine's President.

The expansion of foreign trade and economic links with neighbouring countries was another element that had a favourable impact on foreign trade. Imports climbed by 12 percent in 2000 over 1999, while exports increased by 22 percent.

A positive balance in Ukraine's foreign trade in goods and services remained, reaching about \$3 billion in 2000. It should be mentioned that in goods trade, for the first time since independence, a positive balance was recorded only in 2000. The level of foreign economic activity increased even further in 2001. As a result, the international economic turnover of products and services climbed by 13% to almost 40 billion dollars. Imports



increased by 11%, while exports increased by 11% in the United States. The positive balance amounted to over 3 billion dollars.

In the structure of imports, the largest share belonged to fuel and energy products (40% of total imports), as well as machinery, equipment, mechanisms and means of land, air and water transport (21%), chemical products and related industries (9%). The growth rate of exports was 3 times higher than the growth rate of GDP and almost half that of industrial production. In the structure of exports, the share of grain crops increased from 3.7% to 6.5%, energy carriers - from 8.1 to 10.3%, vehicles - from 4.3 to 5.2%, while the share of livestock products decreased from 3.8 to 3.1 %, chemical products - from 10.3 to 8.5 %, and metal products - from 42.2 to 38.9%.

The strengthening of the geographical expansion and diversification of Ukraine's foreign trade has been a beneficial effect of recent years. Ukraine carried out its own international trade directions within the former Soviet Union's borders. The country was fully reliant on Russia resources for energy, while exports were rigorously governed by the interests of a single national economic complex. There has been a trend in the reorientation of international trade operations from the CIS countries' markets to the markets of Europe, Asia, Africa, and America during the years since independence.

Exports of goods and services to nations that are members of the GUAM Organization for Democracy and Economic Development increased in 2002. The value of exports climbed by 18%. Base metals and their products (24 percent), mineral products (20 percent), consumables (17 percent), and machinery and equipment (18 percent) made up the majority of goods exports. At the same time, Moldova received more than half of Ukraine's exports by that time.

Integration into the European Union became one of Ukraine's foreign policy priorities in 2002. A complex of implemented initiatives aimed at expanding cooperation with the EU allowed for a growth in the volume of commodities and services traded with the EU. Imports increased by nearly 20 percent, while exports increased by 21 percent.

Trade turnover also increased with the countries of the Central European Free Trade Area (CEFTA). In 2002 it grew by 14% and amounted to 3,9 billion US dollars. Machinery and equipment, chemical industry products and wood mass dominated the structure of imports. The largest share of imports among CEFTA countries falls on Poland and the Czech Republic, while exports go to Hungary and Poland.

Positive trends in foreign trade were also observed in 2003. Thus, the export of goods and services increased by 20%.

According to the State Statistics Service of Ukraine, in 2004 the export of goods amounted to 30157 million US dollars. Compared to previous year, exports increased by 43%, imports by 29%. Foreign trade operations were carried out with partners from 195 countries of the world.

Positive trends in foreign trade were also observed in 2003. Thus, the export of goods and services increased by 20%.

According to the State Statistics Service of Ukraine, in 2004 the export of goods amounted to 30157 million US dollars. Compared to previous year, exports increased by 43%, imports by 29%. Foreign trade operations were carried out with partners from 195 countries of the world.

The volume of export of goods and services in 2005 amounted to 41195 million US dollars, imports - 38969 million US dollars. Compared to 2004, it increased 6% and 25%, respectively. The negative balance of foreign trade in goods amounted to 1763 million US dollars.

The real boost together with turbulence was detected in 2006 – 2020, which is demonstrated in the table below:

*Figure 2 - Balance of Ukraine's foreign trade between 2006 - 2021*

<b>Year</b>	<b>Export</b>	<b>Import</b>	<b>Net balance</b>
<b>2006</b>	38367	45034	-6666
<b>2007</b>	49248	60669	-11421
<b>2008</b>	66954	85535	-18580
<b>2009</b>	39702	45435	-5732
<b>2010</b>	51430	60739	-9309
<b>2011</b>	68394	82608	-14214
<b>2012</b>	68809	84658	-15848
<b>2013</b>	63312	76963	-13651
<b>2014</b>	53901	54428	-527
<b>2015</b>	38127	37516	610
<b>2016</b>	36361	39249	-2888

