

Determinants of Demand for Egyptian Vegetable and Fruit Exports to The Most Important European Union Countries

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ABSTRACT

Egypt is interested in foreign trade and as it works to increase trade flow between itself and many countries of the world, Egypt contributes a large percentage to global trade, and the European Union is Egypt's largest trading partner, as the percentage of Egyptian imports from the European Union reached about 26% of total Egyptian imports in 2021. In the same year, Egypt's exports to the European Union reached about 31% of the total Egyptian exports. However, there are fluctuations in Egyptian exports of agricultural commodities to the European Union countries, which vary from year to year this led to the need to study the determinants of European demand for these commodities, especially in large markets, such as the Dutch market, the German market, and the British market before its withdrawal from the Union. Regarding the export of grapes, the study examines the average price of grapes exported from Turkey to the United Kingdom. It finds that as the average price of grapes exported from Turkey to the United Kingdom decreases by 1%, the average per capita share of Egyptian grapes for the English decreases by 3.22%. Furthermore, the study shows that the policy of floating the Egyptian pound does not significantly affect the average per capita share of Egyptian grapes.

Keywords: Demand Determinants; Exports of Vegetables & Fruits; The European Union.

INTRODUCTION

Foreign trade is one of the activities that has an effective role in supporting the national economy, sustaining sustainable development efforts, and achieving better rates of economic growth. It is also associated with economic growth rates through a direct relationship. When foreign trade of a country increases, its economy gains strength, especially if the exports are commodities with high added value and a high technological and industrial component, and the imports are related to production and manufacturing requirements (Rehan, 1967). Many countries depend on foreign trade as an effective tool in achieving sustainable development, creating added value for the national economy, increasing income, reducing unemployment, and addressing economic problems (Sharif, 2001).

Egypt is interested in foreign trade, and it works to increase trade flow between **itself** and several countries

of the world through conducting trade agreements with many countries and global economic blocs (Al-Harazi, 2001 and Fuenfzig *et al.*, 2021). Europe, especially the European Union countries, is considered one of the main and important blocs due to its contribution to world trade. The European Union contributes a large percentage to global trade. The European Union is considered the largest trading partner for Egypt (Gomaa, 2001), with the proportion of Egyptian imports from the European Union amounting to about 26% of the total Egyptian imports in 2021. Egypt's exports to the European Union in the same year reached about 31% of the total Egyptian exports. Despite the importance of the European Union with regard to Egyptian imports and exports, Egyptian horticultural exports to the European Union are characterized by instability on one hand, a lack of continuity on the other hand, and sometimes a tendency towards decreasing on the third hand (Awad, 2001).

Problem of study:

Different statistics related to the initial trade of Egyptian agricultural commodities indicate that Egyptian exports of agricultural commodities to European Union countries fluctuate from year to year. This fluctuation has necessitated studying the determinants of European demand for these commodities, especially in large markets such as the Dutch market, the German market, and the British market prior to its withdrawal from the union (Abu Qamar, 2019 and Saeed, 2020).

Objectives of research:

The study aims at trying to improve the position of Egyptian agricultural exports with the countries of the European Union, through several sub-objectives represented in:

1-Analyzing the current situation of agricultural exports to European Union countries: This objective aims to assess the current status of Egyptian agricultural exports to EU countries, both at the commodity level and the country level. The division of agricultural exports into groups based on their trends (increasing, declining, stable) provides a comprehensive understanding of the dynamics of Egyptian agricultural trade with the EU. Similarly, categorizing EU countries based on their import

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Fourth - Estimating the demand functions for Egyptian citrus using statistics of imports:

A- Determinants of the Dutch demand for Egyptian citrus:

By studying the relationship between the dependent variable represents the average of Dutch per capita share from Dutch imports of Egyptian citrus in kilograms and the independent variables that are believed to have a significant impact on the dependent variable shown in Table No. (5) in the appendix, and identifying the most important competitive markets for Egypt within the Dutch market as in Table No. (6) in the appendix, it is clear from Equation (4) that the average of Dutch per capita share in kilograms from Dutch imports of Egyptian citrus is affected by each of the average price per kilogram of Netherlands imports from Egypt, average price per kilogram of Netherlands imports from South Africa, average price per kilogram of Netherlands imports from Spain.

$$\ln Y_1 = 0.71 - 2.99 \ln X_1 + 3.8 \ln X_2 + 4.41 \ln X_3 \dots \quad (4)$$

(1.43) (-4.93) ** (4.33) ** (4.55) **

$R^2 = 0.81$ $F = 22.1$ **

Whereas:

Y1: Average of Dutch per capita per kg from Dutch imports of Egyptian citrus.

X1: The average price per kilogram of Dutch imports from Egypt.

X2: The average price per kg of Dutch imports from South Africa.

X3: The average price per kilogram of Dutch imports from Spain

F: Significance of the model,

R²: Modified coefficient of determination,

* Level of significance at 0.05.

** The level of significance at 0.01

It was shown that these variables are consistent with economic logic and statistical significance, as it is shown from Equation (4) that there is an inverse relationship between the average of Dutch per capita per kg of Dutch imports of Egyptian citrus and the average price per kg of citrus imported from Egypt, whereas, with an increase in the price of a kilogram of citrus imported from Egypt by 1%, the average of Dutch per capita share of Egyptian citrus decreased by 2.99% during the study period, which means that the individual demand for Egyptian citrus in the Dutch market is elastic. It also appears from the same equation that there is a direct relationship between the average of Dutch per capita per kg of Dutch imports of Egyptian citrus and

the average price per kg of citrus imported from South Africa to the Netherlands, whereas, with a decrease in the average price of a kilogram of citrus imported from South Africa to the Netherlands by 1%, the average of Dutch per capita share from Egyptian citrus decreases by 3.8%, as it is shown from the same equation that there is a direct relationship between the average of Dutch per capita share per kilogram of Dutch imports of Egyptian citrus and the average price of a kilogram of citrus imported from Spain to the Netherlands, as with an increase in the average price of a kilogram of citrus imported from Spain to the Netherlands by 1%, the average of Dutch per capita share from Egyptian citrus decreases by 4.41%, and the results showed that the modified coefficient of determination amounted about 0.81, this refers to about 81% of the changes affecting the average of Dutch per capita share from Egyptian citrus exports are due to the aforementioned variables, and Significance of the model used was proven for the nature of the data.

B- Estimating the price and transit elasticity of the demand model for Egyptian citrus using statistics of imports in the Dutch market:

By studying both cross and price elasticity of demand, it is shown that the price elasticity of Egyptian citrus within the Dutch market has increased by a value amounted about 2.99, which means that the individual demand for Egyptian citrus in the Dutch market is elastic, and therefore it is necessary to maintain the non-raising of export prices of Egyptian citrus within the Dutch market.

