

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Master's Thesis

Foreign Trade – Case Study of Egyptian Cotton

Rana Al Khaldi

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The purpose of this thesis is to examine the fundamental elements of Egyptian foreign trade and the contribution of export growth to the growth of the Egyptian economy. The thesis will be divided into two parts, the theoretical part and the practical part.

Methodology

The descriptive, comparative, and econometric approaches will be used to identify the importance of foreign trade for the Egyptian economy, the performance of cotton export by analysing the numeric data from Egyptian Central Bank by Gretel program.

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The Diploma Thesis Supervisor

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

Supervising department

Department of Economics

Electronic approval: 27. 9. 2022

prof. Ing. Lukáš Čechura, Ph.D.

Head of department

Electronic approval: 27. 10. 2022

doc. Ing. Tomáš Šubrt, Ph.D.

Dean

Prague on 15. 02. 2023

Declaration

I declare that I have worked on my master's thesis titled "Foreign Trade – Case Study of Egyptian Cotton " by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 23.03.2023

Rana Al Khaldi

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Foreign Trade – Case Study of Egyptian Cotton

Abstract

The purpose of this thesis is to examine the fundamental elements of Egyptian foreign trade and the contribution of export growth to the growth of the Egyptian economy. The thesis will be divided into two parts – the theoretical and the practical ones.

The descriptive, comparative, and econometric approaches will be used to identify the important of foreign trade for the Egyptian economy, the performance of cotton exports by analyzing the numeric data from Egyptian Central Bank using Gretl application.

The decline in cotton production in Egypt can be attributed to a number of factors, including the mismanagement of agricultural policies, the overuse of land and water resources, the use of outdated farming methods and equipment, the lack of investment in research and development, and the lack of competitiveness of Egyptian cotton on the global market. In conclusion, the reasons for the decline in cotton production in Egypt include these factors. In order to address these factors, a comprehensive strategy will be required.

Keywords: foreign trade, exports, imports, Egypt, cotton

Zahraniční obchod – Případová studie egyptské bavlny

Abstrakt

Cílem této práce je prozkoumat základní prvky egyptského zahraničního obchodu a příspěvek růstu exportu k růstu egyptské ekonomiky. Práce bude rozdělena na dvě části – teoretickou a praktickou.

Popisné, srovnávací a ekonometrické přístupy budou použity k identifikaci významu zahraničního obchodu pro egyptskou ekonomiku, výkon vývozu bavlny analýzou číselných údajů z egyptské centrální banky pomocí aplikace Gretl.

Pokles produkce bavlny v Egyptě lze přičíst řadě faktorů, včetně špatného řízení zemědělských politik, nadužívání půdy a vodních zdrojů, používání zastaralých zemědělských metod a vybavení, nedostatku investic do výzkumu a vývoje a nedostatečné konkurenceschopnosti egyptské bavlny na globálním trhu. Závěrem lze říci, že důvody poklesu produkce bavlny v Egyptě zahrnují tyto faktory. K řešení těchto faktorů bude zapotřebí komplexní strategie.

Klíčová slova: zahraniční obchod, Vývoz, Dovoz, Egypt, Bavlna

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List of abbreviations

- **BCE** ... Before Christ.
- **BLUE** ... Best Linear Unbiased Estimator.
- **EUROMED**... Euro-Mediterranean transport partnership.
- **FAO** ... Food and Agriculture Organization.
- **GATT** ... General Agreement on Trade and Tariffs.
- **GDP** ... Gross Domestic Product.
- **IMF** ... International Monetary Fund.
- **OLS** ... Ordinary Least Squares method.
- **WTO** ... World Trade Organization

1 Introduction

Egypt has a long and rich history of cotton production, which has played a significant role in the country's economy for centuries. The cotton industry is one of the oldest and most important sectors in Egypt, with a profound impact on the nation's social, economic, and political landscape. Cotton is not only an essential cash crop for Egypt, but also a significant factor in the country's international trade relations.

The motivation for writing a diploma thesis about Egypt's cotton production stems from the country's vital role in the global cotton market and the challenges it faces in maintaining its competitiveness. In recent years, the global cotton market has undergone significant changes, with shifts in supply and demand, fluctuations in prices, and increased competition from emerging cotton-producing countries. These changes have impacted Egypt's cotton industry, which has struggled to maintain its market share and profitability.

Furthermore, the cotton sector in Egypt faces several challenges, including water scarcity, limited land availability, inefficient farming practices, and inconsistent government policies. These challenges have hindered the industry's growth and development, affecting the livelihoods of millions of farmers and workers in the cotton value chain.

Given these challenges, understanding the dynamics of Egypt's cotton production is crucial for policymakers, industry stakeholders, and researchers. A diploma thesis focused on Egypt's cotton production can provide valuable insights into the industry's current status, challenges, and opportunities for growth and development. Moreover, such a thesis can contribute to the academic discourse on cotton production and trade, providing a better understanding of the factors that shape the global cotton market.

The purpose of this diploma thesis is to provide a comprehensive analysis of Egypt's cotton production, including its history, current state, and future prospects. The thesis will examine the challenges faced by the industry and evaluate the policies and strategies that have been implemented to address them. Additionally, the thesis will explore the potential for innovation and technological advancements in the sector, as well as the opportunities for diversification and value addition in the cotton value chain.

Finally, the diploma thesis on Egypt's cotton production is motivated by the importance of the industry to the country's economy, its impact on global cotton trade, and the challenges it faces in maintaining its competitiveness. The thesis aims to contribute to the academic discourse on cotton production and trade, provide insights for policymakers and industry stakeholders, and offer recommendations for the sustainable growth and development of Egypt's cotton sector.

2 Objectives and Methodology

2.1 Objectives

The purpose of this thesis is to examine the fundamental elements of Egyptian foreign trade and the contribution of export growth to the growth of the Egyptian economy. The thesis will be divided into two parts – the theoretical and the practical ones.

2.2 Methodology

Analyzing the numerical data provided by the Egyptian Central Bank, the World Bank through the use of the Gretl application will allow the descriptive, comparative, and econometric approaches to be utilized in order to determine the significance of international trade to the Egyptian economy as well as the performance of cotton exports.

In addition to that, the author also estimates a linear regression equation that will help the author to identify the most important factors influencing the country's exports of cotton.

3 Literature Review

3.1 Foreign Trade

3.1.1 Definition of Foreign Trade

The export and import of commodities and services between countries is often regarded as the most important kind of economic relations between countries. These deals are made in the context of global commerce. It is also carried out through export and import operations, where goods, services, and financial means are transferred from one country to another in accordance with administrative and financial procedures (Al-Sariti, 2008), or as "the process of trade exchange in goods, services, and other various elements of production between several countries with the aim of achieving mutual benefits for the parties to trade." Foreign commerce may also be defined as "the process of trade exchange in products, services, and other varied factors of production between numerous nations with the purpose of producing mutual advantages for the parties to trade." The exchange of products and services as well as the transfer of money between citizens of other political units or between governments and economic entities located in separate political units are all examples of international commerce. Individuals from other political entities may engage in such migrations. International commerce encompasses a wide variety of commercial interactions, which may be broken down into the following classes: commodity trading includes buying and selling finished products, raw materials, semi-finished products, and intermediate items. the trading of services including shipping, insurance, freight, and vacationing. trading in semi-finished or finished products Considering the flow of people from one country to another as part of the labour component commerce (Matar, 2001).

A volcanic glass called obsidian was traded between the ancient civilizations of Mesopotamia and the Levant about 4500 BCE. This is the first instance of trade that has been documented. The origins of international commerce may be traced all the way back to ancient times. Nonetheless, the era of exponential expansion in global trade could not have begun

without the establishment of nation-states as well as breakthroughs in communication and transportation technologies ¹.

3.1.2 Foreign Trade History and Evolution

Uruk, in southern Mesopotamia, was probably the first city the world had ever seen its agriculture made prosperous by sophisticated irrigation canals, was home to the first class of middlemen, trade intermediaries form a cooperative trade network which set the pattern that would endure for the next 6,000 years (Borad, 2022).The Silk Road, a network of commercial routes that connected China to the Mediterranean region, was one of the oldest instances of global trade. The Silk Road, which allowed for the trade of items like silk, spices, and precious metals, was established during the Han Dynasty in China. The Silk Road was an important conduit for cultural, religious, and technological interaction between the East and the West in addition to serving as a means of commerce (Beck, 2017). During the Middle Ages, international trade was primarily conducted through the use of trade fairs. These fairs, such as the Champagne Fairs in France, provided a means for merchants to gather and exchange goods from various regions and cultures, in addition, trade in Northern Europe and the Baltic Sea region was governed at this time by the Hanseatic League, an association of merchants from German cities. In the 16th and 17th centuries international trade was significantly impacted by the discovery of the Americas and the subsequent colonization of the New World. The colonization of the Americas resulted in the development of new markets for European products like textiles and firearms as well as new resources for commerce like sugar and tobacco (Green, 2019). During the 18th century The British East India Company first appeared, when it had substantial power over trade between Europe and Asia. The business, which was given a monopoly over English trade in the East Indies, had a significant impact on both the colonization of India and the opium traffic with China. New trade routes and economic systems, such the triangular commerce between Europe, Africa, and the Americas, were created as a result of the company's power and control over trade (Roos, 2020). The Industrial Revolution began in the 19th century, having a significant impact on global trade where markets grew, and global trade expanded as a result of increasing production and availability of goods.

¹The MVP of Yellowstone's "Stones" (U.S. National Park Service). (2019). Obsidian. Available at: <https://www.nps.gov/articles/archeology-obsidian-mvp-yellowstone-stones.htm> (Accessed: 3 February 2023).

Additionally, improvements in transportation, such as steamships and railroads, increased the efficiency of the movement of commodities and permitted the growth of trade to new areas , historical events influenced foreign trade and vice versa from the exchange of goods on the Silk Road, to the trade fairs of the Middle Ages, to the colonization of the Americas, to the Industrial Revolution and the formation of international trade organizations, international trade has undergone significant evolution and continues to play a vital role in the global economy (Kindleberger et al., 1982).

Below, the author presents the main milestones related to the development of the international trade:

- 1830 – 1870: the first period of globalization.
- 1870 – 1913: The creation of the Suez Canal and the Panama Canal opened the entire globe to trade.
- 1913 – 1918: World War I put a halt on international trade growth.
- 1918 – 1929: trade recovered from the wartime shock.
- 1929 – 1938: More than one-third of trade stopped during the depression.
- 1938 – 1945: World War II put a halt to international trade.
- 1950 – 1973: The ‘Golden Age’ was the rebound of the international economy.
- 1973 – 1975: The Oil Crisis and the recession during these years put a halt to the expansion following WWII.
- 1975 – 2007: Asia’s share in international trade grew.
- 2007 – Present: It appears the nearly 40-year period of growth has come to a halt and the openness of the world’s economy has been stagnant (Chase, 2019).

3.2 Theories of Foreign Trade

If one wants to make sense of how international trade has evolved into what it is now, he or she needs to know how it has evolved in the past. There have been many theories developed by economists throughout the years to try to make sense of international trade. Country-based historical ideas, often known as classical historical theories, are those developed from the perspective of a nation. There emerged, in the middle of the twentieth century, a variety of theories for trade that saw corporations rather than states as the basic unit of study. These hypotheses are considered contemporary since they are grounded in the concept of a company. Many distinct global theories may be found in both the classical and modern categories (Borad, 2022).

3.2.1 Classical Country-based Trade Theories

3.2.1.1 Mercantilism

Mercantilism was an economic theory that gained popularity in Europe during the 17th and 18th centuries. Its primary objective was to accumulate wealth and power through foreign trade. so, the quantity of gold and silver of a nation possesses determines its wealth The theory emphasized exporting as much as possible and limiting imports through the use of tariffs and other trade barriers. This policy was intended to ensure that a country always earned more from exports than it spent on imports, resulting in a trade surplus and the accumulation of gold and silver reserves (Krugman et al., 2009).

In addition to trade policies, mercantilist governments encouraged the establishment of monopolies and the formation of trading companies to control the production and distribution of goods. They also imposed tariffs and other trade barriers to protect domestic industries from foreign competition and promote exports. These policies were intended to enhance a country's economic power and competitiveness (Eichengreen, 2007).

While mercantilism was successful in accumulating wealth and power for some countries, it also led to increased tensions and conflicts among nations. The emphasis on exporting at the expense of imports often resulted in trade imbalances that created tensions and disputes between countries (Johnson, 1954).

3.2.1.2 Adam Smith (Absolute Advantage)

Adam Smith's theory of free trade, as presented in his seminal work (*The Wealth of Nations*, 1776) has had a significant impact on the development of modern economics and its role in foreign trade. Smith believed that free trade, unencumbered by government intervention, was the most efficient way to allocate resources and maximize a country's economic output. At the core of Smith's theory was the concept of the division of labour, which held that by focusing on specific tasks, individuals and businesses could become more efficient and productive. Free trade, according to Smith, allowed countries to specialize in the production of goods and services in which they had a comparative advantage, thereby increasing their overall economic welfare (Irwin, 2017).

Smith also argued against protectionist policies such as tariffs and quotas, which he believed distorted the natural flow of trade and inhibited economic growth. Instead, he

advocated for the removal of trade barriers and the establishment of free markets, which he believed would lead to greater competition, innovation, and ultimately, economic prosperity.

The influence of Smith's ideas on foreign trade can be seen in the development of the World Trade Organization and the various free trade agreements that have been signed by countries around the world. While his ideas have been debated and refined over the centuries, Smith's belief in the benefits of free trade continues to inform modern economic policy (Bhagwati, 2002).

3.2.1.3 Comparative Advantage

Although Smith's theory was better, it was not very effective. A country might be effective at producing both products, or the other country might not have a significant advantage in either item, so in 1817 an economist called David Ricardo proposed the theory suggests that countries should specialize in producing the goods they can produce most efficiently and trade with other countries for goods they cannot produce as efficiently. This results in mutual benefit and increased efficiency in global trade. The theory of comparative advantage has been widely accepted and used by economists and policymakers around the world. It has been used to support the case for free trade, arguing that countries should focus on producing goods they can produce most efficiently, rather than trying to protect their domestic industries through tariffs and other trade barriers (Ricardo, 1817).