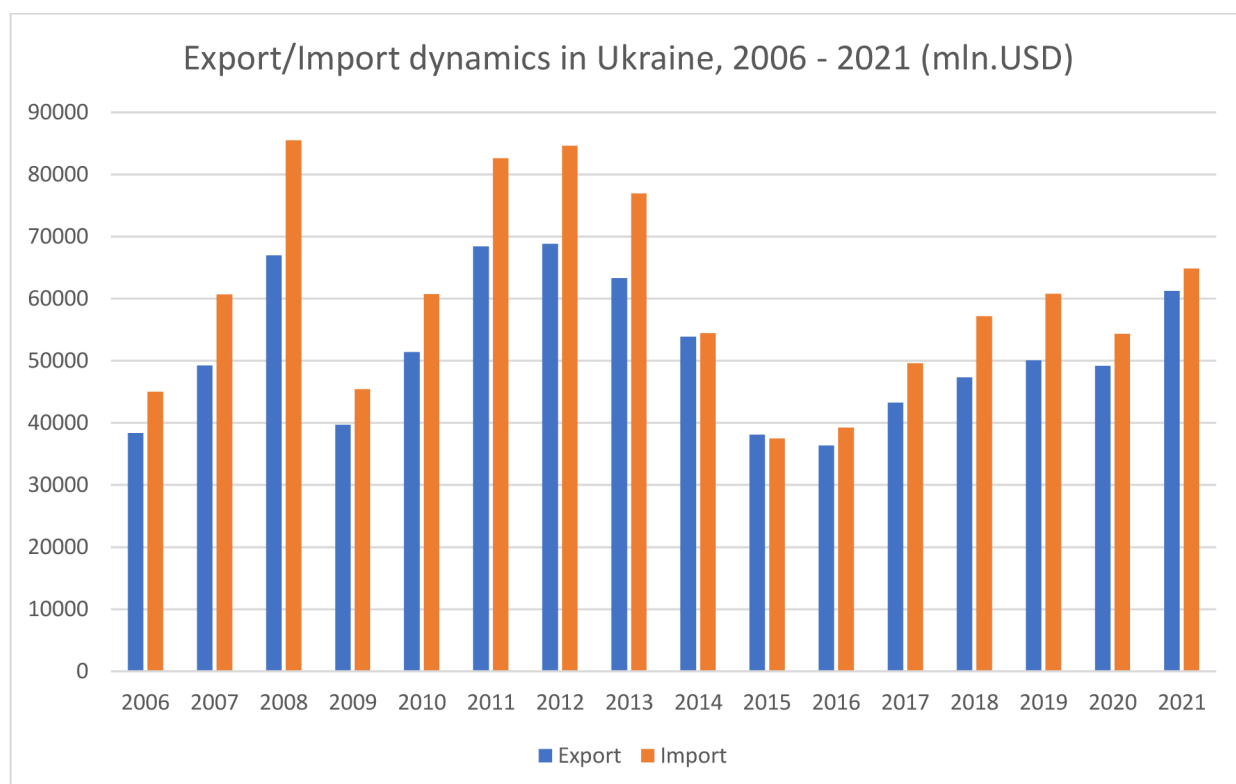
<b>2017</b>	43264	49607	-6342
<b>2018</b>	47334	57187	-9852
<b>2019</b>	50054	60800	-10745
<b>2020</b>	49191	54336	-5144
<b>2021</b>	61266	64874	-3607

Source: own modelling based on data from <http://www.ukrstat.gov.ua/>

We can see a high turbulence in 2013 – 2015, there is a suggestion that it might be caused by the annexation of Crimea in 2014 and political turmoils. Another turbulence is spotted between 2019 – 2021, and this time it might be explained by COVID-19 pandemic that affected not only Ukraine, but the whole world, and not only the export/import of goods and services, but almost all parts of economic activities of states.

Based on the table above, it is possible to construct a diagram that show dynamics of Ukraine's exports and imports over the years of independence.

Figure 3 - Export/Import dynamics in Ukraine, 2006 - 2021 (mln.USD)



Source: own modelling based on data from <http://www.ukrstat.gov.ua/>

Despite having a very small part of global trade (less than 1%), Ukraine currently trades with over 130 countries, however the CIS countries bear the lion's share. Switzerland,

Germany, Italy, Czech Republic and Poland are the key trading partners in Europe. China and Turkey remain the most important allies outside of Europe. Oil, gas, and oil products, as well as land transportation, computers and household appliances, locomotives and wagons, grain, and other goods, account for the majority of Ukraine's imports. Nuclear reactors and other nuclear sector equipment account for a considerable portion of the country's imports.