As it is shown that there is a high cross-elasticity with Spain and South Africa, where they amounted about 4.41 and 3.8 for each of them respectively, which means a high degree of competition within the market, which is consistent with the economic logic where the high cross-elasticity is linked to an increase in the intensity of competition within the market, especially with Spanish exports.

Comparing the results of the two methods of estimating Dutch demand models for Egyptian citrus:

From the preceding, it is shown that the type of price and cross elasticity are stable using the two methods of estimating the individual demand models for Egyptian citrus within the Dutch market, which indicates that there are no significant differences in the results of estimating the individual demand model for Egyptian citrus within the Dutch market using the statistics of exports or imports.

Estimating the demand functions for the preserved vegetables and Egyptian potatoes using the statistics of exports and imports, and determining the

different demand elasticity for each crop (Institute of National Planning, 2001):

A- Determinants of individual demand for Egyptian preserved vegetable exports in the Italian market:

By studying the relationship between the Italian per capita share of Egyptian exports of preserved vegetables as a dependent variable and the independent variables that are believed to have a significant impact on the dependent variable, during the period (2002-2021) shown in Table No (7) in the appendix, and identifying the most important competitive markets for Egypt within the Italian market, it is shown from equation (5) that the average of Italian per capita share from Egyptian exports of preserved vegetables is affected by both the average price of preserved vegetables exported from Egypt to Italy, and the average price of preserved vegetables exported from China to Italy and a dummy variable that reflects the effect of liberalizing the Egyptian pound on Egypt's exports of preserved vegetables to Italy, where it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021). It was shown that these variables are in agreement with economic logic and statistical significance, where it is evident that there is an inverse relationship between the average Italian per capita share of Egyptian preserved vegetables exports and the average price of Egyptian preserved vegetables exported from Egypt to Italy, as with an increase in the price of Egyptian preserved vegetables by 1%, the average Italian per capita share of Egyptian preserved vegetables decreases by 1.71% during the study period, which means that the individual demand for Egyptian preserved vegetables in the Italian market is elastic. It is also shown from the same equation that there is a direct relationship between the average of Italian per capita share from Egyptian exports of preserved vegetables and the average price of preserved vegetables exported from China to Italy, as the average price of preserved vegetables exported from China to Italy decreased by 1%, the average Italian per capita share of Egyptian preserved vegetables decreased by 6.62%, in other words, with the increase in the average price of China by 1%, the average of Italian per capita share from preserved vegetables increased by 6.41%, as the effect of the price change for China's exports is greater. The results also indicated that the policy of liberalizing the Egyptian pound was significant, that is, it affects the average of Italian per capita share from Egyptian preserved vegetables, as the results showed that it is about 0.88, meaning that about 88% of the changes that affect the average of Italian per capita share from Egyptian preserved vegetables exports are due to the preceding variables, and the significance of the model used for the nature of the data has been proven.

$$\ln Y_1 = 7.12 - 1.71 \ln X_1 + 6.41 \ln X_2 + 1.41 D_1 \dots (5)$$

$$(4.12)^{**} \quad (-3.34)^{**} \quad (5.66)^{**} \quad (7.32)^{**}$$

$$R^2 = 0.88 \quad F = 31.3^{**}$$

Whereas:

F: Significance of the model, R-2: Modified coefficient of determination,

*: Level of significance at 0.05, **: Level of significance at 0.01

Y1: Average of Italian per capita share from Egyptian preserved vegetables in kg.

X1: The average export price per kg from Egypt to Italy.

X2: The average export price per kg from China to Italy.

D1: A dummy variable that reflects the effect of liberalizing the Egyptian pound on Egypt's exports of preserved vegetables to Italy, where it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021).

B- Estimating the price and cross elasticity of the demand model for Egyptian preserved vegetables using statistics of exports in the Italian market:

By estimating both the price and transit elasticity, it is shown that the price elasticity of Egyptian preserved vegetables within the Italian market is high and amounted to about 1.71, which means that the individual demand for Egyptian preserved vegetables in the Italian market is flexible, and therefore it is necessary to preserve not to raise the export prices of Egyptian preserved vegetables within the Italian market.

It is also evident that the cross-elasticity increased to about 6.41, which means a high degree of competition within the market, which is consistent with economic logic, where a high cross-elasticity is linked to an increase in the intensity of competition within the market. This is due to the effect of the change in the price of Chinese exports of preserved vegetables to Italy, which is more effective than the change in the price of Egyptian exports.

Second - Estimating the functions of individual demand for Egyptian preserved vegetables using statistics of imports:

A- Determinants of individual demand for Egyptian preserved vegetable imports in the Italian market:

By studying the relationship between the average of Italian per capita share of Italian imports from Egyptian preserved vegetables as a dependent variable and the independent variables that are believed to have a significant impact on the dependent variable shown in Table No. (8) in the appendix, and identifying the most

important competitive markets for Egypt within the Italian market, it is shown from Equation (6) that the average of Italian per capita share from Italian imports of Egyptian preserved vegetables is affected by each of the average price of Italy's imports from Egypt, the average price of Italy's imports from China, the price ratio between Egypt and Morocco, and a dummy variable that reflects the effect of the liberalizing the Egyptian pound On Italy's imports from the Egyptian preserved vegetables, it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021). It was shown that these variables are corresponding with the economic logic and the statistical significance, as it shows that there is an inverse relationship between the average of Italian per capita share from the Egyptian exports of preserved vegetables and the average price of preserved vegetables exported from Egypt to Italy, whereas with an increase in the price of Egyptian preserved vegetables by 1%, the average of Italian per capita share from Egyptian preserved vegetables decreases in about 1.71% during the study period, this means that the individual demand for Egyptian preserved vegetables in the Italian market is elastic. as It is also shown from the same equation that there is a direct relationship between the average Italian per capita share of Egyptian exports of preserved vegetables and the average price of preserved vegetables exported from China to Italy, as with a decrease in the average price of preserved vegetables exported from China to Italy by 1%, the average of Italian per capita share from Egyptian preserved vegetables decreases in about 6.62%, in other words, with an increase in the average price of China by 1%, the average of Italian per capita share from preserved vegetables increased by 6.41%, as the effect of the price change for Chinese exports is greater, as findings indicated that the policy of liberalizing the Egyptian pound was significant, that is, it affects the average of Italian per capita share from Egyptian preserved vegetables, the results also showed that the coefficient of determination amounted about 0.88, meaning that about 88% of the changes affecting the average Italian per capita share of Egyptian preserved vegetable exports are due to the preceding variables, and the significance of the model used for the nature of the data has been proven.

$$\ln Y_1 = 7.12 - 1.71 \ln X_1 + 6.41 \ln X_2 + 1.41 D_1 \dots (6)$$

(4.12)** (-3.34)** (5.66)** (7.32)**

$R^2 = 0.88$ $F = 31.3^{**}$

Whereas:

Y1: The average of Italian per capita share from exports of Egyptian preserved vegetables in kg.