3.2.1.4 Hecksher-Ohlin (HO) Model

The Hecksher-Ohlin (HO) model is an important economic theory in the field of international trade. The theory focuses on the production factors of a nation, such as labour, capital, and natural resources, and how they are used in the production of goods and services. The HO model predicts that countries will specialize in the production of goods that use their abundant production factors, and trade with other countries to acquire goods that use their scarce production factors.

The HO model has important implications for trade policy. For example, if a country has an abundance of labour, it is likely to specialize in the production of labour-intensive goods and export those goods to other countries. If a country has an abundance of capital, it is likely to specialize in the production of capital-intensive goods and export those goods to other countries.

The HO model has been widely studied and debated by economists and has contributed to our understanding of the gains from trade and the effects of globalization on national economies. It continues to be an important tool for policymakers and researchers in the field of international trade (Grossman et al., 1991).

3.2.2 Modern Firm-Based Trade Theories

3.2.2.1 Country Similarity Theory

Country similarity theory, also known as the Linder theory, suggests that countries with similar income levels and consumer preferences are more likely to trade with each other. The theory posits that countries with similar levels of per capita income will produce and consume similar products, resulting in increased trade between them. Linder theory implies that trade will be driven by demand and production factors rather than comparative advantage. According to Linder theory, trade between nations with similar income levels is likely to be in manufactured goods, as these countries have similar tastes and preferences. Conversely, trade between countries with different income levels will be more in primary products or raw materials. The Linder theory offers a valuable perspective on the determinants of international trade. While its limitations must be acknowledged, the theory provides insights into how the trade between nations can be driven by similarities in consumer preferences and income levels (Helpman et al., 1985).

3.2.2.2 Product Life Cycle Theory

The Product Life Cycle Theory, which has four stages: introduction, growth, maturity, and decline, is a theory that describes how a product's sales and profitability change over time. This principle is crucial to international trade, especially when it comes to exporting commodities. It aids companies in comprehending how to compete in global markets and modifying their strategy accordingly.

The Product Life Cycle Theory can be used by firms to determine which markets are appropriate for export and when to enter them. As an illustration, a product in the introduction stage might be best suited for export to emerging nations, whereas a product in the maturity stage might be more suitable for export to developed nations (Vernon, 1966).

Also, the theory can assist organizations in comprehending the competitive pressures that may be present in various markets and at various points in a product's life cycle. They are able to decide on price, marketing, and distribution with more knowledge as a result.

Overall, the Product Life Cycle Theory provides a valuable framework for businesses seeking to expand into international markets, allowing them to better understand the challenges and opportunities they may face (Kotler et al., 2010).

3.2.2.3 Global Strategic Rivalry Theory

In the 1980s, economists Paul Krugman and Kelvin Lancaster developed this theory which known as global strategic rivalry, according to this theory multinational companies (MNCs) compete not just for market share but also for strategic dominance in important industries, Businesses can achieve a strategic advantage when competing with MNCs in the same sector by focusing on their own unique strengths and capabilities. This could involve leveraging local knowledge and expertise, developing niche products and services, or pursuing innovative strategies that allow them to differentiate themselves in the market. Businesses may also seek to form alliances or partnerships with other firms in the industry or engage in mergers and acquisitions to gain access to new markets and technologies (Dunning, 1992).

In general, creating sustainable competitive advantages and having a clear focus on the competitive landscape are necessary to get a strategic edge while fighting against MNCs. Businesses may effectively compete in the global market, create long-term growth and profitability, and leverage their assets and capabilities (Rugman, 2010).

3.2.2.4 Porter's National Competitive Advantages Theory

In 1990, An explanation of how a nation might obtain a long-lasting competitive advantage in international trade is provided by Porter's National Competitive Advantages Theory. According to Porter, the existence of four interrelated determinants - factor circumstances, demand conditions, related and supporting industries, as well as firm strategy, structure, and rivalry - determines a nation's competitiveness in a certain industry.

A more recent model, however, contends that a nation's capacity to compete in each industry depends on that sector's capacity for innovation and modernization. The emphasis of this model is on the significance of innovation and technology as major forces behind competitiveness in the current global economy. It implies that maintaining a competitive advantage over time depends on a nation's capacity to generate innovative goods and services.

Both of these models have important implications for policymakers, businesses, and academics who are interested in understanding the dynamics of global trade and economic development (Teece, 1998).

3.3 Assessment of Foreign Trade

3.3.1 Reasons for Establishing Foreign Trade

The author presents a brief list for establishing an international trade:

- 1. Uneven Distribution of Natural Resources:** The distribution of the world's natural resources among its countries is not equal, the number of natural resources in many nations varies, and these nations also vary from one another in terms of climate, mineral availability, and other aspects. Some nations can produce more sugar than others, like Cuba, while others can produce more cotton than others, like Egypt, and still others can produce more wheat than others, like Argentina. However, all of these nations require wheat, cotton, and sugar. Therefore, it seems sense that there would be a need for international trade since they would have to rely on one another to swap their surpluses for the items that are in short supply there.
- 2. Division of Labour and Specialisation:** Some countries are more able to produce some items more economically than other countries because of the unequal distribution of natural resources. However, they are unable to create other items due to their geographical disadvantage. They specialize in producing things for which they have a natural advantage, such as the availability of labour, raw materials, technical know-how, favourable climatic conditions, etc., and they trade these goods for goods from other nations.
- 3. Achieving Self-Sufficiency:** No country can be completely self-reliant due to the unequal distribution of the factors of production to the different countries, poor material, or human capabilities, or both. Adding that not every country has the same sufficient capabilities to produce all goods and services.

- 4. Different Production Conditions:** Some areas with a seasonal climate are suitable for growing rice and coffee. They must specialize in this type of agricultural product and import other products that are not being produced by somebody, such as oil that is available in countries with desert climates such as the Arab Gulf state.

- 5. Different in Production Cost:** The disparity in production costs between nations is a driving force behind trade between them, particularly in those with so-called economies of scale. Large production results in a decrease in the average quantitative cost of the unit produced in comparison to the other nation, which is produced in quantities that are scarce and therefore have higher production costs, which gives in terms of output, the first country has a comparative advantage over the second country, mostly because of the many environmental considerations.

- 6. Reduced Dependence on your Local Market:** When home market may be struggling due to economic pressures, so going global, will have immediate access to a practically unlimited range of customers in areas where there is more money available to spend, and because different cultures have different wants and needs, the international trade allow to take advantage of these differences.

- 7. Differences in Economic Growth Rate:** There are many differences in the economic growth rate of different countries. Some countries are developed some are developing, while there are some other countries which are under-developed, these under-developed and developing countries have to depend upon developed ones for financial help, which ultimately encourages international trade.

- 8. Increased Productivity:** Companies engaged in international commerce have the potential to raise their productivity by 34%, according to statistics from UK Trade and Investment.

- 9. Innovation:** The disparity in technology levels between nations and consumers' desire to purchase things with the most advanced technology.

3.3.2 Advantages and Disadvantages of Foreign Trade

- **Advantages**

1. The most efficient use of natural resources the practice of international commerce enables nations to make the most efficient use possible of the natural resources at their disposal.
2. The development of foreign commerce leads to specialization, which in turn supports the production of a variety of commodities in a number of nations. These items are able to be produced at relatively lower costs thanks to the benefits of division of labour.
3. The availability of a wide range of goods consumers and nations both have the opportunity to purchase goods and services through international trade that are either unavailable in their home countries or are more expensive to produce there. This is due to the fact that international trade brings economies together.
4. Enhanced productivity as a result of the intense competition that exists in international commerce, manufacturers in every nation strive to create high-quality goods at affordable prices. This, in turn, enhances productivity and is to the advantage of consumers in every region of the globe.
5. Stability in pricing international commerce helps to tame wild price oscillations and drives down the cost of commodities on a global scale.²
6. With the assistance of imported technical know-how, machinery, and equipment from both developing and developed countries, underdeveloped countries are able to start new industries, and as a result, developing nations are able to advance quickly. Establishment of new industries and exchange of technique and technology.
7. Extending market opportunities Businesses that export might experience levels of development that they may not be able to achieve if they just focus on their local market opportunities. Brands and businesses now have the

² GCC exchange. (2018). Advantages and disadvantages of international trade Available at: <https://gccexchange.com/blog/advantages-disadvantages-international-trade> (Accessed: 3 February 2023).

opportunity to produce steady revenue from a wide portfolio of clients across various markets, as opposed to depending on a narrow client base in their major market. This allows them to expand their customer base outside their primary market.

8. Enhance the chance for employment in addition to the employment opportunities that are presented by a profession in international commerce, the industry also helps to the creation of jobs by providing companies with access to new markets. It stands to reason that a company's production and service capabilities will increase in tandem with the available market's size and percentage of the overall market. The final result is that members of the working class now have access to a greater number of employment options.
9. One of the advantages of manufacturing on a wide scale is that, as a result of international commerce, products are now made not just for consumption locally but also for export. Since countries throughout the globe are able to sell their surplus commodities in abroad markets, manufacturing at a big scale is a direct outcome. As a result, all nations around the world are able to reap the benefits of manufacturing at a large size.³

- **Disadvantages:**

1. Economic dependence: A nation's economy may suffer from an excessive reliance on imports. Underdeveloped nations that are dependent on developed nations for their economic development may be economically abused by the latter, so weak states might be colonized.
2. Restricted growth of home industries: The expansion of home industries could be hampered by foreign trade. Unrestricted imports and foreign competition may be a threat to the country's developing and emerging sectors. Underdeveloped countries may suffer because of developed countries' dumping policies.
3. Misuse of natural resources: A nation's natural resources could be quickly depleted by excessive exports. If only items with a competitive cost advantage are produced in a country, then trade may encourage uneven development.

³ Brighton College. (2022). 7 key benefits of international trade. Available at: <https://brightoncollege.com/blog/7-key-benefits-of-international-trade/> (Accessed: 3 February 2023).

4. Import of substandard or harmful goods: The wellbeing of people may be harmed by the import of luxury products, fake medicines, etc. Essential commodities may become expensive at home because of exports, and individuals may experience inflation as a result (Singh, 2012).
5. Political exploitation: Foreign commerce could lead to economic dependence, which could put political independence at risk. For instance, the British initially arrived in India as traders and then came to control the nation for many years.
6. Conflict between nations: There may be rivalry between nations as a result of intensive export competition. Cooperation between nations could be affected. Due to competition in foreign markets, international trade creates rivalry between states. Unhealthy competition may result in conflicts of interest and, possibly, international wars.
7. Invasion of culture: A country's culture may be invaded because of foreign trade, young people from developing countries gradually adapt to western spending patterns and lifestyles.
8. Unemployment: Because this country lacks sufficient industries due to the frequent importation of essential goods, unemployment will continue to be a problem in countries where goods and services are traded constantly. As a result, the unemployment rate will rise (Ajibola, 2019).

3.3.3 The Important Role of Foreign Trade in Economy

Foreign trade plays a significant role in the local and international economy, and the level of foreign trade is an indicator of its economic growth, which is reflected in various social, scientific, and political aspects in the country. The main objective of foreign trade is the exchange of goods and services between countries, due to the scarcity of these goods in the importing countries, and it results in benefits that, in turn, are reflected in various social and political aspects in societies, and perhaps the most prominent of them is their ability to find or provide the following (Furuoka, 2007):

- Foreign trade works to mobilize and develop funds and increase the capital that is produced through foreign trade work.

- Foreign trade is a main source of obtaining major or rare foreign currencies, which enhances the state's ability to obtain cash, which is one of the pillars of economic operations, especially financing and investment operations.
- Foreign trade works to develop and improve economic activities, whether they are production, consumption, or services, and this is done by activating the commercial movement in those economic sources resulting from export or import operations.
- Foreign trade from exports results in a financial return that can be used as a source of financing for development projects, or services that the state needs, so-called current spending.
- Countries are trying through foreign trade to find a kind of balance in their economic situation. There is no doubt that if exports increase, they work to achieve a balance with imports, especially if those imports grow steadily.
- Balanced foreign trade also works to bring about a balance in the balance of payments through the requirements of the state, and the revenues it achieves that reduce the deficit and imbalance if it is balanced with exports.
- Securing the needs of developing countries from the basic requirements of economic development, such as capital, technology, sources of foreign exchange and modern management, which help revitalize the various economic sectors in the national economy (Hajji, 2017).

The importance of foreign trade varies from one country to another according to the level of its economic progress and the availability of its production elements, as the importance of foreign trade decreases in large-sized countries with huge potentials because they are able to produce the largest part of their needs locally, but they can raise the level of well-being of their members by obtaining a quantity It is greater than the goods produced by other countries at a relatively lower cost. On the contrary, its importance increases in small-sized countries, so it specializes in the production of a limited number of goods and services and depends on abroad to import the bulk of the goods and services it needs, and the importance of trade for the same

country varies from one period of time to another according to the trade policy that it applies towards the outside world (Boudjemaa et al., 2016).

Foreign trade has emerged as a solution to the problem of countries' inability to achieve self-sufficiency in goods and services on their own due to their inability to produce these goods, either for reasons due to the nature of goods or the lack of capital or technology, or the modern management of some countries to produce them at a lower cost. The importance of foreign trade in the country is measured by the ratio of its foreign trade to the gross domestic product, which is illustrated by the following relationship:

The following formula depicts the share of the foreign trade in each country:

$$\textit{Foreign Trade Contribution} = \frac{\textit{imports+exports}}{\textit{GDP}} \times 100 \quad (1)$$

The higher this percentage, the higher importance of foreign trade in the country, and vice versa. The importance of foreign trade at the global level has increased, as the growth rate of foreign trade at the international level during the seventies and eighties of the twentieth century was estimated at an average of 6.5% annually, far exceeding the growth rate of real global output. The absolute volume of foreign trade increases at the global level only, but its relative importance in global economic activity has also increased, and the importance of foreign trade varies from one country to another (Younis et al., 2015).