## **4.2 Time series development forecast**

A time series is defined as “*a set of observations, each one being recorded at a specified time*” (Brockwell, Davis, 2009).

The classification of time series may be according to nature: momentary time series, when the indicator shows how many samples exist in a given time moment, or interval time series, when the indicator shows how many samples arose or disappeared in a certain time interval (Anderson, 2011).

This part of the thesis examines the dynamics of time series development using statistical data, comparing particular samples in absolute values.

### **4.2.1 First difference**

The first difference is the most common one, which refers to the absolute increases or decreases in the monitored indicator in the selected period compared to the preceding one.

$$dy_t = y_t - y_{t-1}$$

$$t = 2, 3, 4, \dots, n$$

where  $y_t$  is a value of indicator of the selected period, and  $y_{t-1}$  is the value of indicator of the preceding one.

### **4.2.2 Time series growth rate**

Relative attributes, which are dimensionless, are also used in the analysis of time series.

The rate of change of values in a time series (increase / decrease) is described by the growth coefficient indicator. It's also possible to track the growth rate, which is a percentage-based conversion of the growth coefficient.

$$k_t = y_t / y_{t-1}$$

$$t = 2, 3, 4, \dots, n;$$

where  $k_t$  is a growth rate,  $y_t$  is a value of indicator of the selected period, and  $y_{t-1}$  is the value of indicator of the preceding one.

### 4.2.3 Seasonality

Seasonality of time series is a characteristics under which the data undergoes predictable and recurring variations throughout the year. These fluctuations are related to different traditions, customs and the changing of the seasons, so in Ukraine, as in many other countries, it is spring, summer, autumn and winter.

Seasonal indicators are used to indicate the seasonal impact and its amplitude, and they tell us how far the value deviates from the trend value.

$$St = y_t / y'_t;$$

where  $y_t$  is a real value, and  $y'_t$  is a balanced value (or trend value).

### Development forecast

The future development forecast is based on data that was available at the time. Due to the many possibilities for the development of trade in Ukraine, especially now when there are political tensions around the country, three probable scenarios for trade development in 2022 are given. These three layers of variations depict distinct circumstances that may arise as a result of government actions - Optimistic, pessimistic, and moderate. Given the consistency of government initiatives, the spring season 2019 served as a benchmark for which data are already available.

The qualified estimate is based on the use of an expert approach based on current state data. The scenario technique was also employed to produce the three above-mentioned versions due to the continuously altering political conditions as well as the pandemic impact.

The actual processing focuses on the description of particular economic indicators of trade in Ukraine. The dynamics of export in the years 2003-2021 is the first indication to be examined.

Figure 4 – Table of Exports in Ukraine 2003 - 2021

Year	Export	First difference	Relative growth percentage	Growth rate
2003	23080			
2004	32672	9592	41,5%	1.42
2005	34286	1614	4.9%	1.05

<b>2006</b>	38367	4081	11.9%	1.12
<b>2007</b>	49248	10881	28.3%	1.29
<b>2008</b>	66954	17706	35.9%	1.36
<b>2009</b>	39702	-27252	-40.7%	0.60
<b>2010</b>	51430	11728	29.5%	1.30
<b>2011</b>	68394	16964	32.9%	1.33
<b>2012</b>	68809	415	0.6%	1.00
<b>2013</b>	63312	-5497	-7.9%	0.92
<b>2014</b>	53901	-9411	-14.8%	0.85
<b>2015</b>	38127	-15774	-29.2%	0.71
<b>2016</b>	36361	-1766	-4.6%	0.95
<b>2017</b>	43264	6903	18.9%	1.19
<b>2018</b>	47334	4070	9.4%	1.09
<b>2019</b>	50054	2720	5.7%	1.06
<b>2020</b>	49191	-863	1.7%	0.98
<b>2021</b>	61266	12075	24.5%	1.25

*Source: Own modelling based on data of State Statistics Service of Ukraine*

The table above shows the exports dynamics in Ukraine for past two decades. The table overall hints that besides three critical points after 2008, 2014 and 2019, there is an increasing trend. The values for the majority of years are positive and increasing, somewhere even dramatically, like 28 – 35% in 2007-2008 or nearly 29-32% in 2010 – 2011.