X1: The average export price from Egypt to Italy per Kg.

X2: The average export price from China to Italy per Kg.

D1: A dummy variable that reflects the effect of liberalizing the Egyptian pound on Egypt's exports of preserved vegetables to Italy, where it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021).

F: Significance of the model,

R-2: Modified coefficient of determination,

* : Level of significance at 0.05, **: Level of significance at 0.01

B- Estimating the price and cross elasticity of the demand model for Egyptian preserved vegetables using statistics of exports in the Italian market:

The results indicate that the price elasticity of Egyptian preserved vegetables in the Italian market increased, as it was estimated at about 1.71, which means that the individual demand for Egyptian preserved vegetables in the Italian market is elastic, and therefore it is necessary to maintain the non-raising of export prices of Egyptian preserved vegetables within the Italian market. It is also shown that a high cross-elasticity and amounted to about 6.41, which means a high degree of competition within the market, which is corresponding with economic logic, where the increase in cross-elasticity is linked to an increase in the intensity of competition within the market, However, it can be said that the effect of the change in the price of Chinese preserved vegetable exports to Italy is more effective than the change in the price of Egyptian exports.

Second - Estimating the functions of individual demand for Egyptian preserved vegetables using the statistics of imports:

A- Determinants of individual demand for Egyptian preserved vegetable imports in the Italian market:

By studying the relationship between the average of Italian per capita share from Italian imports of Egyptian preserved vegetables as a dependent variable and the independent variables that are believed to have a significant impact on the dependent variable shown in Table No. (8) in the appendix, and to identify the most important competitive markets for Egypt within the market as in Table No. (9) in the appendix, it is shown from the equation (7) that the average of Italian per capita share from Italian imports of Egyptian preserved vegetables is affected by the average price of Italian imports from Egypt, the average price of Italian imports from China, the price ratio between Egypt and Morocco, and a dummy variable that reflects the effect of the liberalizing the Egyptian pound on Italy's imports of

Egyptian preserved vegetables, where it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021). It has been shown that these variables are corresponding with the economic logic and statistical significance, as it is shown from Equation (7) that there is an inverse relationship between the average of Italian per capita share from imports of Egyptian preserved vegetables and the average price of preserved vegetables imported from Egypt, as the price of preserved vegetables imported from Egypt increased by a percentage 1% The average of Italian per capita share from Egyptian preserved vegetables decreased by 8.22% during the study period, which means that the per capita demand from Egyptian preserved vegetables in the Italian market is elastic. It is also shown from the same equation that there is a direct relationship between the average of Italian per capita share from Italian imports of Egyptian preserved vegetables and the average price of preserved vegetables imported from China to Italy, as with a decrease in the average price of preserved vegetables imported from China to Italy by 1%, the average of Italian per capita share from Egyptian preserved vegetables decreases in by 9.17%.

$$\ln Y1 = 4.55 - 8.22 \ln X1 + 9.17 \ln X2 + 7.11 \ln X3 - 1.21 D1 \dots (7)$$

(3.44)** (-4.56)** (5.65)** (6.54)** (-4.56)**

R² = 0.71 F = 8.8

Whereas:

F: Significance of the model,

R-2: Modified coefficient of determination,

*: Level of significance at 0.05, **: Level of significance at 0.01

Y1: The average of Italian per capita share from imports of Egyptian preserved vegetables in kg.

X1: The average export price from Egypt to Italy per Kg.

X2: The average export price from China to Italy per Kg.

D1: A dummy variable that reflects the effect of liberalizing the Egyptian pound on Egypt's exports of preserved vegetables to Italy, where it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021).

It was also shown from the model that there is a direct relationship between the average of Italian per capita share from Italian imports of Egyptian preserved vegetables and the price ratio between Egypt and Morocco, as with an increase in the price ratio between Morocco and Egypt by 1%, the average of Italian per capita share from Egyptian preserved vegetables increases by 7.11%. The results also showed that the

policy of liberalizing the Egyptian pound was not significant, that is, it did not affect the average of Italian per capita share from Italy's imports of Egyptian preserved vegetables. The results also showed that the coefficient of determination amounted about 0.71, meaning that about 71% of the changes affecting the average of Italian per capita share from Egyptian preserved vegetable exports are due to the preceding variables, and the significance of the model used for the nature of the data has been proven.

B- Estimating the price and cross elasticity of the demand model for Egyptian preserved vegetables using statistics of imports in the Italian market:

The results indicate a high price elasticity of Egyptian preserved vegetables within the Italian market, which was estimated in about -8.22, which means that the individual demand for Egyptian preserved vegetables in the Italian market is elastic, and therefore it is necessary to maintain the non-raising of export prices of Egyptian preserved vegetables within the Italian market.

It is also shown that the high cross-elasticity amounted to about 9.17, which means a high degree of competition within the market, which is corresponding with economic logic, as the high cross-elasticity is linked to an increase in the intensity of competition within the market, noting the decrease in the average price of Italy's imports from Morocco for preserved vegetables since 2013, and the improving its price competitive advantage and its disparity with the prices of Egypt, although Egypt still has a competitive advantage with Morocco, but it is decreasing, which the competitiveness of Morocco is increasing.

Comparison of the results of the two methods of estimating Italian demand models for Egyptian preserved vegetables:

From the preceding, it is shown that both price and cross elasticity are stable using the two methods of estimating the individual demand models for Egyptian preserved vegetables within the Italian market, which indicates that there are no significant differences in estimating the individual demand model for Egyptian preserved vegetables within the Italian market using export statistics or import statistics.

Third - Estimating the demand functions for Egyptian potatoes using statistics of exports:

A- Determinants of the Greek demand for Egyptian potato exports:

By studying the relationship between the average of Greek per capita from Egyptian exports of potatoes per kg as a dependent variable and the independent variables that are believed to have a significant impact on the dependent variable shown in Table No. (10) in

the appendix, and to identify the most important competitive markets for Egypt within the market as in Table No. (12) in the appendix.