3.3.4 Types of Foreign Trade

1. Export trade: Exports are one concept, no matter how many ideas or differences of opinion there are, as they are defined as the activity that leads to the withdrawal of goods and services from the producer and consumer or from an exporting country to an importing country, it is divided into:
 - ❖ Visible exports: These are tangible goods.
 - ❖ Invisible exports: These are services.

2. Import trade: It refers to purchase of goods from a foreign country. Countries import goods which are not produced by them either because of cost disadvantage or because of physical difficulties or even those goods which are not produced in sufficient quantities to meet their requirements, and they are also divided into:
 - ❖ Visible imports: They are tangible imports such as goods.
 - ❖ Invisible imports: These are services.

3. Entrepot Trade: When goods are imported from one country and are exported to another country, it is called entrepot trade. Here, the goods are imported not for consumption or sale in the country but for re- exporting to a third country, so importing of foreign goods for export purposes is known as entrepot trade (Abu Sharar, 2015).

3.3.5 Factors Affecting Foreign Trade

There are several factors affecting foreign trade, which are as follows:

1. Relative superiority in some branches of production and their high production efficiency: Whenever the state enjoys relative superiority and high efficiency for some industries, this would support the tendency of these countries to specialize, and this leads to their expansion in this industry and the increase of its exports.

2. Diversity of demand: The more diversified the consumer demand, the more the country's foreign trade increases.

3. The degree of intensification of foreign countries' demand for the country's products, as the increase in foreign countries' demand for the country's products affects the volume of foreign trade. Transportation costs and ease of transportation: A country that enjoys good and cheap transportation between it and other parts of the world increases its trade volume with respect to other countries that are less than it in this regard.
4. The absence of artificial obstacles between countries: Customs duties, quotas, and other regulations followed by different countries to limit imports impede foreign trade and reduce its quantity.
5. Internal and external political stability as an important factor in increasing the volume of exports between countries (Adel, 1993).

3.3.6 Terms of Trade

Meaning of terms of trade (TOT) In economics, terms of trade (TOT) refer to the relationship between how much money a country pays for its imports and how much it earns from exports. It is expressed as a ratio of import prices to export prices. The concept of terms of trade is important in economics as it throws light on the extent to which a nation can fund its imports based on the returns of its exports. The formula to calculate an economy's TOT is (Mora, 2006)

$$\text{Terms of Trade (TOT)} = \frac{\text{Index of Export price}}{\text{Index of Import price}} \times 100 \quad (2)$$

Terms of Trade (TOT) can be illustrated with a numerical example as below:

- ❖ Let prices be constant at \$1 per unit across both countries and for both products.
- ❖ Let Country-A can export 700 tons of rice to Country-B at \$700 as export price.
- ❖ Let Country-A needs to import 200 tons of wheat from Country-B at \$200 as import price, so it is:

$$\text{Terms of Trade (TOT)} = \frac{700}{200} \times 100 = 3.5 \times 100 = 350 \quad (3)$$

Hence, the value for Country A's terms of trade is 350%, which indicates a strong position in the international trade.

The following are the various concepts of Terms of Trade:

- **Net Barter Terms of Trade:** net barter terms of trade also called commodity terms of trade is defined as a ratio of export prices to import prices, in symbolic terms:
 - ❖ $T_n = P_x/P_m$ where:
 - ❖ T_n stands for net barter terms of trade.
 - ❖ P_x stands for price of exports (x).
 - ❖ P_m stands for price of imports (m).

- **Gross Barter Terms of Trade:** gross barter terms of trade is the ratio of physical quantity of import to physical quantity of export, in symbolic terms:
 - ❖ $T_g = Q_m/Q_x$ where:
 - ❖ T_g stands for gross barter terms of trade.
 - ❖ Q_m stands for quantity of imports.
 - ❖ Q_x stands for quantity of exports.

- **Income Terms of Trade:** income terms of trade is defined as commodity terms of trade multiplied by quantity of export, symbolically, income terms of trade can be written as:
 - ❖ $T_y = (P_x/P_m) Q_x$ where:
 - ❖ T_y stands for income terms of trade.
 - ❖ P_x stands for price of exports.
 - ❖ Q_x stands for volume of exports.
 - ❖ P_m stands for price of imports.

- **Single Factor Terms of Trade:** single factor terms of trade is calculated by multiplying net barter terms of trade with productivity index of domestic export sector, symbolically, single factor terms of trade can be written as:
 - ❖ $T_s = (P_x/P_m) Z_x$ where:
 - ❖ T_s stands for income terms of trade.
 - ❖ P_x stands for price of exports.

- ❖ P_m stands for price of imports.
- ❖ Z_x stands for productivity index of domestic export sector.

• **Double Factorial Terms of Trade:** double factorial terms of trade are calculated by multiplying net barter terms of trade with the ratio of factor productivity of domestic industry and foreign export industry, symbolically, double factorial terms of trade can be written as:

- ❖ $T_d = T_c (Z_x/Z_m)$ where:
- ❖ T_d stands for double factorial terms of trade.
- ❖ T_c stands for net barter terms of trade.
- ❖ Z_x stands for productivity index in the domestic export sector,
- ❖ Z_m stands for import productivity index.

• **Real Cost Terms of Trade:** real cost terms of trade is measured by multiplying the single factor term of trade by the index of the amount of disutility (pain, sacrifice) symbolically, real cost terms of trade can be written as:

- ❖ $T_r = T_s \cdot R_x$ where:
- ❖ T_r stands for real cost terms of trade.
- ❖ T_s stands for single factor terms of trade.
- ❖ R_x stands for disutility real cost in producing export goods.

• **Utility Terms of Trade:** The utility terms of trade are calculated by multiplying the real cost terms of trade index with an index of the relative average utility of imports and of domestic commodities foregone, symbolically, utility terms of trade can be written as:

- ❖ $T_u = T_r \cdot U$ where:
- ❖ T_u stands for Utility Terms of Trade.
- ❖ T_r stands for Real cost terms of trade index.
- ❖ U stands for Index of relative utility of imports and domestically foregone Commodities.

3.3.7 Foreign Trade Protectionism Tools

Trade protectionism is a measured and purposeful policy by a nation to control imports while promoting exports. It is done to promote the economy of the nation above all other economies, for example, if a U.S. manufacturer produced goods domestically that were more expensive than imports, the government might enact tariffs, or import taxes, that boost the price of the foreign-made products. The effect would be making the U.S.-made goods more competitive on price. The tools of protection may be categorized as either tariff or non-tariff barriers (Sherlock et al., 2008).

- **Tariffs**

A tariff is an import duty or "tax" imposed on products or services as they enter a nation. Tariffs, which can be set or percentage taxes, have the dual objectives of bringing in money for the government and making it more challenging for businesses from other nations to operate in the protected market. The restoration of tariffs at rates occasionally as high as 33 and 50% in the early 20th century significantly countered the 19th century's efforts to promote free commerce. Eight rounds of multilateral trade negotiations conducted by the General Agreement on Tariffs and Trade (GATT), the third institution created after the Bretton Woods Agreement, and its successor, the World Trade Organization, since 1945 have resulted in a major reduction in tariffs (Sherlock et al., 2008).

- **Non-tariff barriers**

Although progress was achieved in removing tariff barriers under the GATT in the years leading up to 1995, when the WTO was founded, the use of non-tariff protection rose throughout this time, mostly as a replacement for the tariffs that were prohibited. The list of non-tariff actions used by both developed and developing nations is provided below.

1. **Quotas:** a restriction on the amount of a product that can be imported in terms of value or volume. Chinese tariffs on imported cars or Examples from the 1980s French quotas on import Japanese VHS equipment are well-known.

2. **Voluntary export restraints:** Agreed arrangements whereby an exporter agrees not to export more than a specific amount of a good to the importing country (usually to pre-empt the imposition of more stringent measures). Such agreements are common for automobiles and electronics but are also applied to steel and chemicals.
3. **Domestic subsidies:** giving domestic producers financial assistance or special tax treatment to give them a strategic advantage over outside suppliers. The most prominent instances are in agriculture, where both the EU and the US regularly use subsidies to aid domestic farmers.
4. **Import deposits:** the policy of asking the importer to deposit money with the government for a specific amount of time (often a percentage of the value of the goods). The impact on cash flow is meant to discourage imports.
5. **Safety and health standards / technical specifications:** This more subtle form of deterrent requires importers to meet stringent standards or to complete complicated and lengthy formalities, all remember during the 1990s the French bans on lamb and then beef imported from the UK.

3.4 Trade Agreements and Organizations

3.4.1 World Trade Organization (WTO)

The World Trade Organization (WTO), which has been around since 1995 and is tasked with the responsibility of regulating international commerce, is an international organization. It ultimately succeeded the General Agreement on Tariffs and Trade (GATT), which had been negotiated in 1947 in the aftermath of World War II. The majority of the countries that participate in international commerce have put their signatures on the accords that provide the groundwork for the World Trade Organization. The fundamental objective of the organization is to provide assistance to exporters, importers, and manufacturers of products and services in the areas of managing and safeguarding their businesses. From the 30th of June in 1995, Egypt

has been a member of the World Trade Organization (WTO), and since the 9th of May in 1970, Egypt has been a member of the GATT ⁴.

3.4.2 Euro-Mediterranean Partnership (EUROMED)

On July 13, 2008, in Paris, at the initiative of France, which is now holding the EU Presidency, the first meeting of the reinvigorated Euro-Mediterranean Partnership took place. This conference was officially termed the "Barcelona Process: Union for the Mediterranean," and it was given this name. This meeting had a total of 270 participants, which included representatives from the 27 member states of the European Union, five non-EU European states with significant ties to the region (Albania, Bosnia-Herzegovina, Monaco, Montenegro, and Croatia), and 11 countries in the southern Mediterranean (Algeria, Egypt, Israel, Lebanon, Morocco, Syria, Tunisia, Turkey, PNA, Jordan, and Mauritania)⁵. The Barcelona process, which is a framework for cooperation between Europe and the Mediterranean, is seen as a natural extension of the Union, and this perception is shared by many. The renewal of this strategic alliance between the European Union and its southern neighbours will result in an increase in the political stakes involved in the partnership (Abbott, 2018).

In addition to the current 28 member states that make up the European Union (EU), the Common Agricultural Policy (CAP) has recently welcomed 16 partners from the larger Middle Eastern and Southern Mediterranean areas. The basis of the partnership was constructed on three pillars that continue to be significant in contemporary relationships:

- 1- Political and security discussions with the goal of establishing a safe haven for all parties, based on respect for the rule of law, democracy, and human rights in accordance with international standards.
- 2- Creating conditions that are favourable for shared economic possibilities through cooperative work on economic and financial issues, including the consistent building of a free trade zone, will help to foster socioeconomic progress that is both sustainable

⁴ WTO | What is the WTO? (n.d). World Trade Organization-Global trade. Available at https://www.wto.org/english/thewto_e/whatis_e/whatis_e.htm (Accessed: 10 February 2023).

⁵ Euro-Mediterranean transport partnership (EUROMED). (n.d.). Mobility and Transport. Available at: https://transport.ec.europa.eu/transport-themes/international-relations/european-neighbourhood-policy/euro-mediterranean-transport-partnership-euromed_en (Accessed: 10 February 2023).

and fair. This will allow for favourable circumstances to be created for shared economic possibilities.

- 3- fostering partnerships in the social, cultural, and humanitarian spheres with the goal of fostering better communication and understanding between different cultures, religions, and peoples
- 4- Encouraging more interaction between the public and civil society, particularly amongst women and young people.

At the end of the Cold War, Egypt's position in the Euro-Mediterranean region did not change much. This plan was devised in light of Europe's increasing concentration on its interests in eastern Europe and the Maghreb. The goal was to reduce the likelihood that the area would fall farther and further behind. Examples of Egypt's Euro-Med strategy include the country's active promotion of the establishment of a Mediterranean Forum and its discussions with the European Union to develop a Euro-Egyptian Partnership accord. Both of these initiatives are examples of Egypt's aggressive promotion of the establishment of a Mediterranean Forum. Despite the fact that the conversations surrounding the Euro-Egyptian Partnership have been more challenging over the last few years, the Mediterranean Forum has shown to be an effective instrument in assuring Egypt's ongoing participation in problems pertaining to the Mediterranean. Egypt contends that the most significant barrier to development is the European Union's insistence on maintaining its position that agriculture would not be included in the proposed Euro-Mediterranean free trade area (Selim, 2007).

3.4.3 International Monetary Fund (IMF)

The founding membership of the International Monetary Fund (IMF) in 1944 had 44 nations; now, the IMF has 190 signatory states. Its goal is to reject measures that would undermine global wealth and raise poverty, while encouraging those that would foster monetary cooperation, financial stability, international commerce, high employment, and sustained economic development. Nowadays, 190 nations are members of this organization. The International Monetary Fund (IMF) is an independent organization that operates on its own charter, governance structure, and budget while being a specialized agency of the UN and a member of the United Nations Economic and Social Council. The International Monetary Fund also decides on its own policies (Samans et al., 2007).

The International Monetary Fund's (IMF) primary responsibility is to safeguard the international monetary and financial system, the system of exchange rates, and the international settlements that allow people in different nations to trade with one another. This goal necessitates the avoidance of monetary and financial meltdowns, as well as significant shifts in economic activity, high inflation, and excessive market and exchange rate volatility. A secondary objective is to prevent any noticeable shifts in economic activity. Previous financial crises have shown the interconnected nature of the world's economies and the potential for troubles in one area to ripple across borders and affect neighbour countries. Financial and economic security must be treated as an international and national priority (Samans et al., 2007).

The International Monetary Fund (IMF) helps nations adopt and adhere to economically sound policies via its monitoring, technical support, and financing activities. In 2012, the Fund's mandate expanded to include any issues in the macroeconomy and the financial sector that threaten global stability (Boughton, 2009).

3.5 Egyptian Cotton

Because of its suppleness, strength, and long-lasting qualities, Egyptian cotton is often regarded as the best cotton in the world and has played a significant role in Egyptian history and culture for thousands of years. There is evidence that production of cotton dates all the way back to the time of the ancient Egyptians. It is considered the best cotton in the world because of its softness, strength, and superior features which come from the unique mix between Delta soil of Nile River and salty Mediterranean water and the hot climate there.