First hard hit came in 2008, during the global financial crisis, it impacted economies of many countries, including Ukraine. As a consequence, there is a major decrease of exports by almost 40%. However, the exports restored quickly, going back to the pre-crisis values already in 2010-2011. Another failure approached in 2014, now in a political context right after the annexation of Crimea. It should be noted that all political events affect significantly on all economic processes in the country. It can be seen from the table that after 2014 the exports in the country were recovering slowly – it almost reached the pre-2014 indicators in 2019, when the global pandemic disrupted global economies again. In 2021, however, the exports were boosted, apparently due to the increasing demand after a two-year „economic lockdown“ around the world.

Figure 5 - Graph of Exports in Ukraine 2003 - 2021



Source: Own modelling based on data of State Statistics Service of Ukraine

The graph above shows accordingly the trend of increasing exports in all years except of 3 critical points, as mentioned previously. Those are 2009, 2014 and 2020.

Figure 6 - Table of Imports in Ukraine 2003 - 2021

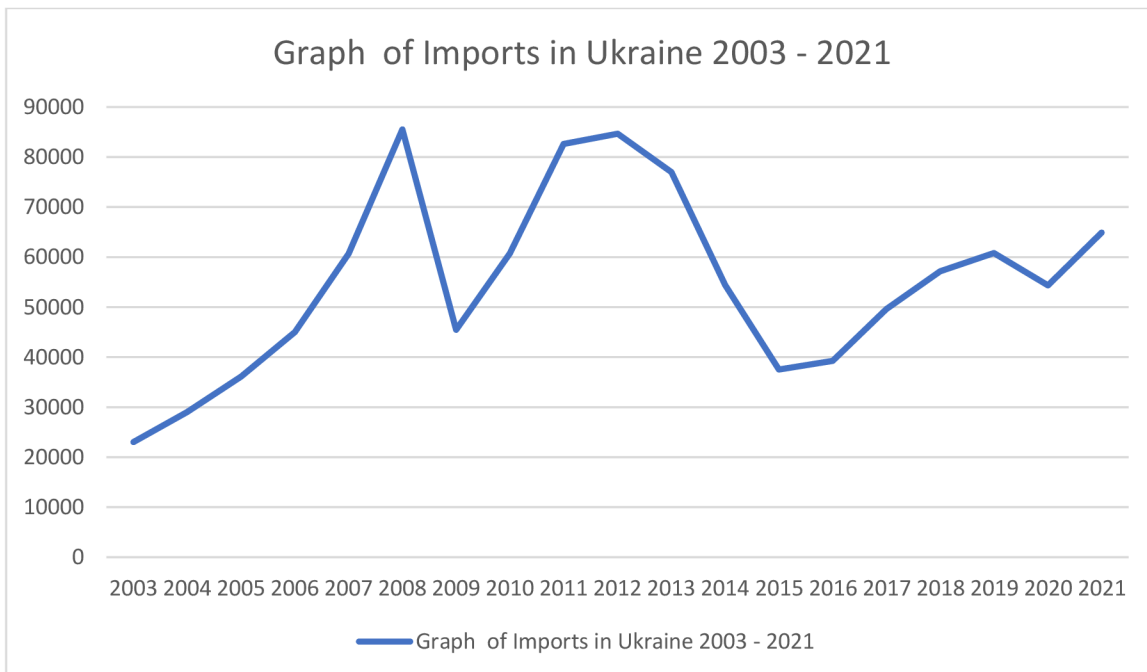
Year	Import	First difference	Relative growth percentage	Growth rate
<b>2003</b>	23020			
<b>2004</b>	28996	5976	25,9%	1.26
<b>2005</b>	36141	7145	24.6%	1.25
<b>2006</b>	45034	8893	24.6%	1.25
<b>2007</b>	60669	15635	34.7%	1.35
<b>2008</b>	85535	24866	40.9%	1.40
<b>2009</b>	45435	-40100	-46.9%	0.53
<b>2010</b>	60739	15304	33.6%	1.34
<b>2011</b>	82608	21869	36%	1.36
<b>2012</b>	84658	2050	2.4%	1.02
<b>2013</b>	76963	-7695	-9%	0.91
<b>2014</b>	54428	-22535	-29.2%	0.71
<b>2015</b>	37516	-16912	-31%	0.69