It is shown from Equation (8) that the average of Greek per capita share from Egyptian potato exports is affected by the average price of potatoes exported from Egypt to Greece, the average price of potatoes exported from Cyprus to Greece, and a dummy variable that reflects the effect of the Egyptian pound's liberalization on Egypt's exports From potatoes to Greece, it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021). It was shown that these variables are corresponding with economic logic and statistical significance, as it is shown from Equation (8) that there is an inverse relationship between the average of Greek per capita share from Egyptian exports of potatoes and the average price of potatoes exported from Egypt to Greece, as the price of Egyptian potatoes increased by 1% The Greek average per capita share of Egyptian potatoes decreased by 0.88% during the study period

$$\ln Y1 = 1.63 - 0.88 \ln X1 + 0.91 \ln X2 + 0.5D1 \dots \dots (8)$$

(4.55)**
(-4.91)**
(3.44)**
(1.21)

R²= 0.61
F = 9.89

Whereas:

Y1: Average of Greek per capita share from Egyptian potato exports in kg.

X1: The average export price per kg from Egypt to Greece.

X2: The average export price per kg from Cyprus to Greece.

D1: A dummy variable that reflects the effect of floating the Egyptian pound on Egypt's exports of potatoes to Greece, as it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021).

F: Significance of the model,

R²: Modified coefficient of determination,

*: Level of significance at 0.05, **: Level of significance at 0.01

This means that the individual demand for Egyptian potatoes in the Greek market is inelastic. It also appears from the same equation that there is a direct relationship between the average of Greek per capita share from Egyptian potato exports and the average price of potatoes exported from Cyprus to Greece, as with a decrease in the average price of potatoes exported from Cyprus to Greece by 1%, the average Greek per capita share of Egyptian potatoes decreases by 0.91. % (and vice versa), and the results also showed that the policy

of liberalizing the Egyptian pound was not significant, meaning that it did not affect the average Greek per capita share from Egyptian potatoes, and the results showed that the determinant coefficient amounted to about 0.61, meaning that about 61% of the changes that affect the average share of the Greek per capita of the Egyptian exports of potatoes is due to the preceding variables, and the significance of the model used has been proven for the nature of the data.

B- Estimating the price and cross elasticity of the demand model for Egyptian potatoes using export statistics in the Greek market:

By studying both the price and cross elasticity of demand for Egyptian potatoes, it is shown that the price elasticity of Egyptian potatoes in the Greek market is low, as it was estimated at about 0.88, which means that the individual demand for Egyptian potatoes in the Greek market is inelastic, and therefore the Egyptian potato has a high competitive ability within the Greek market.

It is also shown that the cross elasticity is low, whereas amounted to about 0.91, which means a low degree of competition for Cypriot potato exports within the market, which is corresponding with economic logic, as Egypt enjoys a price competitive advantage.

From the preceding, it is shown that the effect of the change in the price of Cyprus exports on the average of Greek per capita share from Egyptian exports is less than the effect of the price of Egyptian exports, meaning that the competitiveness of Cypriot exports in relation to Egyptian exports is not strong.

Fourth - Estimating the demand functions for Egyptian potatoes using the statistics of imports:

A- Determinants of Greek demand for Egyptian potato imports:

By studying the relationship between the average of Greek per capita from Greek imports of Egyptian potatoes per kg as a dependent variable and the independent variables that are believed to have a significant impact on the dependent variable shown in Table No (11) in the appendix, and to identify the most important competitive markets for Egypt within the market as in Table No. (12) in the appendix, it is shown from the equation (9) The average of Greek per capita share from Greek imports of Egyptian potatoes in kilogram is affected by each of the average price of Greek imports from Egypt per kilogram, the average price per kilogram of Greek imports from Cyprus, and a dummy variable that reflects the effect of liberalizing the Egyptian pound on Greek imports of Egyptian potatoes, as it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021). It was shown that these variables are

corresponding with economic logic and statistical significance, as it is shown from Equation (9) that there is an inverse relationship between the average Greek per capita per kg from Greek imports of Egyptian potatoes and the average price of a kg of potatoes imported from Egypt, as the increase in the price of a kg of potatoes The average of Greek per capita share from Egyptian potatoes decreased by 0.81% during the study period, which means that the individual demand for Egyptian potatoes in the Greek market is inelastic.

$$\ln Y_1 = 1.63 - 0.81 \ln X_1 + 0.93 \ln X_2 + 0.6 D_1 \dots (9)$$

(4.2)** (-4.54)** (-4.71)** (1.7)

$R^2 = 0.66$ $F = 9.9^{**}$

Whereas:

Y1: Average of the Greek per capita in kg from Greek imports of Egyptian potatoes.

X1: The average price per kg of Greek imports from Egypt.

X2: Average price per kg of Greek imports from Cyprus.

D1: A dummy variable that reflects the impact of the Egyptian pound flotation on Greek imports of Egyptian potatoes, as it takes the value (zero) for the period (2002-2015) and takes the value (1) for the period (2016-2021).

F: Significance of the model,

R^2 : Modified coefficient of determination,

*: Level of significance at 0.05, **: Level of significance at 0.01

It is also shown from the same equation that there is a direct relationship between the average Greek per capita share from Greek imports of Egyptian potatoes per kg and the average price per kg of potatoes imported from Cyprus to Greece, as with a decrease in the average price per kg of potatoes imported from Cyprus to Greece by 1%, the average of Greek per capita share from Egyptian potatoes by 0.81%, or in other words, an increase in the price of Cypriot imports by 1% leads to an increase in the average Greek per capita share of Egyptian potatoes by 0.93%. The policy of liberalizing the Egyptian pound was insignificant, meaning that it does not affect the average Greek per capita share from Greek imports of Egyptian potatoes, and the results showed that it the determinant coefficient amounted to 0.58, meaning that about 58% of the changes affecting the average Greek per capita share of Egyptian exports of potatoes are due To the aforementioned variables, the significance of the model used for the nature of the data has been proven.

B- Estimating the price and cross elasticity of the demand model for Egyptian potatoes using the statistics of imports in the Greek market:

By studying the price and cross elasticity of demand, it is shown that the price elasticity of Egyptian potatoes in the Greek market is low, as it was estimated at about -0.81, which means that the individual demand for Egyptian potatoes in the Greek market is inelastic, and therefore the Egyptian potatoes have a high price competitiveness within the Greek market.

It is also shown from the same equation that the cross elasticity amounted to about 0.93, which means a low degree of competition within the market, which is corresponding with economic logic.

Comparison of the results of the two methods of estimating the Greek demand models for Egyptian potatoes:

From the preceding, it is shown that the type of price and cross elasticity is stable using the two methods of estimating the individual demand models for Egyptian potatoes inside the Greek market, which indicates that there are no significant differences in estimating the individual demand model for Egyptian potatoes inside the Greek market using export statistics of exports or imports.

The results indicate the stability of the type of price elasticity and cross elasticity using the two methods of estimating the individual demand models for Egyptian citrus within the Dutch market, which indicates that there are no significant differences in estimating the individual demand model for Egyptian citrus within the Dutch market using export statistics or import statistics.