A perfect mix, give it its long staple (fibre) which makes it stronger and softer at the same time, it uses in the product high-quality textile, unlike others of cotton which scattered around the world that grow cotton, The silky soft cotton once considered as the **White Gold** and known as the **Fourth Pyramid** of Egypt. It has a big global demand since it was first developed in the early 1818, first registered transaction happened on 1885, which registered in **Alexandria Stock Exchange** which established in 1833 (Barakat, 2020).

- ❖ Cotton was first cultivated in Egypt in ancient times.

Cotton was first cultivated in Egypt during the reign of the Pharaohs, when the country was still known as Ancient Egypt. Cotton was farmed along the riverbanks of the Nile, which provided an excellent environment for its cultivation due to the abundant alluvial soil and reliable water supply. Cotton was an essential component of the ancient Egyptian economy and culture since it was utilized in the production of a wide variety of textiles, including clothing, bedding, and other textiles (Yousef, 2000).

Through commerce, cotton quickly became popular in other regions of the globe, and by the 15th century, the crop was being cultivated in a significant number of locations throughout Europe, Asia, and the Americas. Despite this, Egyptian cotton continued to command a premium price owing to the higher quality and distinctive qualities it had.

- ❖ The increase in global cotton output that occurred in the 19th century.

The amount of cotton that was grown in Egypt saw a substantial increase throughout the 19th century. This was in part due to the introduction of new types of cotton that were more suited to the weather and soil conditions of the area where they were grown. The "long-staple" kind of cotton was one of the most significant of these variations because it produced a fabric that was softer and smoother than other types of cotton and had longer fibers than other types of cotton.

Long-staple cotton was the first variety of cotton to be cultivated in Egypt, and it rapidly became the most common type of cotton farmed there. This practice started in the 1820s. At the turn of the century, Egyptian cotton had earned a reputation as the best in the world. As a result, textile producers in both Europe and the United States were eager to acquire it (Sheikh, 2022).

❖ The significance of Egypt's cotton industry to the country's economy and society

Throughout the 19th and early 20th centuries, Egypt's economy and culture were heavily reliant on the cotton business. This was especially true of the cotton industry. Cotton was one of the most important exports for the nation, and it was also a major source of income for thousands of people working in the agricultural and textile industries.

Significant societal changes occurred in Egypt as a direct result of the cotton boom. The wealthy landowners who owned enormous cotton plantations began to dominate society, and the rural poor who were forced to labour on these plantations were often mistreated and forced to endure difficult working conditions. This resulted in popular discontent and was a contributing factor in the formation of nationalist groups that aimed to topple the governing class (Abdel, 2019).

❖ Fall and the obstacles in Egyptian cotton industry.

Throughout the 20th century, the Egyptian cotton industry was confronted with a variety of obstacles, such as rivalry from other cotton-producing nations and political unrest in Egypt itself. In the 1950s and 1960s, the government took control of private property and the cotton business, which resulted in a drop in both output and quality (Goldschmidt, 2008).

The Egyptian government, on the other hand, initiated a program in the 1990s with the goal of reviving the cotton sector and restoring the quality of Egyptian cotton. This required the implementation of innovative production methods, the enhancement of existing infrastructure, and the provision of assistance to farmers. Nowadays, Egyptian cotton is once again recognized to be one of the best cottons in the world. Textile makers and consumers place a high value on Egyptian cotton because of its superior quality. Egyptian cotton is often utilized in the manufacturing of high-end items like as beds, towels, and clothes because of its renowned softness, strength, and durability (Richards, 1978).

In conclusion, Egyptian cotton has a vast and rich history that spans thousands of years. Its history may be traced back to ancient Egypt. Egyptian cotton has been an essential part of the country's culture and economy for many centuries, beginning with its early cultivation in ancient Egypt and continuing into its present reputation as a luxury commodity on markets across the world. Despite the fact that the cotton business has had to overcome obstacles over the course of the ages, the quality of Egyptian cotton has persisted, and it is still highly regarded by textile makers and customers all over the globe (Barakat, 2020).

4 Practical Part

4.1 Egypt's Geopolitical Location and Role in International Trade

Egypt has been a center for trade and business in the Middle East due to its strategic geographical location at the crossroads between East and West, which provides international companies with a gateway for their commercial activities to the Middle East and Africa.

1. The geo-strategic location of this global point enabled Egypt to play an important trading role throughout the ages, middle of the silk road.
2. Junction / connection point (Africa, Asia, the European coast).
3. Overlook the Red Sea and Mediterranean.
4. Important of the Sues channel between east and west.
5. Environmental diversity, Climate suitable for many types of crops.

Figure 1, Egypt's location



Source: Maps of World, 2022.

4.2 Egyptian Economy

4.2.1 Overview

Egypt enjoys many economic advantages, including:

Diversified economy: The Egyptian economy relies on a wide range of sectors, including agriculture, manufacturing, extractive industries, wholesale, and retail trade. This diversity is considered the main strength of any economy as it enhances its ability to absorb internal and external shocks and offers a wide range of different investment opportunities and potential for growth.

Infrastructure: Egypt has a vast and growing infrastructure network that allows for seamless movement of products and services both domestically and abroad with the rest of the world. Infrastructure capabilities include:

- (15) commercial ports, (51) specialized ports and (6) dry ports.
- Number (20) airports
- Suez Canal
- A local road network with a length of 108,784 km, with a plan to add 3,200 km in the medium term (Sheikh, 2022).

large consumer base: Egypt is the most populous country in the Middle East and the third most populous in Africa. Over the past decade, Egypt's population has grown at an average annual rate of (2.2%) with a unique age structure dominated by young people. This has helped the country's rise as a strategic consumer market and is evidenced by the sharp expansion of retail sales over the past decade. This strong and growing consumer base acts as a buffer for economic activity in times of crisis, and it is worth noting that the consumption of the household sector constitutes more than 80% of the country's GDP (Sheikh, 2022).

Labour force: The labour force in Egypt is the largest in the region and includes about (27.7) million workers. Individuals under 30 years of age represent approximately (60%) of the total population.

Economic policies: Egypt has adopted a comprehensive plan towards trade liberalization since 1991 and joined the World Trade Organization in 1995. It has been issuing or amending various legislative laws since then to improve the institutional and legislative framework for trade barriers adopted to trade (including technical regulations, standards, and evaluation procedures). Conformity of Traded Goods and Services Egypt also participated in regional and

international agreements based on common and mutual interests, and also benefited from preferential access to different markets.⁶

Investment attraction policies: The Egyptian government has established many free, industrial, and private investment zones. It has also set laws to regulate the work of these zones through the internal investment system of the Investment Incentives and Guarantees Law No. (8) of 1997 and the Companies Law No. (159) of 1981.

Table 1, GDP (nominal) and GDP growth rate

Year	GDP (Billion, USD)	GDP growth rate
2011	293.53	1.76 %
2012	300.07	2.23 %
2013	306.63	2.19 %
2014	315.57	2.92 %
2015	329.36	4.37 %
2016	343.68	4.35 %
2017	358.05	4.18 %
2018	377.08	5.31 %
2019	398.03	5.56 %
2020	412.24	3.57 %
Mean	343.42	3.64 %

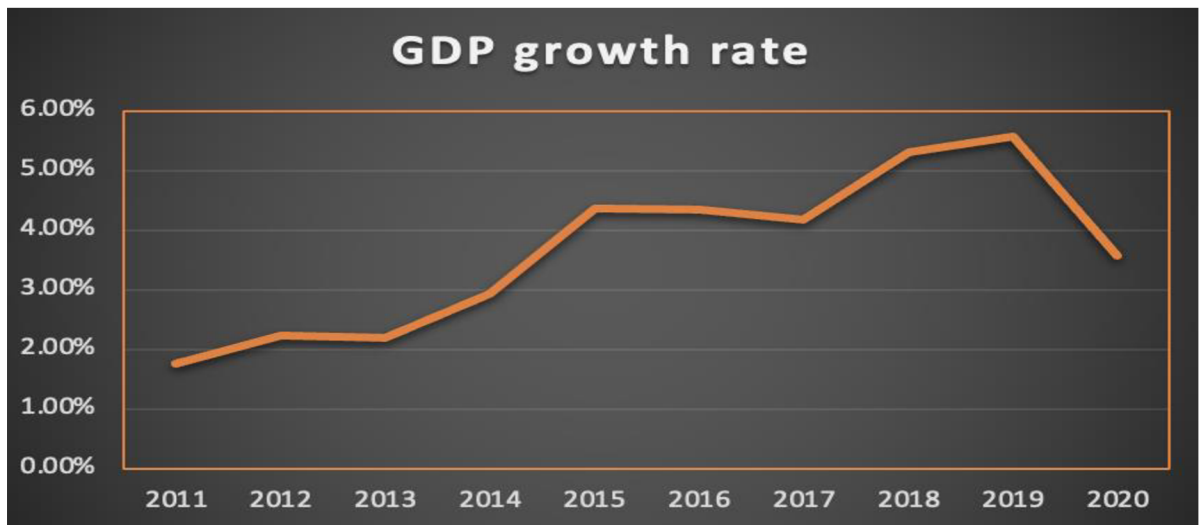
Source: The World Bank, 2022.

It is clear to us from the table that Egypt's GDP has achieved an average growth rate of about 3.64% for the average period (2011 - 2020) and the growth rates in the study period witnessed up and down fluctuations. The GDP during the studied period increased from about \$293 billion in 2011 to \$412 billion in 2020.

⁶ GAFI- Home (n.d). The General Authority for Investment and Free Zones available at: <https://www.gafi.gov.eg/English/Pages/default.aspx> (Accessed: 12 February 2023).

the following figure shows the growth rates of GDP in the studied period:

Figure 2, GDP growth rate



Source: own processing based on the World Bank, 2022.

It is clear from Figure 2 that the growth rates went through a stable state between the years 2011-2014 at 2% as a result of the political instability in that period, then it increases again between the years 2015-2019 until it reached 5.56%, and then decreased again in 2020.

The following is a presentation of some economic indicators during the studied period:

Table 2, Macroeconomic indices

Year	National income	Commercial Dependency rate%	Commercial Coverage rate%	The Average Slope of Foreign Trade
2011	818.754	25.46	96.09	49.93
2012	958.597	26.21	77.01	46.39
2013	992.022	24.65	79.80	44.31
2014	985.262	25.37	73.90	44.11
2015	1.064.235	25.62	63.57	41.90
2016	1.057.086	23.86	84.74	44.08
2017	1.062.265	24.73	76.34	43.62
2018	1.145.442	25.03	68.65	42.22
2019	1.230.729	23.43	74.59	40.91
2020	1.290.025	18.96	81.47	34.40
Mean		24.33	77.62	43.19

Source: The World Bank, 2022.

1. Dependency rate to total Egyptian foreign trade:

It is the country's dependence rate on foreign trade and is equal to the **division of the value of total imports by the value of the total national income**. The data of Table 2 indicate that the rate of dependency on foreign trade in Egypt during the period (2011-2020) ranged between a minimum of about 19 in 2020, and a maximum of about 26% in 2012, and the average commercial dependency rate was estimated at about 24%, and this It means that it depends on foreign imports at an estimated rate of 24% of the value of the national income.

2. The rate of commercial coverage in Egypt:

The rate of coverage of total exports of total imports in Egypt, indicates the extent to which the state controls its imports and the purchasing power of its total exports, and it is obtained by outside **the value of total exports over the value of total imports**. With regard to the commercial coverage rate in Egypt during the period (2011-2020), the data of Table 2 indicated that this rate ranged between about 63% as a minimum in 2015, and about 96% as a maximum in 2011, and the average coverage rate was estimated at 77.62% During the studied period, this percentage reflects the decrease in the value of total exports in relation to the total Egyptian imports during the same period.

3. The average slope of Egyptian foreign trade:

Foreign trade plays an important role in financing national development programs, and the average tendency to trade represents the ratio represented by the value of foreign trade in relation to the value of the gross national product. The national income, as the proceeds of exports contribute to the increase in the national income and the increase in the import capacity of the country. With regard to the average tendency of Egyptian foreign trade during the period (2011-2020) ,the data of Table 2 indicated that this rate ranged between about 34% as a minimum in 2020, and about 50% as a maximum in 2011, and the average was estimated at about 43% during the studied period, and this reflects the importance of foreign trade from the value of the total national income, and therefore The impact of its importance on the development of national development plans (Al-Suwait, 2021).

4.2.2 Partners

Export: As seen in the Figure (3), in 2020 the main trading export partners are United Arab Emirates with 9.57 percent of total exports then United State with the 7.09 percent of total exports and through Saudi Arabia with 6.21 %, Turkey 5.85 %, Italy 5.82 %, India 4.38%, Germany and United Kingdom at same rate 3.93 % then Spain, Canada and Greece.

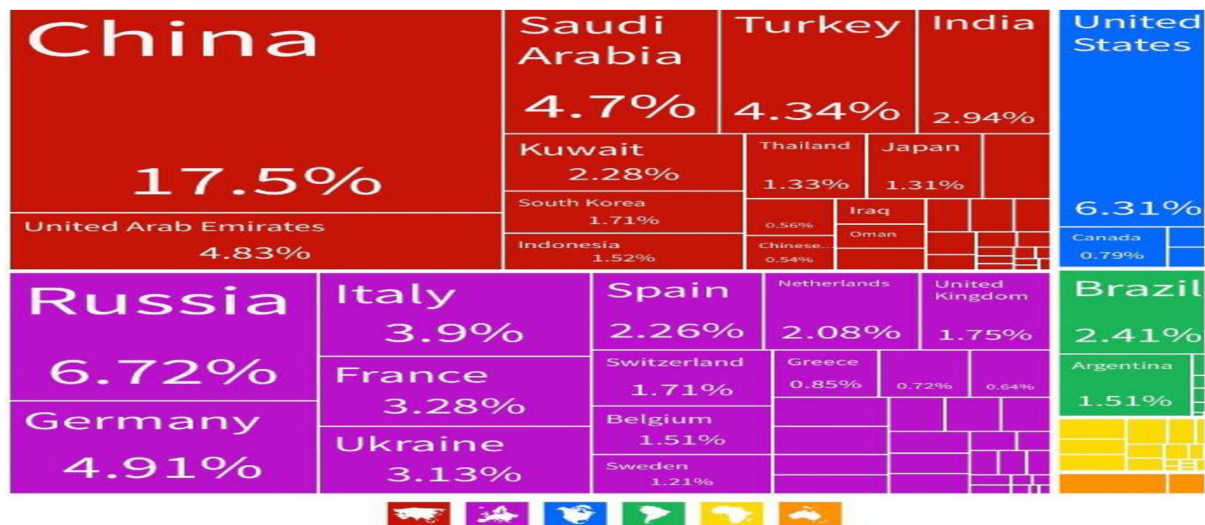
Figure 3, Egypt’s main export partners



Source: OEC, 2020.