<b>2016</b>	39249	1733	4.6%	1.05
<b>2017</b>	49607	10358	26.3%	1.26
<b>2018</b>	57187	7580	15.2%	1.15
<b>2019</b>	60800	3613	6.3%	1.06
<b>2020</b>	54336	-6464	-10.6%	0.89
<b>2021</b>	64874	10538	19.3%	1.19

Source: Own modelling based on data of State Statistics Service of Ukraine

The table above illustrates that imports copy exports in Ukraine, having confidently increasing trend for five years from 2003 to 2008. The dramatic fall by almost 47% hit right after the global financial crisis, then there was a couple of years of increasing import, after which the Crimean annexation together with the national currency devaluation disrupted the dynamics of imports again.

Figure 7 - Graph of Imports in Ukraine 2003 - 2021



Source: Own modelling based on data of State Statistics Service of Ukraine

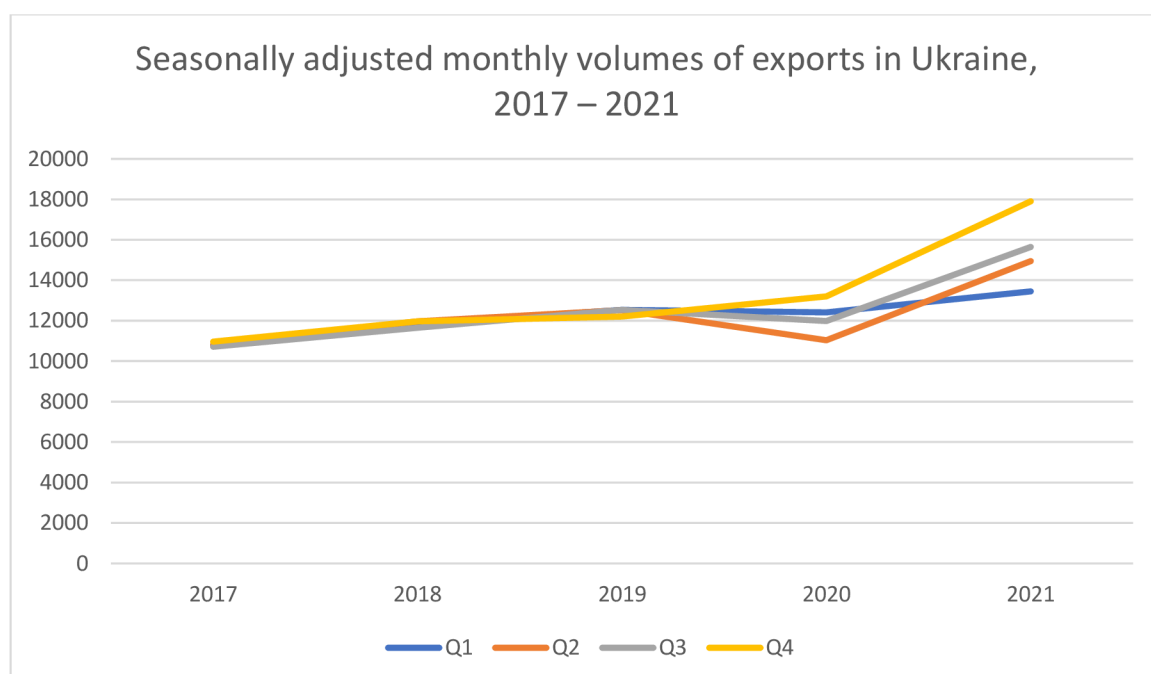


Figure 8 - Seasonally adjusted monthly volumes of exports in Ukraine, 2017 – 2021

Year	Q1	Q2	Q3	Q4
2017	10797.2	10810.1	10711.7	10963.5
2018	11853.1	11958.9	11647.8	11966.9
2019	12541.1	12526.8	12536.9	12207.4
2020	12405.9	11037.1	11989.1	13206.1
Seasonal average	11900	11583	11721	12085
Seasonal variation	77.5	-239.5	-101.5	262.5
Seasonal index	0,7%	-2%	-0,9%	2,3%
Total average	11822.5			
2021	13448	14945	15645	17901
Variation of 2021 compared to 2017 - 2020	1548	3362	3924	5816
Comparison of 2021 to 2017 - 2020	13%	29%	33.4%	48.1%