This means that the numbers and statistics of imports were relatively corresponding with their counterparts in the statistics of exports in the study of the demand for the study crops, which means adopting either of them for studying and designing the attractiveness model for the exports of vegetables and fruits to countries of the European market.

RECOMMENDATIONS

- 1.The necessity of existence an export agency and highly efficient. It is recommended to establish an export agency and highly efficient export institutions that can thoroughly study foreign markets. This will enable better understanding of market dynamics, consumer preferences, and competition, leading to more effective export strategies.
- 2.Greater emphasis should be placed on non-economic factors that encourage demand for exports. This includes implementing effective marketing strategies, enhancing the quality of export services, simplifying and reducing the cost of financing

exports, lowering fees and tariffs, streamlining administrative procedures in the export sector, and ensuring compliance with international quality standards.

3. It is crucial to focus on studying foreign import markets to understand their specific needs, standard quality specifications, preferred export dates, and desired items. This will enable exporters to tailor their products and offerings to meet the requirements of the target markets, increasing their chances of success.
4. Efforts should be made to develop the structure of Egyptian exports, with a particular focus on commodities with high added value. By shifting towards products that offer greater value and differentiation, Egypt can capture a larger share of the global market and enjoy higher profit margins.
5. A comprehensive price and export policy should be implemented to achieve a competitive advantage in export markets. This includes carefully setting prices to be competitive while maintaining profitability, as well as adapting export strategies to effectively compete against other countries in target markets.
6. Changing the places for growing crops, especially planting them in the new lands.
7. The necessity to enter into promising markets in which there is no market share for Egypt, according to each crop, and this has been shown through statistical analyzes.
8. Conducting the new bilateral agreements between Egypt and the European Union countries that would open new markets for agricultural crops.

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Appendix

Table 1. The most important economic variables affecting the individual demand for UK imports of Egyptian grapes during the period (2002-2021) (Amount in kg, Price in dollars)

Years	Average of English per capita imports from Egyptian grapes	Average price of UK imports from Egypt	Average price of UK imports from Spain	Average price of UK imports from South Africa	Average price of UK imports from Turkey	Price ratio between Egypt/Turkey	Price ratio between Egypt/South Africa	Price ratio between Egypt / Spain
2002	0.088	4.73	1.395	0.883	1.749	270.44	535.67	339.07
2003	0.068	3.86	1.858	1.026	1.856	207.97	376.22	207.75
2004	0.138	1.89	2.011	1.304	2.158	87.58	144.94	93.98
2005	0.206	1.823	1.871	2.267	1.233	147.85	80.41	97.43
2006	0.264	1.486	1.687	2.379	1.269	117.10	62.46	88.09
2007	0.305	2.42	2.76	2.459	1.455	166.32	98.41	87.68
2008	0.300	2.042	2.843	2.668	1.912	106.80	76.54	71.83
2009	0.329	2.707	2.535	2.438	1.64	165.06	111.03	106.79
2010	0.304	2.782	2.435	2.673	2.024	137.45	104.08	114.25
2011	0.299	3.321	2.921	2.955	2.447	135.72	112.39	113.69
2012	0.357	011.3	2.746	2.79	2.421	123.92	107.53	109.25
2013	0.301	2.585	2.672	2.763	2.279	113.43	93.56	96.74
2014	0.323	2.43	3.094	3.011	2.324	104.56	80.70	78.54
2015	0.293	2.857	2.705	2.445	1.958	145.91	116.85	105.62
2016	0.359	2.397	2.599	2.161	1.954	122.67	110.92	92.23
2017	0.349	2.189	2.562	2.448	1.633	134.05	89.42	85.44
2018	0.356	2.228	2.493	2.634	1.808	123.23	84.59	89.37
2019	0.346	2.291	2.342	2.369	2.166	105.77	96.71	97.82
2020	0.372	2.002	2.291	2.508	1.985	102.410	79.715	88.558
2021	0.382	1.872	2.207	2.540	2.012	94.438	73.054	86.712
Average	0.29	2.96	2.40	2.34	1.91	135.63	131.76	112.54

Source: World Bank website, www.trademap.org

Table 2. The most important economic variables affecting the individual demand for Egyptian grape exports within the UK market during the period (2002-2021) (Quantity in kg, Price in dollars)

Year	Price ratio between Egypt/South Africa	Price ratio between Egypt/Turkey	Average export price from Spain to the UK	Average export price from South Africa to the UK	The average export price from Turkey to the UK	The average export price from Egypt to the UK	Average per capita share of Egyptian exports of grapes	Price ratio between Egypt / Spain
2002	56.59	47.25	1.227	0.668	0.8	0.378	0.056	30.81
2003	41.57	40.72	1.501	0.919	0.938	0.382	0.052	25.45
2004	62.28	63.54	1.608	1.209	1.185	0.753	0.114	46.83
2005	49.19	63.12	1.594	1.423	1.109	0.7	0.180	43.91
2006	72.76	75.08	1.725	1.263	1.224	0.919	0.134	53.28
2007	81.88	81.14	2.3	1.319	1.331	1.08	0.314	46.96
2008	70.47	45.52	2.407	1.138	1.762	0.802	1.448	33.32
2009	115.02	92.94	2.271	1.258	1.557	1.447	0.970	63.72
2010	221.78	185.60	2.368	1.621	1.937	3.595	0.343	151.82
2011	18.26	14.36	3.206	1.846	2.347	0.337	3.355	10.51
2012	107.51	82.68	2.693	1.798	2.338	1.933	0.672	71.78
2013	162.71	119.54	2.865	1.617	2.201	2.631	0.341	91.83
2014	140.03	114.57	3.035	1.791	2.189	2.508	0.467	82.64
2015	79.08	68.60	2.591	1.63	1.879	1.289	0.970	49.75
2016	144.09	104.47	2.276	1.363	1.88	1.964	0.578	86.29
2017	134.36	137.22	2.534	1.586	1.553	2.131	0.414	84.10
2018	122.16	123.44	2.484	1.746	1.728	2.133	0.424	85.87
2019	120.10	97.37	2.31	1.667	2.056	2.002	0.430	86.67
2020	137.99	129.17	2.33	1.74	1.88	2.38	0.19	100.56
2021	144.00	136.82	2.30	1.78	1.90	2.54	0.07	107.90
Average	104.09	91.16	2.28	1.47	1.69	1.60	0.58	67.70

Source: World Bank website, www.trademap.org

Table 3. The most important countries exporting grapes to the United Kingdom according to the relative importance of the quantity of exports during the period (2002-2021) (Quantity: thousand tons)