Imports: Also, as in figure (4) Egypt imports 17.5 percent from the total imports from China, and 6.72% from Russia, United State 6.31 %, Germany 4.91 %, Saudi Arabia 4.7 % Turkey 4.34% Then Italy France and Ukraine.

Figure 4, Egypt’s main import partners



Source: OEC, 2020.

4.2.3 Exports

Table 3, Egypt's merchandise exports in current values (%)

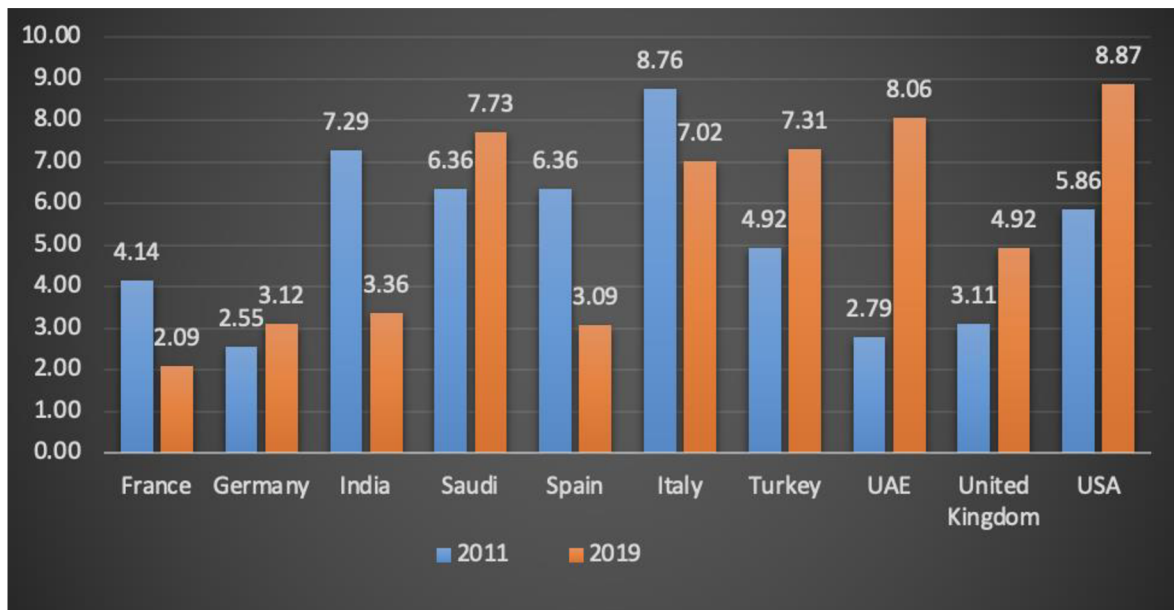
Year	France	Germany	India	Saudi	Spain	Italy	Turkey	UAE	United Kingdom	USA	Total
2011	4.14	2.55	7.29	6.36	6.36	8.76	4.92	2.79	3.11	5.86	50.01
2012	3.91	2.19	6.93	6.23	6.23	7.9	5.33	2.45	2.85	6.84	48.06
2013	3.16	2.22	7.38	7.02	7.02	9.25	6.09	2.65	3.38	4.19	47.56
2014	1.42	2.48	7.15	7.36	7.36	9.14	5.38	3.68	3.57	4.19	46.71
2015	2.34	2.54	4.09	9.05	9.05	7.51	5.77	5.13	4.37	5.12	74.99
2016	1.95	3.9	3.7	5.4	5.4	7.18	3.93	14.9	6.46	6.95	57.75
2017	2.37	4.07	3.83	4.12	4.12	10.23	4.45	11.14	5.95	8.35	57.46
2018	2.37	3.82	4.83	3.57	3.11	11.57	3.76	8.22	6.4	8.57	56.22
2019	2.09	3.12	3.36	7.73	3.09	7.02	7.31	8.06	4.92	8.87	55.57
2020	2.48	3.08	3.17	7.36	4.13	5.38	5.92	11.04	3.96	5.47	51.99
Mean	2.623	2.997	5.173	6.42	5.587	8.394	5.286	7.006	4.497	6.441	54.63

Source: own processing based on Comtrade, 2022.

As for the development that occurred in the relative share of the main markets for Egyptian merchandise exports during the research period. From a review of the data on the distribution of Egyptian merchandise exports to global markets (Table 3) it was found that the main trading partners of Egypt during the period, respectively:

Italy, the United Arab Emirates, the United States, Saudi Arabia, Spain, India, Turkey, the United Kingdom, France and Germany, the average total contribution of these countries to receiving Egyptian merchandise exports during the mentioned period amounted to about half of Egyptian exports (54.63 %).

Figure 5, comparison of Egyptian merchandise exports - 2011 and 2019

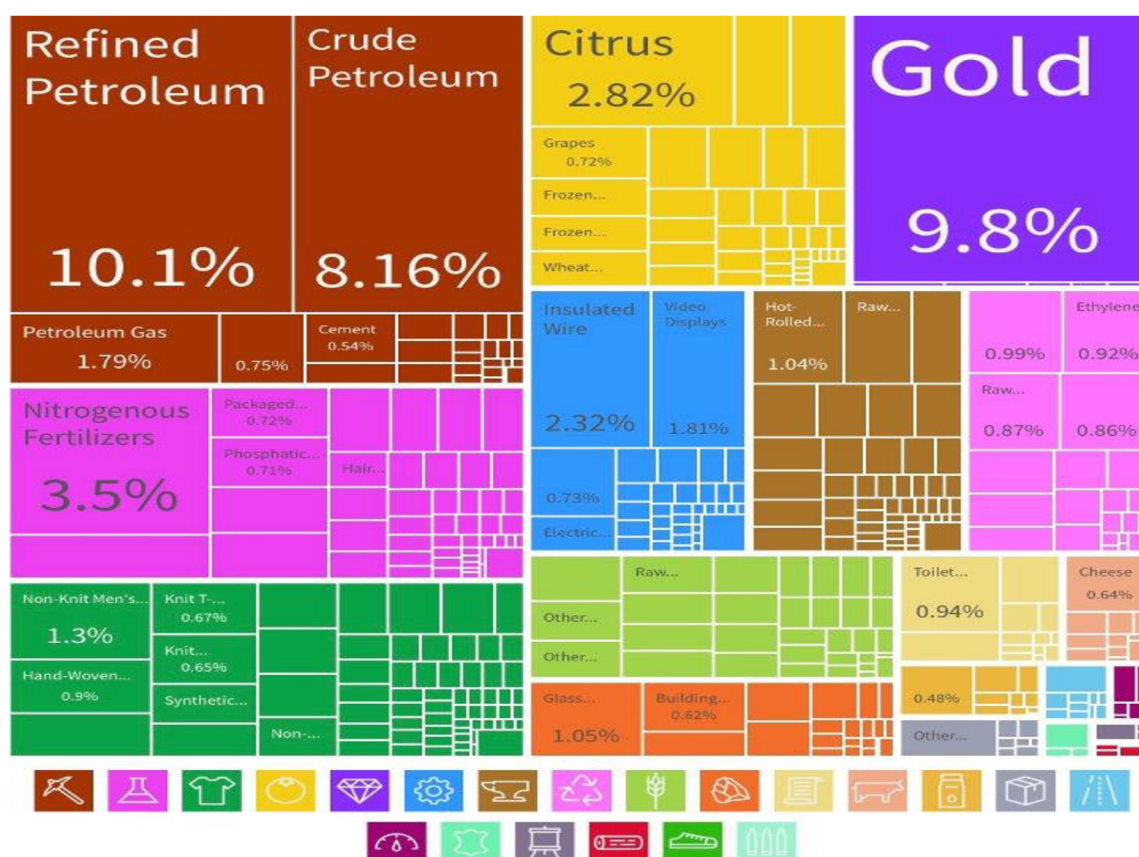


Source: own processing based on Comtrade.

As for the development of the relative share of each partner in receiving Egyptian merchandise exports during the period, it was noted, as shown in Figure 5 from the comparison between the beginning and end of the period, that the relative contribution of France, India, Spain and Italy decreased, and the relative contribution Saudi Arabia ,Turkey, the United Arab Emirates, the United Kingdom and the United States increased , but the contribution of Germany remain almost constant .

As for the most important declines as shown on table 3 , the contribution of India was reduced from about 7.3% of the total Egyptian merchandise exports in 2011 to about 3.17% in 2020, followed by a decrease in the contribution of France from about 4.14% to about 2.4%, while the most important **rises** were the increase in the contribution of the United Arab Emirates which increased from about 2.79% in 2011 to about 11.04% in 2020, which is clearly due to the boom that occurred in Egypt’s merchandise exports to the United Arab Emirates from 2015 until the end of the period, followed by an increase in the contribution of the United States from about 5.9% to 8.9% in 2019 , and the relative contribution of Turkey increased from 4.9% to approximately 7.3% in 2019 . It is noted that the contribution of the Arab partner (Saudi Arabia and the United Arab Emirates) increased significantly from 9.15% in 2011 to 18.4 % in 2020.

Figure 6, structure of Egyptian exports in 2020



Source: OEC, 2020.

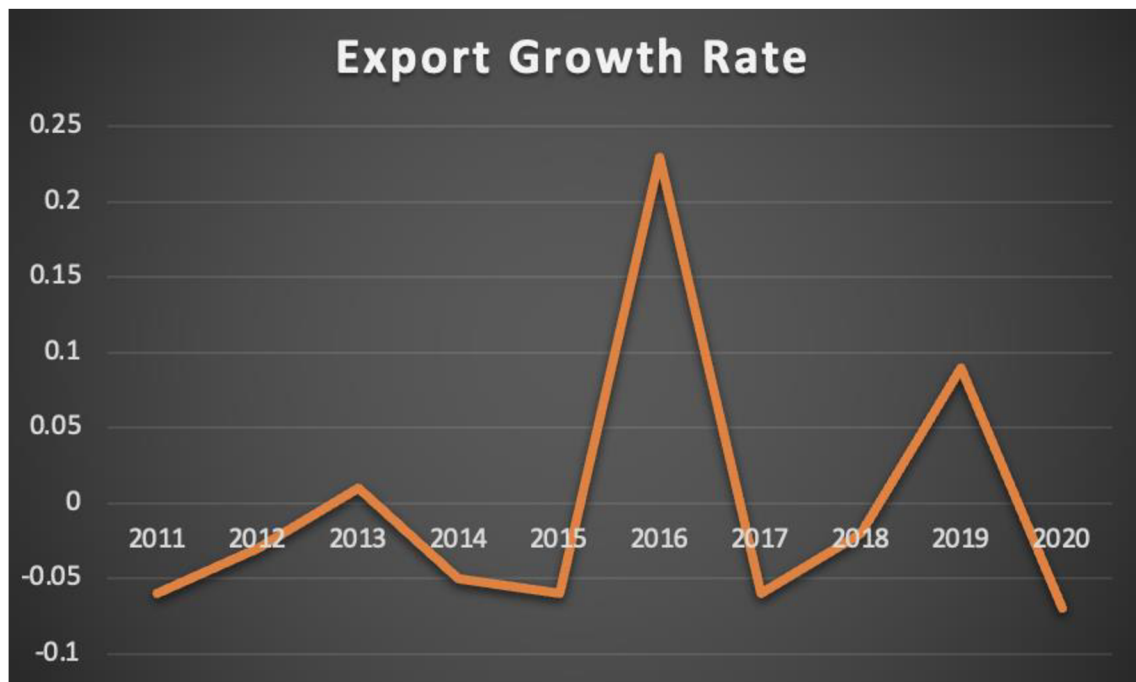
Table 4, growth of exports and growth of output in Egypt

Year	Exports (billion, USD)	Export Growth Rate
2011	200.339.9	- 0.06
2012	193.465.6	- 0.03
2013	195.093	0.01
2014	184.687.4	- 0.05
2015	173.312.7	- 0.06
2016	213.741.5	0.23
2017	200.575.8	- 0.06
2018	196.853	- 0.02
2019	215.120.7	0.09
2020	199.24	- 0.07

Source: own processing based on The World Bank, 2022.

It is clear from Figure 6 and Table 4 that Egyptian exports to the world had declined in constant values (considering 2011 as the base year) from \$200 billion in 2011 to \$199 billion in 2020. The quantitative development of exports can be divided During that period, Egyptian exports fell into two periods, a period of decline, which is the period from 2011 to 2015, when exports decreased from about 200 billion dollars in 2011 and reached about 173 billion dollars, while the second period is a recovery period, which starts from 2016 until now. The value of exports increased until it reached about 199 billion dollars in 2020.