Source: Own modelling based on data of State Statistics Service of Ukraine

Figure 9 - Seasonally adjusted monthly volumes of exports in Ukraine, 2017 – 2021



The figures 8 and 9 show the seasonally adjusted monthly volumes of exports in Ukraine between the period of 2017 – 2021. As seen from the figures, the indicators increase from 2017 to 2019, however in 2020 a slight decrease is seen for three first quarters, while the

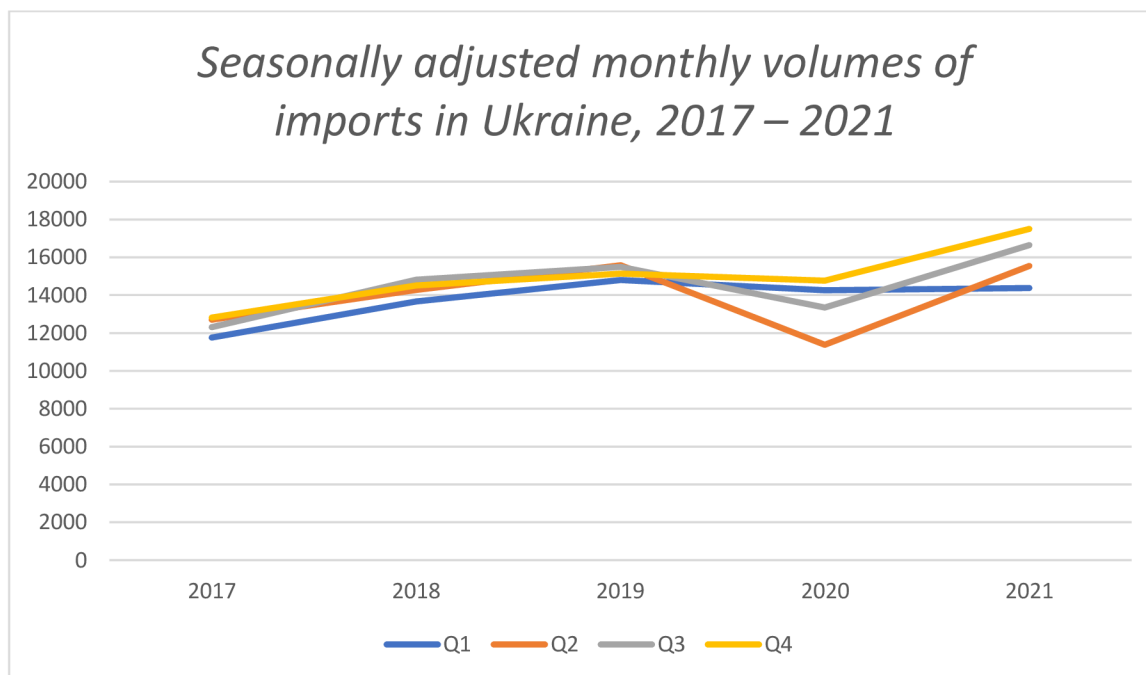
fourth quarter experiences a constant growth. Thus it can be concluded that after the pandemic, the volumes of exports recovered only in the end of 2020 and throughout 2021 year.

Figure 10 - Seasonally adjusted monthly volumes of imports in Ukraine, 2017 – 2020

Year	Q1	Q2	Q3	Q4
2017	11759	12707.4	12308.3	12814
2018	13664.7	14270.8	14822.2	14507.9
2019	14798.9	15580.2	15487.8	15138.4
2020	14258.8	11377.4	13346.2	14766.8
Seasonal average	13620	13484	13991	14307
Seasonal variation	-231	-367	140	456
Seasonal index	-1,7%	-2.7%	1.02%	3.3%
Total average	13851			
2021	14379	15549	16644	17499
Variation of 2021 compared to 2017 - 2020	759	2065	2653	3192
Comparison of 2021 to 2017 - 2020	5.6%	15.3%	19%	22.3%

Source: Own modelling based on data of State Statistics Service of Ukraine

Figure 11 - Seasonally adjusted monthly volumes of imports in Ukraine, 2017 – 2020



Source: Own modelling based on data of State Statistics Service of Ukraine

The Figures 10 and 11 demonstrate the seasonally adjusted monthly volumes of imports in Ukraine for the period between 2017 – 2021. Expectedly, it more or less copies the volume of exports in Ukraine, showing the constant growth only in the end of 2020 and throughout 2021.