Country	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Turkey	79.29	77.90	77.06	77.31	74.04	69.55	73.36	61.64	70.00	70.44	66.35	64.70	63.14	53.88	70.69	69.38	65.85	55.71	51.51	50.00
South Africa	82.63	79.08	71.54	66.57	73.65	70.41	63.85	60.31	54.45	44.33	42.89	48.49	52.27	59.33	62.40	59.97	53.87	57.26	51.48	53.74
Spain	23.86	27.16	29.98	38.28	36.19	36.57	44.39	43.92	49.36	57.17	56.55	56.03	60.00	68.85	62.48	69.08	54.81	46.79	41.43	36.90
Chile	54.03	51.64	45.96	46.47	44.75	52.37	40.25	29.36	31.81	36.08	38.05	36.30	30.86	36.45	25.40	40.77	25.94	18.60	23.80	25.51
Germany	18.24	18.90	17.76	16.66	25.29	22.30	22.75	27.25	22.49	20.68	25.77	22.89	22.83	26.04	24.09	36.30	40.42	41.87	34.50	37.89
Greece	24.23	23.81	23.13	23.66	23.03	23.55	19.07	20.90	19.33	22.76	18.94	19.07	20.49	18.52	18.68	16.04	12.46	8.25	4.07	5.22
India	20.74	19.69	20.40	16.01	14.63	18.67	9.92	16.24	13.84	9.86	5.62	13.11	10.02	13.44	11.69	10.90	9.78	6.31	8.26	8.23
Holland	10.19	10.26	13.11	10.49	9.66	7.64	9.31	8.96	12.93	12.17	15.46	17.72	13.71	18.43	17.59	10.32	10.22	5.05	6.48	4.65
Peru	13.80	13.75	14.39	14.33	12.90	13.74	10.76	12.70	17.38	12.17	11.61	10.56	10.89	9.22	6.36	7.24	8.43	8.78	8.95	4.65
Brazil	16.17	15.53	16.07	12.10	13.80	13.03	13.24	12.79	10.02	10.34	9.93	10.26	8.05	7.92	9.91	10.75	12.88	11.06	8.87	2.66
Italy	10.88	10.84	11.73	11.25	8.41	10.94	11.18	9.83	11.62	10.36	9.11	6.58	6.71	9.99	10.87	11.69	7.62	10.50	7.23	9.90
Egypt	19.13	18.09	16.89	19.25	11.27	11.24	14.80	14.52	10.61	8.66	4.53	4.08	3.45	2.89	2.52	2.04	2.64	2.09	3.35	2.18
Namibia	9.25	8.63	8.73	6.77	6.69	6.19	5.37	4.82	4.60	3.85	2.91	3.50	4.00	4.21	3.13	2.91	3.51	1.48	1.74	1.86
The rest of countries	6.56	4.18	11.08	12.79	22.97	26.34	26.71	47.35	37.23	34.84	43.00	54.60	54.16	64.10	52.83	45.53	52.11	63.90	56.71	59.31
Total	388.9	379.4	377.8	371.9	377.2	382.5	364.9	370.5	365.6	353.7	350.7	367.8	360.5	393.2	378.6	392.92	360.54	337.66	308.39	302.6
	8	7	3	5	9	2	5	9	7	0	2	9	8	8	1					8
Average	27.79	27.10	26.99	26.57	26.95	27.32	26.07	26.47	26.12	25.27	25.05	26.28	25.76	28.09	27.05	28.07	25.75	24.12	22.03	21.62

Source: www.trademap.org

Table 4. The most important economic variables affecting the individual demand for the exports of the Egyptian citrus group in the Dutch market during the period (2002-2021)

Year	Average of Dutch per capita share from Egyptian citrus exports	Price ratio between Egypt/Turkey	Price ratio between Egypt/Spain	Price ratio between Egypt/South Africa	The average export price from turkey to Holland	The average export price from Spain to Holland	The average export price from South Africa to Holland	The average export price from Egypt to Holland
2002	0.020	138.67	69.92	195.31	0.3	0.595	0.213	0.416
2003	0.220	68.13	35.49	92.28	0.386	0.741	0.285	0.263
2004	0.656	71.55	43.35	92.93	0.478	0.789	0.368	0.342
2005	1.956	73.13	43.61	119.47	0.495	0.83	0.303	0.362
2006	0.945	79.83	46.58	129.58	0.461	0.79	0.284	0.368
2007	0.914	58.93	45.74	101.95	0.711	0.916	0.411	0.419
2008	1.288	65.31	45.76	152.89	0.81	1.156	0.346	0.529
2009	2.630	86.29	58.76	142.49	0.715	1.05	0.433	0.617
2010	2.125	91.00	61.29	117.95	0.722	1.072	0.557	0.657
2011	1.684	75.29	55.22	86.77	0.688	0.938	0.597	0.518
2012	1.702	105.29	85.83	137.89	0.719	0.882	0.549	0.757
2013	3.305	61.65	47.79	81.98	0.738	0.952	0.555	0.455
2014	3.361	63.10	42.11	66.61	0.626	0.938	0.593	0.395
2015	3.314	71.95	48.59	74.01	0.574	0.85	0.558	0.413
2016	6.223	71.03	42.04	60.41	0.535	0.904	0.629	0.38
2017	7.628	65.32	41.15	61.01	0.594	0.943	0.636	0.388
2018	9.013	74.54	39.59	62.27	0.538	1.013	0.644	0.401
2019	7.537	52.98	37.09	54.56	0.621	0.887	0.603	0.329
2020	10.12	61.63	36.46	53.66	0.57	0.95	0.64	0.35
2021	11.24	60.25	34.95	50.95	0.57	0.96	0.65	0.34
Average	3.79	74.79	48.07	96.75	0.59	0.91	0.49	0.43

Source: World Bank website, www.trademap.org

Table 5. The most important economic variables affecting the individual demand for Dutch imports from the Egyptian citrus group during the period (2002-2021)