Figure 7, the growth of Egyptian exports between 2011 and 2020

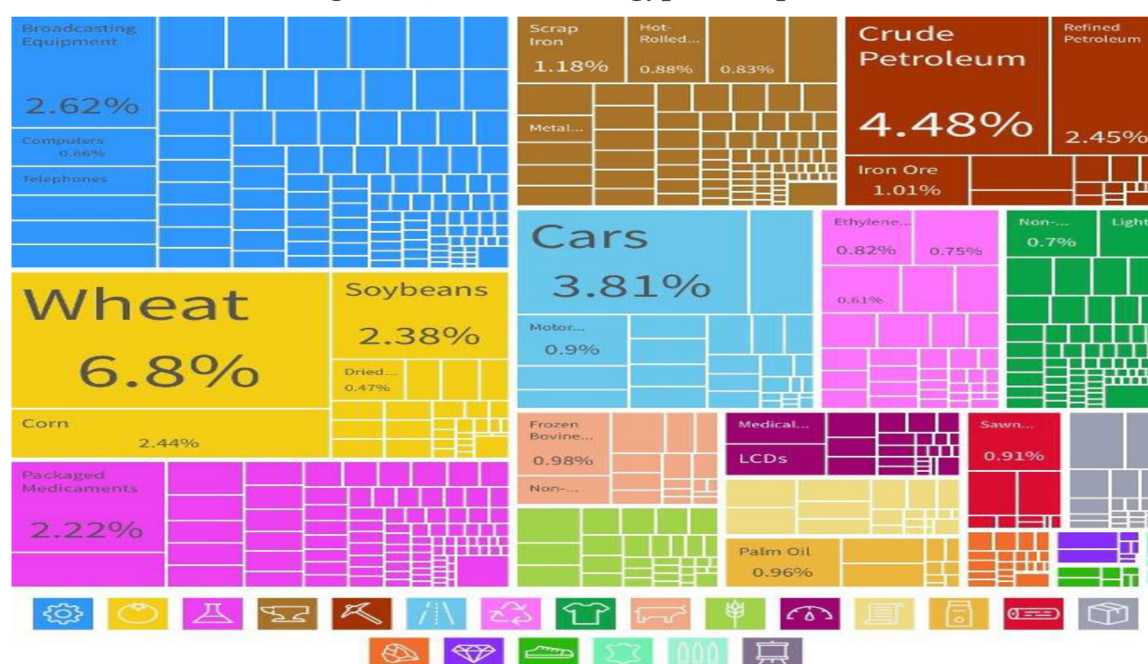


Source: own processing based the World Bank, 2022.

It is noted that the turning points during the research period are related to two important events, as the decline in exports starting in 2011 is linked to the January 25 revolution, which caused great disruption in economic activity in Egypt. It can also be noted that the recovery in exports was starting from 2016, the year in which the Egyptian government decided to liberalize the exchange rate of the national currency, which represents a real significant reduction in its value in front of foreign importers, which increases the competitive advantage of these exports and thus increases the demand for them. Starting in 2017, export growth rates returned to acceptable levels, driven by the exchange rate liberalization policy, which increased the competitiveness of Egyptian exports in international markets.

4.2.4 Imports

Figure 8 , structure of Egyptian imports in 2020



Source: OEC, 2020.

Table 5, growth rate of imports

Year	Import (billion, \$)	Import Growth Rate
2011	208.488.3	- 0.04
2012	251.218.2	0.20
2013	244.488.1	- 0.03
2014	249.922.5	0.02
2015	272.648.7	0.09
2016	252.222.6	- 0.07
2017	262.731.5	0.04
2018	286.735.1	0.09
2019	288.399.3	0.01
2020	244.560.2	- 0.15
Mean	256.141.4	

Source: own processing based on The World Bank, 2022.

The table data shows that the average value of Egyptian total imports amounted to about 256.14 billion dollars during the period (2011-2020), The value of total imports fluctuated between increase and decrease during the study period, with a maximum of 288.39 billion dollars in 2019, and a minimum of 208.48 billion dollars in 2011.

4.3 Self-Sufficiency Analysis

Then, proceeding to another analysis, the author implements a self-sufficiency analysis, which is based on three fundamental components – import, export and production. However, there is a problem in the data availability, so an important component – change in stocks is excluded. Yet, the author believes that even despite this minor contretemps, calculations will still reflect the general situation with self-sufficiency in cotton lint correctly. Below, the author presents the table used for the analysis of self-sufficiency in Egypt.

Table 6, dataset used for self-sufficiency analysis

Year	Import (quantity, tons)	Export (quantity, tons)	Production, (quantity, tons)	Self- Sufficiency
2011	43.649	61.217	181.000	111 %
2012	16.919	57.733	109.000	160 %
2013	70.866	42.027	94.000	77 %
2014	68.502	24.759	111.953	72 %
2015	84.970	37.093	54.833	53 %
2016	89.945	30.906	38.400	39 %
2017	121.842	27.880	78.678	46 %
2018	123.820	36.630	124.000	59 %
2019	239.482	70.781	73.000	30 %
2020	189.581	75.508	59.000	34 %

Source: own processing based on FAO, 2022

As it may become obvious by looking at figures reflecting the situation with self-sufficiency for cotton lint available in the last column, the situation with self-sufficiency in Egypt was much better in the beginning of the previous decade, whereas starting from 2013, the situation rapidly deteriorated and the country did not just stop being self-sufficient, as the coefficient had fallen under the boundary of 100%, but the country's situation with availability of cotton lint became horrible as the figures for the index are astonishingly low.

This, in fact, supports the author's view on the situation with cotton in Egypt, where the commodity has been one of the most popular and well-known ones in the Arab world prior to the middle of the previous decade. In fact, the perceived deterioration of the country's situation can surely enough be blamed for a serious diminishment of the production volume, which is directly responsible for the drop in the self-sufficiency and inability to satisfy the domestic

consumption of cotton, which is visible from those indices. Despite the fact that the author did not really incorporate any changes in stocks due to unavailability of data, the author still suggests that those numbers somewhat reflect the real situation with the self-sufficiency in cotton lint for the country as the indices that were found out are significantly far from being close to the level of 100%, which is considered to be an acceptable level for the index suggesting that a country does not really experience problems with satisfying domestic consumers with a given commodity.

All in all, after conducting self-sufficiency analysis, the author suggests that the situation is rather complicated and based on the dynamic, it is not likely to improve at all in the nearest future as the production volume is almost three times less than it had been prior to 2013-2014 in 2020. Without breaking this viscous circle of low production, there is no way that the country's domestic situation with cotton demand will improve.

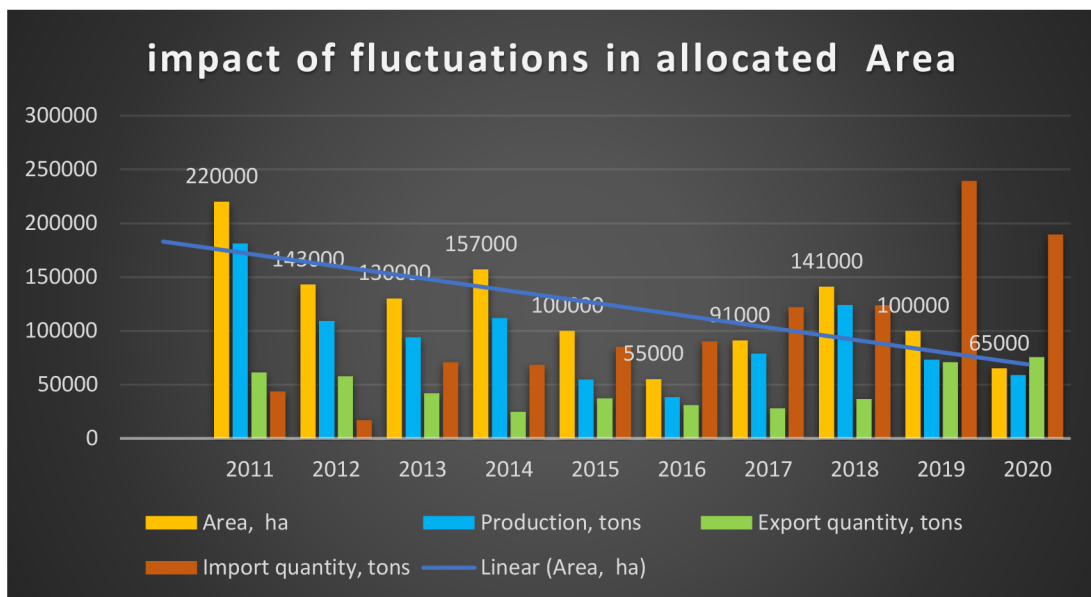
Nevertheless, the situation with self-sufficiency is crystal clear, so the author will proceed to another important domain – terms of trade, where she will focus on understanding if the country's position with terms of trade has deteriorated alongside the fall in the production and self-sufficiency. The next chapter of this bachelor thesis presents an overview, calculation and interpretation of the terms of trade index, which directly indicates a country's position in trading.

Table 7, impact of fluctuations in area allocated on other aspects

Year	Area, ha	Production, (quantity, tons)	Export (quantity, tons)	Import (quantity, tons)
2011	220.000	181.000	61.217	43.649
2012	143.000	109.000	57.733	16.919
2013	130.000	94.000	42.027	70.866
2014	157.000	111.953	24.759	68.502
2015	100.000	54.833	37.093	84.970
2016	55.000	38.400	30.906	89.945
2017	91.000	78.678	27.880	121.842
2018	141.000	124.000	36.630	123.820
2019	100.000	73.000	70.781	239.482
2020	65.000	59.000	75.508	189.581

Source: own processing based on FAO, 2022.

Figure 9, impact of fluctuations in area allocated



Source: own processing based the FAO, 2022.

It is clear from table 7 and Figure 9 that the decline in the area allocated for cotton production during the study period from 220.000 ha in 2011 to 65.000 in 2020 which has a negative impact on production which decline from 181.000 tons to 59.000 tons, fluctuation on export, but it led to increase the import from 43.649 tons to 189.581 tons.

4.4 Terms of Trade

For the extraction of data related to terms of trade, the author uses Comtrade dataset provided by the United Nations. Below, the author presents the original dataset based on which calculations will be performed.

Table 8, dataset for terms of trade

Year	Import (quantity, tons)	Import (volume, USD)	Export (quantity, tons)	Exports (volume, USD)
2011	43.649	146.760.000	61.217	264.332.000
2012	16.919	46.530.000	57.733	163.698.000
2013	70.866	169.917.000	42.027	135.669.000
2014	68.502	157.324.000	24.759	86.519.000
2015	84.970	143.588.000	37.093	84.282.000
2016	89.945	155.492.000	30.906	90.875.000
2017	121.842	236.963.000	27.880	92.258.000
2018	123.820	254.343.000	36.630	126.595.000
2019	239.482	236.285.000	70.781	168.057.000
2020	189.581	168.794.000	75.508	161.604.000

Source: Comtrade, 2022.

Then, after extracting valuable data reflecting the total quantity of cotton lint exported and the monetary volume of export/import, the author proceeds to the calculation of average prices per ton exported and imported, which is calculated as a simple division of the monetary volume by quantity.

The author eventually is able to get the following values for the average prices and also for the terms of trade index:

Table 9, terms of trade calculation

Year	Import price per ton	Export price per ton	Terms of Trade
2011	3362.27634	4317.9509	1.284234387
2012	2750.16254	2835.4321	1.031005271
2013	2397.72246	3228.1391	1.346335577
2014	2296.63367	3494.4465	1.521551522
2015	1689.86701	2272.1807	1.344591449
2016	1728.74534	2940.3676	1.700867959
2017	1944.8384	3309.1105	1.701483516
2018	2054.13503	3456.047	1.682482844
2019	986.650354	2374.3236	2.406448859
2020	890.352936	2140.2236	2.403792323

Source: own processing based on Comtrade.

Consequently, even before proceeding to the interpretation of the terms of trade indices, it becomes obvious that the price of exports significantly exceeds the price of imports for every single consecutive year in the row. However, the year 2012 seems to be the most troubled one also in terms of the production, as it was possible to notice in the dataset related to the self-sufficiency computation. Presumably, the domestic situation got so tense that farmers and firms selling cotton had to sell it for a really low price just in order to sustain themselves due to a really complicated domestic situation of the country.

Nevertheless, the situation with terms of trade has been developing in an opposite direction to self-sufficiency index, where those terms have gradually been increasing over the course of 10 years selected, when in 2020, the ratio of terms of trade reached 2.4 or 240%, which suggests that the price of exports exceeds the price of imports by two times. Despite the problem with production and self-sufficiency, Egyptian cotton still remained as a valuable asset and seemingly, foreign partners are still willing to pay a lot for this cotton, which additionally proves the fact that this asset is really valuable. All in all, Egypt has a strong position with its terms of trade for cotton, which is a good sign for the international trade of the country in cotton lint.

4.5 Linear Regression

The final part of the author's analysis is related to the linear regression estimation, where the author creates a regression that will describe the development of Egyptian cotton lint exports. Below, the author presents the dataset that is used for the estimation.

Table 10, dataset for the linear regression

Year	Export quantity, thousand tons	Exchange rate, domestic currency to USD	US cotton price per pound, USD	Area, hundred thousand ha	Yield, kg/ha
2001	81.609	3.973	0.43	3.15	1005
2002	161.12	4.499666667	0.41	3.02	960
2003	196.822	5.850875	0.6	20.18	919
2004	183.727	6.196241667	0.55	3.07	962
2005	96.749	5.778833333	0.5	2.75	743
2006	55.189	5.733166667	0.52	2.46	863
2007	128.335	5.635433333	0.57	2.4	880
2008	97.172	5.4325	0.63	1.33	791
2009	15.441	5.544553309	0.57	1.19	790
2010	54.638	5.621942918	0.93	1.57	763
2011	61.217	5.932827652	1.36	2.2	737
2012	57.733	6.056058333	0.79	1.43	746
2013	42.027	6.870325	0.83	1.3	729
2014	24.759	7.077608561	0.76	1.57	728
2015	37.093	7.691258333	0.63	1	697
2016	30.906	10.02540079	0.65	0.55	673
2017	27.88	17.78253352	0.73	0.91	718
2018	36.63	17.76729042	0.82	1.41	757
2019	70.781	16.77058184	0.67	1	664
2020	75.508	15.75917292	0.64	0.65	720
2021	81.084	15.64452728	0.93	0.85	717

Source: FAO, 2022.