#### Development forecast for 2022

This part uses available statistical data and official information from the governmental websites as of February 2022 to forecast the coming year. The following scenarios were developed for projecting 2022 based on available information and a qualified assessment. It's worth to keep in mind that the pandemic crisis as well as the rising tension around the possible Russian invasion to Eastern Ukraine might play a big role in influencing any economic forecast.

*Figure 12 - Forecast for volume of exports and imports in Ukraine for 2022*

Scenario	Q1	Q2	Q3	Q4
Optimistic	30%	40%	50%	70%
Moderate	20%	15%	20%	40%
Pessimistic	5%	5%	15%	30%

*Source: own modelling*

Three scenarios were created for the prediction of volume of exports and imports in 2022, as seen in Figure 12. The scenarios are based on different approaches to the political context in Ukraine and epidemic situation in the world. In the optimistic variant, the political crisis is solved peacefully, and the pandemic situation is improving and the measures are relaxed. In the moderate scenario, it is assumed that political tension and COVID-19 will continue to strongly influence economic sector in the second quarter. During the third quarter, the political events are expected to be with less tension and the pandemic restrictions are relaxed or lifted. The pessimistic variant reflects a situation where the political crisis disrupt significantly the economic sector and pandemic situation is not solved yet, and trade remains very limited.

## 5 Conclusion

After considering the fundamental principles and characteristics of international trade, it can be concluded that trade is the primary form of international economic connections for the vast majority of countries. As a result, without export and import activities in the global market of products and services, the country cannot completely expand and function economically.

The share of engineering and chemical sector products now dominates the structure of developed country exports and imports. Although raw materials and foodstuffs still dominate in most developing countries, there is an increase in the number of manufactured items in exports.

Foreign trade uses such organizational forms of export and import as trade of finished products, complete equipment, disassembled products, worn out equipment, raw materials, cooperative products, direct sales, countertrade, international bidding and rental of machinery and equipment.

The purpose of the bachelor thesis was to examine the dynamic of trade in Ukraine over the past decades, define the main factors affecting the volume of exports and imports using statistical indicators (2003-2021). Due to data availability, the time period for some statistics differed.

Three main negative factors affecting the trade dynamics are revealed – the global financial crisis in 2008, the annexation of Crimea in 2014 and the global COVID-19 pandemic in 2019.

The development of trade was evaluated by time series development forecast analysis. Data and information used for the analysis are the volume of exports, imports and net balance in particular years and quarters.

According to the analysis, the trade has an increasing trend, except three above mentioned periods. Based on the available data and qualified assessment, three scenarios were suggested – optimistic, moderate and pessimistic. Within the optimistic scenario, the volume of exports and imports show a significant increase in the upcoming year. Within the moderate scenario, there is a mild, but still significant increase is expected. Within the pessimistic scenario, the situation doesn't improve essentially, showing rather a slow increase of the volume.

There is a factor of a possible invasion by Russia or other political turmoils that can unexpectedly affect the trade volume in a negative way. This factor cannot be predicted or avoided in advance, consequently the forecast cannot be 100% accurate.

## 6 References

Albert O. Hirschman, *National Power and the Structure of Foreign Trade*. University of California Press, 1980

Alexander Davidson, *How the Global Financial Markets Really Work: The Definitive Guide to Understanding the Dynamics of the International Money Markets*, Kogan Page, 2009

Anderson, Theodore W. *The statistical analysis of time series*. Vol. 19. John Wiley & Sons, 2011.

Andreas Dür, Manfred Elsig. *Trade Cooperation: The Purpose, Design and Effects of Preferential Trade Agreements* : World Trade Forum, Cambridge University Press, 2015

Attila Chikán, Erzsébet Kovács, *Inventories in National Economies: A Cross-Country Analysis of Macroeconomic Data*, Springer, 2018

Autar Krishen Koul, *Guide to the WTO and GATT: Economics, Law and Politics*, Springer, 2018

Beesley, Celeste. "Foreign policy preferences in Ukraine: Trade and ethnolinguistic identity." *International Studies Quarterly* 64.1 (2020): 35-44.