Year	The price ratio between Egypt / turkey	The price ratio between Egypt / Spain	The price ratio between Egypt / South Africa	The average price of Holland imports from turkey	The average price of Holland imports from Spain	The average price of Holland imports from South Africa	The average price of Holland imports from Egypt	Average of Dutch per capita share from Egyptian citrus imports
2002	84.22	101.68	107.58	0.792	0.656	0.62	0.667	0.030
2003	82.05	59.85	78.87	0.596	0.817	0.62	0.489	0.432
2004	73.06	67.17	87.41	0.798	0.868	0.667	0.583	0.838
2005	81.96	68.59	62.46	0.768	0.895	0.682	0.559	2.423
2006	81.93	68.57	76.70	0.723	0.751	0.703	0.576	1.855
2007	70.03	74.88	78.57	0.966	0.812	0.911	0.638	1.616
2008	72.54	73.55	72.62	1.126	0.946	0.947	0.687	1.740
2009	93.56	86.70	87.34	1.255	0.948	0.885	0.828	2.759
2010	78.78	81.97	91.02	0.988	0.824	0.952	0.75	2.190
2011	87.60	81.65	81.65	1.248	0.943	0.879	0.77	1.492
2012	72.89	71.05	71.84	1.153	0.902	0.889	0.648	2.779
2013	73.71	84.22	70.51	1.305	1.014	0.97	0.715	3.150
2014	65.67	75.15	63.00	1.388	1.008	0.967	0.635	3.383
2015	58.31	75.07	60.78	0.99	0.872	0.909	0.53	4.020
2016	53.25	74.12	56.40	1.254	0.929	0.984	0.524	6.331
2017	53.93	79.89	59.91	1.105	0.928	1.031	0.556	6.869
2018	56.95	82.22	56.78	1.126	1.018	1.015	0.578	7.959
2019	54.11	76.71	57.16	1.077	0.922	0.974	0.527	6.744
2020	55.96	80.76	57.35	1.013	0.9665	0.9895	0.554	7.558
2021	56.52	81.77	57.265	0.962	0.9734	0.9849	0.5571	7.7909
Average	70.35	77.28	71.76	1.03	0.90	0.88	0.62	3.60

Source: World Bank website, www.trademap.org

Table 6. The most important citrus exporting countries to the Netherlands according to the relative importance of the exports quantity during the period (2002-2021)
(Amount: thousand tons)

Country	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
South Africa	329.11	318.10	306.1	299.1	293.7	262.0	254.0	262.4	298.8	249.7	234.4	239.7	236.2	273.4	233.1	149.6	191.9	78.1	146.4	75.7
Spain	166.10	174.82	199.0	178.4	199.8	201.3	217.0	236.6	231.3	233.6	234.0	253.2	204.9	197.7	244.9	219.7	176.4	237.8	197.9	177.5
Morocco	167.11	152.37	116.9	137.1	117.7	107.8	68.1	57.1	52.9	46.6	24.9	36.4	45.6	28.6	26.5	30.3	39.5	13.6	7.0	0.5
Argentina	64.77	61.95	59.6	53.8	55.2	53.5	44.8	45.6	40.0	39.4	37.7	36.8	26.2	34.6	31.5	45.3	29.0	29.7	26.3	10.8
Egypt	56.31	53.86	48.2	48.3	53.5	43.7	40.2	37.9	52.8	47.3	29.9	46.7	41.7	32.1	25.3	12.3	3.8	0.9	0.1	0.0
Brazil	92.81	89.70	80.7	85.5	88.2	73.7	79.0	65.7	45.2	61.0	64.0	72.1	61.4	86.6	69.6	99.3	67.3	64.4	75.5	48.2
China	40.14	39.43	41.7	38.8	31.9	34.1	38.7	36.3	32.0	28.9	23.3	19.4	20.8	21.9	15.5	15.4	14.2	14.6	15.7	9.8
Uruguay	31.95	33.72	30.5	40.1	37.9	52.7	35.6	42.6	67.8	73.3	84.4	106.8	78.5	127.1	119.2	103.4	65.1	53.6	81.6	52.0
Germany	30.54	28.90	30.2	24.8	22.8	18.6	20.2	22.3	19.8	20.7	20.1	18.0	14.4	16.5	9.5	10.3	9.0	3.0	2.5	3.4
Mexico	20.76	20.27	22.1	21.4	13.8	17.5	14.7	22.0	23.9	22.1	23.6	21.7	21.6	9.9	11.5	13.3	8.2	7.7	4.3	5.4
Belgium	41.65	39.16	32.5	42.1	27.4	30.4	26.4	23.9	31.1	27.8	19.6	20.4	9.6	8.8	7.0	5.8	4.4	4.6	3.4	3.5
Zimbabwe	12.94	13.74	9.7	22.0	13.1	22.6	13.2	18.7	8.0	5.1	4.2	5.9	7.2	9.3	11.7	17.7	16.8	13.2	10.1	17.6
Peru	15.31	14.66	12.5	9.4	15.5	17.8	15.1	4.1	7.2	6.7	7.4	7.9	7.5	7.4	88.2	16.3	24.3	21.9	27.6	25.4
United kingdom	8.03	10.31	16.3	14.3	15.9	13.1	21.6	28.4	29.0	27.4	35.6	43.6	32.3	33.9	40.8	43.8	33.2	6.9	22.2	14.3
Rest of countries	97.14	97.15	95.8	110.1	83.3	101.5	85.5	107.0	99.3	114.5	117.7	125.0	98.6	112.1	117.1	95.4	95.7	81.8	117.8	84.5
Total	1174.68	1148.15	1101.7	1125.3	1069.7	1050.3	974	1010.6	1039.2	1004	960.8	1053.7	906.4	1000	1051.3	877.8	778.9	631.8	738.2	528.5
Average	78.31	76.54	73.45	75.01	71.31	70.02	64.94	67.37	69.27	66.94	64.05	70.24	60.43	66.66	70.09	58.53	51.92	42.12	49.23	35.24

www.trademap.org:Source

Table 7. The most important economic variables affecting the individual demand for Egyptian exports from preserved vegetables in the Italian market during the period (2002-2021)
(Quantity in kg, Price in dollars/kg)

Year	The price ratio between Egypt and Morocco	The price ratio between Egypt and Poland	The price ratio between Egypt and china	The average export price from Morocco to Italy	The average export price from Poland to Italy	The average export price from China to Italy ¹	The average export price from Egypt to Italy	Average of Italian per capita from national income	The exchange rate (dollar/pound)	Average of Italian per capita share from the Egyptian exports of preserved vegetables
2002	5.361	18.485	70.095	3.115	2.684	0.830	0.793	38294.000	4.350	0.014
2003	7.046	26.776	68.974	2.954	2.591	0.380	0.899	38135.000	4.540	0.011
2004	19.453	35.067	67.853	2.793	2.499	0.070	1.006	37977.000	4.730	0.075
2005	31.860	43.358	66.732	2.632	2.406	0.519	1.112	37818.000	4.920	0.041
2006	44.267	51.649	65.611	2.471	2.314	0.969	1.219	37660.000	5.110	0.059
2007	63.140	55.200	54.730	2.051	2.346	1.366	1.295	35900.000	5.635	0.024
2008	56.220	72.750	67.900	2.574	1.989	2.131	1.447	37910.000	5.433	0.009
2009	72.390	73.140	71.440	2.046	2.025	2.073	1.481	37870.000	5.545	0.006
2010	124.810	96.980	68.190	1.467	1.888	2.685	1.831	37850.000	5.622	0.015
2011	90.880	84.540	48.980	1.799	1.934	3.338	1.635	37900.000	5.933	0.062
2012	77.500	94.470	48.050	2.204	1.808	3.555	1.708	36200.000	6.056	0.055
2013	71.620	82.950	60.250	2.343	2.023	2.785	1.678	35550.000	6.870	0.110
2014	21.200	29.660	15.670	2.708	1.935	3.662	0.574	34890.000	7.078	0.606
2015	63.480	82.760	36.300	1.974	1.514	3.452	1.253	32980.000	7.691	0.274
2016	63.410	65.270	35.430	1.689	1.641	3.023	1.071	31950.000	10.025	0.465
2017	89.770	84.280	50.390	1.594	1.698	2.840	1.431	31360.000	17.783	0.294
2018	55.460	42.030	23.760	1.345	1.775	3.140	0.746	33840.000	17.767	0.636
2019	109.350	75.830	49.210	1.337	1.928	2.971	1.462	34530.000	16.771	0.295
2020	111.417	76.072	49.631	0.891	1.829	2.724	1.417	35475.000	20.640	0.533
2021	124.075	79.720	53.775	0.638	1.852	2.593	1.511	36497.000	22.660	0.575
Average	65.14	63.55	53.65	2.03	2.03	2.26	1.28	36029.30	9.26	0.21