Then, it is wise to mention the structure of the model that will be created by the author. Below, the author presents the very model that is estimated by her:

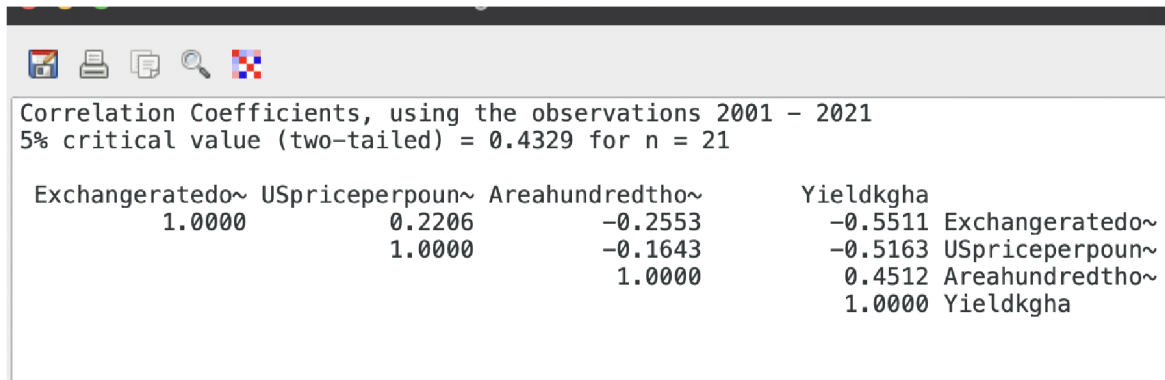
$$y_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_i$$

- Y is export quantity in thousand tons.
- X_1 is exchange rate in domestic currency per one USD. The author believes that the sign of this component will be positive, since when the currency is depreciating, the quantity exported goes up.
- X_2 is US cotton price per pound of cotton. The author believes that as the average price of competitive cotton (US one) increases, it increases the export of the country as the Egyptian cotton is cheaper and demand for it increases.
- X_3 is harvested cotton area in thousand ha. The author believes that the sign will be positive as area is one of the most important factors of production in agriculture.
- X_4 is yield in kilograms per ha. The author believes that this sign will also be positive for the very same reason as for the area variable.

In addition to the estimation of the model, the author also conducts economic, statistical and econometric verifications. The author assumes absence of heteroscedasticity, absence of autocorrelation, normality of residuals and absence of multicollinearity. The author uses Gretl application for the linear estimation based on annual time series data reflecting the development of export of cotton lint in thousand tons.

First, the author verifies if there is a presence of multicollinearity in the dataset using the correlation matrix from the figure below.

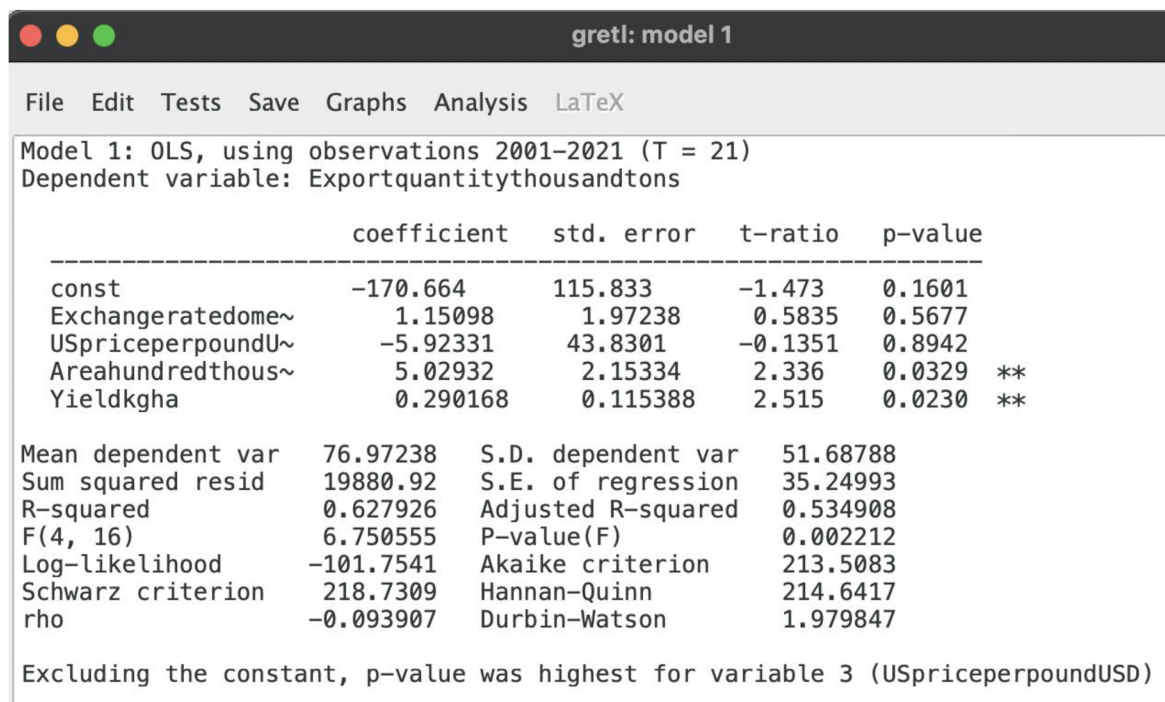
Figure 10, correlation matrix



Source: own processing.

No multicollinearity as the correlation between independent variables is low, which is also underpinned by the P value attributed to the situation, where it is equal to 0.43. At the significance level of 5%, the null hypothesis about absence of correlation is not rejected, so the author can proceed to the OLS estimation.

Figure 11, OLS output



Source: own processing.

Consequently, the author estimates the following model based on the dataset presented in the beginning of the chapter:

$$y_t = -170.664 + 1.15X_1 - 5.92X_2 + 5.02X_3 + 0.29X_4 + \varepsilon_t$$

Based on the model, following relationships are created:

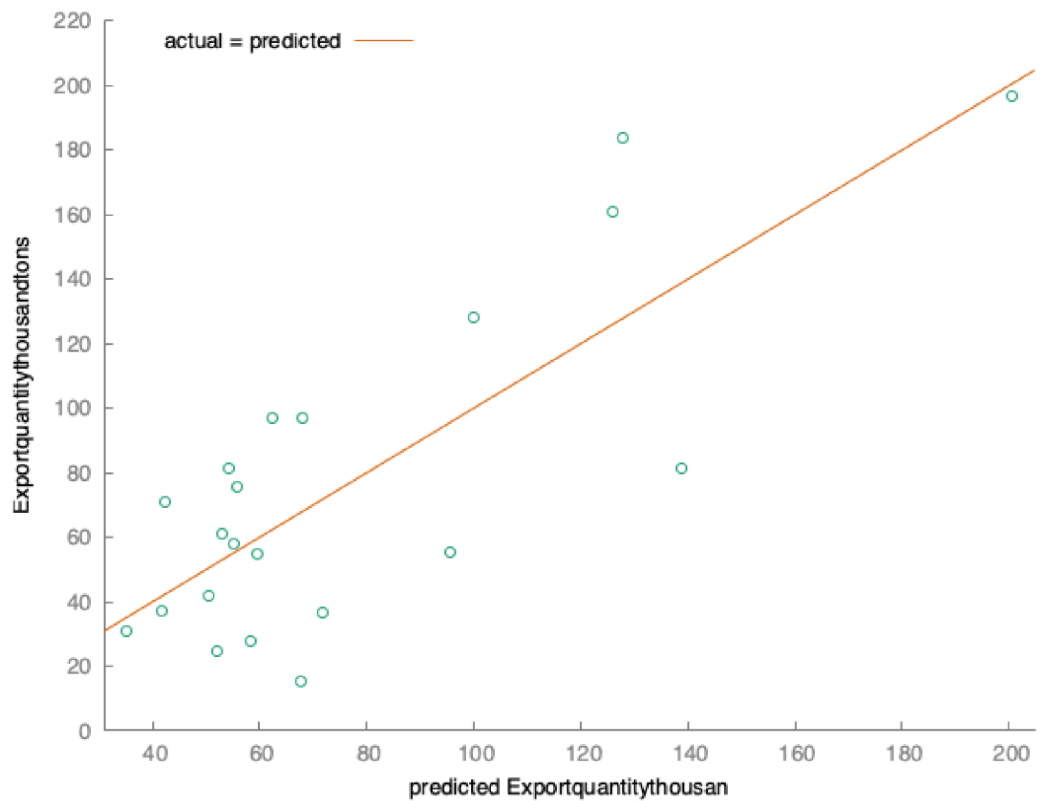
- When the exchange rate increases by 1 unit of domestic currency to USD, the quantity of exports increases by 1.15 thousand tons.
- When the average price of US cotton increases by 1 degree, the quantity of exports decreases by 5.92 thousand tons.
- When the area increases by 1 hundred thousand ha, the quantity of exports increases by 5.02 thousand tons.
- When the yield increases by 1 kilogram per ha, the quantity of exports increases by 0.29 thousand tons.

All signs fully coincide with what had been assumed by the author (economic verification has successfully been passed), so she proceeds to the F test for the model. Based on the F value and P value related to it, which is equal to 0.002, the author can conclude that the model is significant at the significance level of 5 percent due to the fact that the null hypothesis about insignificance of the model was rejected. Then, the author proceeds to t-tests related to each variable.

- Exchange rate is not significant at $P = 0.5$, where the null about insignificance was not rejected.
- Price of US cotton is not significant at $P = 0.47$, where the null about insignificance was not rejected.
- Area is significant at $P = 0.03$, where the null about insignificance was rejected and the alternative was assumed.
- Yield is significant at $P = 0.02$, where the null about insignificance was rejected and the alternative was assumed.

Therefore, just two variables are significance – yield and area. As for the quality of the model, it is equal to 0.62 (R square) or 0.53 for the adjusted R square, which is far from being perfect and it means that there are more factors that have not been included to this model that describe the development of cotton exports in Egypt. Below, the author presents the scatterplot where the comparison of fitted versus observed values is indicated.

Figure 12, scatterplot of fitted versus fitted



Source: own processing.

Finally, the author proceeds to the econometric verification:

Figure 13, econometric verification

```
White's test for heteroskedasticity -  
  Null hypothesis: heteroskedasticity not present  
  Test statistic: LM = 17.0423  
  with p-value = P(Chi-square(14) > 17.0423) = 0.253933  
  
LM test for autocorrelation up to order 1 -  
  Null hypothesis: no autocorrelation  
  Test statistic: LMF = 0.152907  
  with p-value = P(F(1, 15) > 0.152907) = 0.701271  
  
Test for normality of residual -  
  Null hypothesis: error is normally distributed  
  Test statistic: Chi-square(2) = 0.722889  
  with p-value = 0.696669
```

Source: own processing.

Consequently, based on the econometric tests, it can be said that there is no autocorrelation ($0.70 > 0.05$), no heteroscedasticity ($0.25 > 0.05$) and residuals are normally distributed ($0.69 > 0.05$). In addition to the absence of multicollinearity, the author can conclude that the model is BLUE.

4.6 Logarithmic Dissolution of Factors

In order to better understand, what was the main cause of the decrease of the cotton production in Egypt, the author also conducts an analysis of the logarithmic dissolution of factors using two factors as the most important ones – area and yield. In Table 10, the author presents the analysis itself.

Table 11, logarithmic dissolution of factors

<i>Year</i>	2007	2008	2009	2010
Harvested area (hundred thousand. ha)	2.4	1.3	1.2	1.6
Yield (kg/ha)	880.00	791.00	790.00	763.00
Production (hundred thousand. tons)	2.22	1.05	0.95	1.37
<i>Year</i>	07/08	08/09	09/10	
Change of Production (DP)	-1.2	-0.1	0.4	
I_P	0.472972973	0.904762	1.44211	
I_A	0.554166667	0.894737	1.31933	
I_Y	0.898863636	0.998736	0.96582	
Factors analysis (OSR)				
$\ln I_A / \ln I_P$	79 %	111 %	76 %	
$\ln I_Y / \ln I_P$	14 %	1 %	-9 %	

Source: own processing based on FAO Data.

Consequently, the author is able to conclude that she managed to identify that area is the main factor that led to the drop of cotton production and it eventually lead to the decreasing role of Egypt in the international market of cotton.

5 Results and Discussion

Egypt has a long history of cotton production, and at one point in time, the country was among the top producers of cotton in the world. Cotton output in Egypt, on the other hand, has been on a steady downward trend over the last several decades. This drop has been linked to a number of issues, including the mishandling of agricultural policy and the misuse of land in specific locations. Mainly because the productivity of the sector has dropped due to inappropriate government policies implemented by the government of the country which halted the overall development of the sector.

In addition to that, the author believes that there are more reasons for this drop in the production and consequently, of exports. The incorrect agricultural policies that have been enacted by the Egyptian government are one of the key factors contributing to the country's declining cotton output. These policies have caused an overuse of land and resources in particular locations, which has led to the deterioration of the soil and a reduction in crop yields as a direct consequence. Cotton output has been on the decrease for some time now, and one factor that has contributed to this is the government's emphasis on the cultivation of other crops, such as wheat and rice. Nevertheless, the author's findings are somewhat similar to (Kassim, 2018) who also provides a promising conclusion that the country is on its way to implement a new strategy that is likely to mend problems created during the implementation of the old one, which was rather inappropriate for the given situation.

The inefficient use of Egypt's land and water resources is one more issue that has contributed to the country's falling cotton output levels in recent years. The government has handed out parcels of land to farmers without doing adequate planning and management, which has resulted in an excessive consumption of resources as well as the deterioration of the soil. In addition, the government has not given sufficient assistance for irrigation and water management, which has resulted in a lack of available water as well as a reduction in the number of agricultural yields. This finding is underpinned by the fact that area and yield were the only two statistically significant regressors for the export of cotton variable and additionally, the author suggests, based on the output of the logarithmic dissolution of factors that the drop in the production and consequently, of exports, is largely associated with the drop in the total harvested area, that happened in the late 00s. The author coincides with (Fuglie, 2021).