Brockwell, Peter J., and Richard A. Davis. *Time series: theory and methods*. Springer Science & Business Media, 2009.

Christev, Atanas, Olga Kupets, and Hartmut Lehmann. "Trade liberalisation and employment effects in Ukraine." *Comparative Economic Studies* 50.2 (2008): 318-340.

Crane, Keith, and F. Stephen Larrabee. *Encouraging trade and foreign direct investment in Ukraine*. Vol. 673. Rand Corporation, 2007.

Dilip K. Das, *Regionalism in Global Trade*, Edward Elgar Publishing, 2004

Edward McWhinney. *From Gatt to the WTO: The Multilateral Trading System*, WTO Secretariat, 2000

Emerson, Michael, et al. *The prospect of deep free trade between the European Union and Ukraine*. CEPS, 2006.

Enrico Sassoond, *The New Protectionist Wave*, Springer, 2016

Fuller, Wayne A. *Introduction to statistical time series*. John Wiley & Sons, 2009.

G. W. Maynard, *The Principles of the Foreign Trade Multiplier: A Comment*. Successori Fratelli Fusi, 1951

Guido Glania, Jürgen Matthes, *Multilateralism Or Regionalism?: Trade Policy Options for the European Union*, CEPS, 2005

Ha-Joon Chang. *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*, Bloomsbury Publishing, 2009

Hironori Asakura, *World History of the Customs and Tariffs*, World Customs Organization, 2003

Hoekman, Bernard, Jesper Jensen, and David Tarr. "Vision for Ukraine in the World Economy: Defining a Trade Policy That Leverages Global Opportunities, A." *J. World Trade* 48 (2014): 795.

Joseph Francois, Bernard Hoekman. *Behind-the-Border Policies: Assessing and Addressing Non-Tariff Measures*. Cambridge University Press, 2019

Kevin H. O'Rourke, *The International Trading System, Globalization, and History*, Vol.2, Edward Elgar, 2005

Kowalski, Tadeusz, and Yochanan Shachmurove. "Economic development in Poland and Ukraine: The case of foreign trade." *Interdisciplinary Journal of Economics and Business Law* 7.2 (2018): 35-61.

Kubicek, Paul. "Civil society, trade unions and post-Soviet democratisation: Evidence from Russia and Ukraine." *Europe-Asia Studies* 54.4 (2002): 603-624.

M.L. Jhinagn, *Money, Banking, International Trade and Public Finance*, Vrinda Publications P Ltd, 2017

Meyfroidt, Patrick, et al. "Drivers, constraints and trade-offs associated with recultivating abandoned cropland in Russia, Ukraine and Kazakhstan." *Global Environmental Change* 37 (2016): 1-15.

Noam Chomsky, Marv Waterstone, *Consequences of Capitalism: Manufacturing Discontent and Resistance*, Penguin Books Ltd, 2021

Petrenko, Viktoriia, and Alla Karnaushenko. "Joint enterprises in foreign trade activity of Ukraine." *Baltic Journal of Economic Studies* 3.5 (2017): 203-207.

Polak, J. J. "The Foreign Trade Multiplier." *The American Economic Review*, vol. 37, no. 5, American Economic Association, 1947

Rodney Hilton, *The Transition from Feudalism to Capitalism*. Verso, 1978

Stephan Haggard, *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries*, Cornell University Press, 1990

Raymond Glenn Riezman, *International Trade Agreements and Political Economy*, World Scientific, 2013

Russell Roberts, *The Choice: A Fable of Free Trade and Protectionism*, Pearson , 2006

UNITED NATIONS, *International Classification of Non-Tariff Measures*, 2019

Melina Helga Richter, *US Sanctions against Iran. Historical Context, Goals and Consequences*, GRIN Verlag, 2020

Wang, Ying, Ze Tian, and Shenyue Xia. "Analysis of the Competitiveness and Complementarity of China-Ukraine Trade Cooperation under the Background of" Belt and Road." *Proceedings of the 2018 International Conference on Economics, Business, Management and Corporate Social Responsibility*. 2018.

Yatsenko, Olha, et al. "Global risks of trade and economic cooperation of Ukraine with countries of the Northern American region." (2019).

Yatsenko, Olha, et al. "Realization of the potential of Ukraine–EU free trade area in agriculture." (2017).