Moreover, one of the contributing factors to the fall in cotton yield is the continued use of antiquated agricultural practices and machinery. The majority of farmers in Egypt are still using time-honored agricultural practices since they do not have access to the contemporary tools and technology that would allow them to raise crop yields and enhance the quality of the cotton they produce. In addition, Egypt's cotton sector expansion has been hampered by a lack of investment in research and development, which has also been a barrier to growth. A lack of investment has been made in the creation of new types of cotton that are resistant to both pests and diseases, as well as in the improvement of agricultural procedures to boost yields and quality. The author's findings are identical to those provided by (Tellioglu, 2017). In addition, the lack of competitiveness of Egyptian cotton on the international market is another factor that may be cited as a cause for the drop in cotton output in Egypt. Egyptian cotton is recently considered to be of a lower yield and worse quality compared to more modern types of cotton that have been produced in other nations, like India, China, and the United States. As a direct consequence of this, the demand for Egyptian cotton has declined, which has led to a drop in pricing. Moreover, this has resulted in a reduction in the amount of cotton that is produced in Egypt.

5.1 Recommendations

Based on her findings and comparison with other academists, the author is able to provide a list of relevant recommendations:

- Increase investment in agricultural infrastructure: To improve the productivity of the cotton sector, Egypt needs to invest in modern irrigation systems, better drainage systems, and improved storage facilities. By improving these infrastructure facilities, farmers can better manage water and soil resources, reduce crop losses due to pests and diseases, and increase crop yields.
- Implement technology-based solutions: The use of technology in agriculture can improve the efficiency of farming operations, reduce production costs, and increase crop yields. Egypt can introduce technology-based solutions such as precision agriculture, which uses sensors and data analytics to optimize crop growth and increase yields.

- Enhance access to finance: Access to finance is critical for farmers to purchase inputs, such as seeds and fertilizers, and to invest in modern farming technologies. By increasing access to finance, farmers can invest in their operations, increase productivity, and improve their competitiveness in the market.
- Strengthen research and development: Research and development are critical for developing new varieties of cotton that are resistant to pests and diseases and can grow in different soil and climate conditions. By strengthening research and development, Egypt can develop new cotton varieties that are more resilient to changing weather patterns and better suited to the local soil conditions.
- Improve market access: Improved market access can help farmers find new buyers and increase their profits. Egypt can explore new export markets, develop new value-added products, and promote its cotton as a premium product to attract buyers.

Overall, by implementing these recommendations, Egypt can improve the allocation of scarce resources in the cotton industry and strengthen the performance of the agrarian sector in general. The list of recommendations is a basic one, but it is sufficient enough to bring the country back on the international arena and increase the competitiveness of the cotton industry.

6 Conclusion

Egyptian cotton presence in foreign markets and to maintain the global markets is very important, as it also supports the presence of Egyptian textiles in the domestic and global markets. This research aims to identify the factors that led to instability of the production and trade of Egyptian cotton, and to identify the mechanisms of action that can be followed to achieve productivity and marketing stable policy, and thus achieve stability of cotton farmer's income, and the preservation of the status of Egyptian cotton in global markets.

liberalization policies which adopted by the government led to a decline in area allocated for cotton cultivation and fluctuation of hectare productivity, that lower the total production of cotton at an annual rate and it is statistically significant ,where the cotton production reached 181 thousand tons in 2010 representing about 19% of the total production of the Republic during the period (2011-2020) it is decrease to 59 thousand tons which present only 6.3% from the total production at the same period which is statistically significant , that is because of the area liberalization policy which adopted by the government which led to decrease in area allocated to produce cotton from 220 thousand ha to the 65 thousand ha at the end of the study period. Also, the overuse of water resources, the use of outdated farming methods and equipment, the lack of investment in research and development, and the lack of competitiveness of Egyptian cotton on the global market. In conclusion, the reasons for the decline in cotton production in Egypt include these factors. In order to address these factors, a comprehensive strategy will be required, this strategy should also take under consideration correct the malfunction in the government's role in the market adjust, and lack of marketing information systems with regard to foreign markets for cotton, which resulted in a lot of problems and negative results such as the fluctuation of production and exports and inventory quantities, and lower returns to the farmer's market production of cotton. According to the results of previous research, the following is recommended:

- 1- The need for a stable policy for the production and export of cotton to ensure preservation of comparative advantage in the global markets and address the price imbalances between domestic and world prices for cotton production and supplies.
- 2-Directing greater investments for research on increasing productivity per hectare of cotton.
- 3- Provide an information base extends producers constantly with regular information about production costs and profitability of the competition sessions for cotton and how to reduce production costs and expected price for each class of cotton varieties in light of the global supply, so that the farmer can realize market conditions, which handles it.

7 References

- Abbott, S. G. (2018).** The EU and the Middle East: From the Euro-Mediterranean partnership to the union for the Mediterranean. E-International Relations. Available at :<https://www.e-ir.info/2018/11/28/the-eu-and-the-middle-east-from-the-euro-mediterranean-partnership-to-the-union-for-the-mediterranean/> (Accessed: 10 February 2023).
- Abdel Ati, M. (2019).** An economic analysis of Egyptian cotton exports. Egyptian journal for agriculture economy, 29 (4), p.153.
- Abu Sharar, A. (2015).** International Economics, Theories and Policies (4th ed). Dar Al Masirah for Publishing, Distribution and Printing, Amman, p.33.
- Adel, A. (1993).** The International Economic Relationship. University House, Beirut.
- Al-Suwait, N. (2021)** An Economic Study of Some Indicators of Egyptian Foreign Trade, Journal of African Research and Studies and Nile Basin Countries, Aswan University, Volume (2), Issue (1).
- Ajibola Alfred. (2019).** Disadvantages of foreign trade. Len Academy. Available at: <https://www.len.com.ng/csblogdetail/387/Disadvantages-of-Foreign-Trade> (Accessed: 8 February 2023).
- Al-Sariti, M. (2008).** The Economics of Foreign Trade (1st ed.). Alexandria.
- Barakat Shereif. (2020).** Egyptian Cotton: The Rise, Fall, and Revival of Egypt's White Gold. Egyptian Street Available at:<https://egyptianstreets.com/2022/05/28/egyptian-cotton-the-rise-fall-and-revival-of-egypts-white-gold> (Accessed: 15 February 2023).
- Barasat Government College. (n.d)** available at <https://bgc.ac.in/pdf/study-material/International-Trade.pdf> (Accessed: 6 February 2023).
- Beck, T. (2017).** The Silk Road: The international ramifications of ancient textile trade global. EDGE: Your source for Global Business Knowledge. Available at: <https://globaledge.msu.edu/blog/post/54482/the-silk-road-the-international-ramifica> (Accessed: 3 February 2023).
- Bhagwati, J. (2002).** Free trade today. Princeton University Press.
- Borad, S. B. (2022).** International trade theory -All you need to know-e FinanceManagement Available at: <https://efinancemanagement.com/international-financial-management/international-trade-theory> (Accessed: 3 February 2023).
- Boudjemaa, B and Kings, O. (2016).** The evolution of the volume of foreign trade in Algeria during the period 2001-2016, (11th ed.). Adrar Publishing. Algeria.
- Boughton James. (2009).** Finance, Development, and the IMF. Oxford: Oxford University Press, 9780199239863.

Brighton College. (2022). 7 key benefits of international trade. Available at:<https://brightoncollege.com/blog/7-key-benefits-of-international-trade/> (Accessed: 3 February 2023).

Chase Samuels. (2019). A timeline of international trade. TRG Peak Blog. Available at: <https://traderiskguaranty.com/trgpeak/timeline-international-trade/>(Accessed: 5 February 2023).

Dunning, J. H. (1992). Globalization, competition and the multinational.

Eichengreen, B. (2007) Globalizing Capital: A History of the International Monetary System (2nd ed). Princeton University Press.

Fuglie, K., Dhehibi, B., El Shahat, A. A. I., & Aw-Hassan, A. (2021). Water, policy, and productivity in Egyptian agriculture. American Journal of Agricultural Economics103(4), 1378-1397.

Euro-Mediterranean transport partnership (EUROMED). (n.d.). Mobility and Transport. Available at: https://transport.ec.europa.eu/transport-themes/international-relations/european-neighbourhood-policy/euro-mediterranean-transport-partnership-euromed_en (Accessed: 10 February 2023).

Furuoka, F. (2007). "Do Exports Act as "Engine" of Growth? Evidence from Malaysia" Economics Bulletin. 6(37), 1-14.

GAFI- Home(n.d). The General Authority for Investment and Free Zones available at: <https://www.gafi.gov.eg/English/Pages/default.aspx> (Accessed: 12 February 2023).

GCC exchange. (2018). Advantages and disadvantages of international trade Available at:<https://gccexchange.com/blog/advantages-disadvantages-international-trade> (Accessed: 3 February 2023).

Goldschmidt, A. (2008). A brief history of Egypt. Infobase Publishing. <https://www.infobasepublishing.com/Bookdetail.aspx?ISBN=0816066728&Ebooks=> (Accessed: 7 February 2023).

Green Hilary. (2019). International trade in the early Middle Ages. Available at:<https://www.historiamag.com/international-trade-early-middle-ages/>(Accessed: 5 February 2023).

Grossman, G. & Helpman, E. (1991). Trade, knowledge spillovers, and growth. Available at: <https://www.nber.org/papers/w3485> Accessed: 5 February 2023).

Hajji, F. (2017). Introduction to Foreign Trade, Diwan of University Publications, Algeria.

Helpman, E., & Krugman, P. (1985). Market Structure and Foreign Trade Increasing Returns, Imperfect Competition, and the International Economy.

Cambridge, MA: MIT Press. Available at: <https://academic.oup.com/ej/article-abstract/96/381/243/5190342?redirectedFrom=fulltext> (Accessed 6 February 2023).

Irwin, D. A. (2017). Adam Smith's "Wealth of Nations": A 21st century translation and commentary. Princeton University Press.

Johnson, H. G. (1954). The Theory of Protection. *Economic Journal*, 64(253), 791-801.

Kassim, Y., Mahmoud, M., Kurdi, S., & Breisinger, C. (2018). An agricultural policy review of Egypt: First steps towards a new strategy.

Kindleberger, C. P., & Tella, G. D. (1982). Economics in the long view: Models and methodology.

Kotler, P., & Armstrong, G. (2010). Principles of marketing.

Krugman, P., & Obstfeld, M. (2009). International Economics: Theory and Policy (8th ed.). Pearson Education.

Matar Saeed. (2001). Foreign Trade (1st ed.). Dar Al-Safa, Amman, Jordan.

Mora, M. (2006) ECFIN country focus. Terms-of-trade effects in catching-up countries. Economic analysis from the European Commission's Directorate-General for Economic and Financial Affairs, 3(4). Available at: https://ec.europa.eu/economy_finance/publications/pages/publication1337_en.pdf (Accessed: 5 February 2023).

Ricardo, D. (1817). On the Principles of Political Economy and Taxation. London: John Murray.

Richards, A. (1978). Land and Labour on Egyptian Cotton Farms, 1882-1940. *Agricultural History*, 52(4), 503-518.

Roos, D. (2020). How the East India Company became the world's most powerful monopoly. Available at: <https://www.history.com/news/east-india-company-england-trade> (Accessed: 5 February 2023).

Rugman, A. M. (2010). Theoretical aspects of MNEs from emerging economies: Toward a new paradigm of international business. *Academy of Management Perspectives*, 24(1), 56-74.

Samans, Richard, Uzan, Marc and Lopez-Claros. (2007). International Monetary System, the IMF and the G20. London: Palgrave Macmillan, 2007. Available at: <https://link.springer.com/book/9780230524958> (Accessed: 9 February 2023).

Selim Mohammad El Sayed. (2007). Egypt and the Euro-Mediterranean partnership: Strategic choice or adaptive mechanism? Taylor & Francis. Available at: <https://www.tandfonline.com/doi/abs/10.1080/136293997084> (Accessed: 10 February 2023).

Sheikh Rania. (2022). A clear vision analysis. *Egyptian Foreign Trade*, 13(2).

Sherlock, J., & Jonathan, R. (2008). "The Handbook of International Trade A Guide to the Principles and Practice of Export", pp1/ 6-7 (2nd ed.). GMB Publishing. Ltd. Available at: <http://www.sze.hu/~gjudit/Exportszerzodesek/Handbook%20of%20international%20trade.pdf> (Accessed: 8 February 2023).

Sherlock, J., & Jonathan, R. (2008). "The Handbook of International Trade A Guide to the Principles and Practice of Export" pp 1/5-6 (2nd ed.) GMB Publishing. Ltd. Available at:<http://www.sze.hu/~gjudit/Exportszerzodesek/Handbook%20of%20international%20trade.pdf>. (Accessed: 8 February 2023).

Singh Soumya. (2012). What are the disadvantages of foreign trade? Preserve Articles.com: Preserving Your Articles for Eternity. Available at :<https://www.preservearticles.com/education/what-are-the-disadvantages-of-foreign-trade/21487> (Accessed: 7 February 2023).

Teece, D. J. (1998). Capturing value from knowledge assets: The new economy, markets for know-how, and intangible assets. California management review, 40(3), 55-79.

The MVP of Yellowstone's "Stones" (U.S. National Park Service). (2019). Obsidian. Available at: <https://www.nps.gov/articles/archeology-obsidian-mvp-yellowstone-stones.htm> (Accessed: 3 February 2023).

Tellioglu, I., & Konandreas, P. (2017). Agricultural policies, trade and sustainable development in Egypt.

Vernon, R. (1966). International Investment and International Trade in the Product Cycle. The Quarterly Journal of Economics, 80 (2), 190 -207. Available at: <https://academic.oup.com/qje/article-abstract/80/2/190/1868595>(Accessed:7 February 2023).

WTO | What is the WTO? (n.d). World Trade Organization-Global trade. Available at https://www.wto.org/english/thewto_e/whatis_e/whatis_e.htm (Accessed: 10 February 2023).

Younis, M et.al. (2015). International Trade and Economic Clusters, University Education House. University Education House, Alexandria.

Yousef, T. M. (2000). The political economy of interwar Egyptian cotton policy. Explorations in Economic History, 37(4), 301-325.