Source: World Bank website, www.trademap.org

Table 8. The most important economic variables affecting the individual demand for Italian imports from Egyptian preserved vegetables during the period (2002-2021) (Quantity in kg, Price in dollars/kg)

Year	Average of Italian per capita share from Egyptian preserved vegetable imports	The price ratio between Egypt and Morocco	The price ratio between Egypt and Poland	The price ratio between Egypt and China	Average price of Italy's imports from Morocco	Average price of Italy's imports from Poland	Average price of Italy's imports from China	Average price of Italy's imports from Egypt	Italian average per capita national income	Exchange Rat Dollar/pound
2002	0.246	82.73	44.67	75.50	2.04	3.27	2.06	1.74	38294	4.35
2003	0.223	82.30	48.56	73.45	2.07	3.15	2.18	1.74	38135	4.54
2004	0.199	81.87	52.45	71.40	2.10	3.03	2.29	1.74	37977	4.73
2005	0.176	81.44	56.34	69.35	2.12	2.91	2.41	1.74	37818	4.92
2006	0.174	81.01	60.23	67.30	2.15	2.80	2.52	1.74	37660	5.11
2007	0.102	68.4	63.5	54.8	2.224	2.397	2.775	1.522	35900	5.635
2008	0.097	65.6	60.6	62.8	2.647	2.865	2.767	1.737	37910	5.433
2009	0.098	85.3	77.9	75.4	2.274	2.489	2.574	1.940	37870	5.545
2010	0.157	107.3	80.6	65	1.646	2.190	2.717	1.766	37850	5.622
2011	0.247	105.8	76.7	58.4	1.868	2.577	3.388	1.977	37900	5.933
2012	0.165	64.2	91.8	42.3	2.481	1.737	3.767	1.594	36200	6.056
2013	0.184	58.5	79.4	55	2.739	2.019	2.916	1.603	35550	6.870
2014	0.167	60.2	73.2	47.7	3.002	2.467	3.787	1.806	34890	7.078
2015	0.224	73.6	81	48.4	2.299	2.090	3.499	1.693	32980	7.691
2016	0.296	102.2	87.7	59.8	1.844	2.149	3.151	1.884	31950	10.025
2017	0.333	79.4	80.5	48.6	1.846	1.821	3.014	1.466	31360	17.783
2018	0.333	73.2	79.2	40.6	1.764	1.630	3.181	1.291	33840	17.767
2019	0.312	87.6	66.6	47.7	1.672	2.199	3.069	1.465	34530	16.771
2020	0.33	73.10	62.35	38.10	1.63	1.94	3.08	1.17	35475	20.64
2021	0.34	68.10	55.89	33.67	1.57	1.94	3.08	1.03	36497	22.66
Average	0.22	79.09	68.96	56.76	2.10	2.38	2.91	1.63	36029.30	9.26

Source: World Bank website, www.trademap.org

Table 9. The most important exporting countries of preserved vegetables to Italy, according to the relative importance of the quantity of exports during the period (2002-2021)
(Amount: thousand tons)

Country	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Egypt	25.15	23.29	18.80	20.10	20.18	17.96	13.63	10.15	11.09	9.80	14.67	9.31	5.81	5.69	5.96	4.27	3.11	1.95	0.79	0.37
China	8.22	8.28	8.22	8.43	8.28	9.18	8.37	8.50	9.34	7.61	11.01	10.31	9.87	11.41	11.51	12	12.47	12.93	13.39	13.86
Morocco	7.49	6.76	5.96	5.67	4.65	3.30	2.87	2.80	3.44	4.20	2.90	3.50	1.87	2.20	3.09	2.16	1.94	1.73	1.51	1.29
Spain	11.01	10.12	12.57	5.56	5.64	6.41	6.08	5.92	4.22	4.38	3.86	3.92	3.05	3.30	3.19	2.84	2.62	2.4	2.19	1.97
Poland	7.62	7.28	6.39	6.44	6.72	7.06	5.49	4.54	5.02	4.91	4.98	4.98	5.15	4.44	4.86	4.73	4.68	4.64	4.59	4.55
creek	3.10	2.79	2.44	2.64	1.55	1.07	1.36	1.13	1.49	1.06	1.28	1.48	1.37	1.06	1.43	1.3	1.29	1.29	1.29	1.28
Turkey	3.14	2.85	2.74	1.76	2.10	1.91	1.40	0.91	0.75	0.92	1.18	0.49	0.20	0.20	0.21	1.18	0.49	0.21	0.2	0.20
Vietnam	-0.26	0.05	0.44	0.78	0.89	1.01	1.38	2.19	2.09	1.75	1.93	3.18	2.50	2.68	3.20	3.3	3.5	3.71	3.92	4.12
India	0.53	0.67	1.02	0.72	1.05	1.33	1.25	1.64	1.90	1.66	2.01	2.67	2.50	1.82	3.91	3.33	3.57	3.82	4.06	4.31
Tunisia	0.48	0.43	0.45	0.25	0.35	0.20	0.23	0.18	0.08	0.04	0.04	0.14	0.06	0.08	0.06	0.1	0.08	0.09	0.07	0.8
Rest of the countries	4.47	4.69	6.06	4.13	5.60	4.50	5.66	4.82	6.13	3.42	5.92	7.69	4.53	4.87	4.18	3.42	3.83	3.8	3.54	2.49
Total	70.95	67.22	65.08	56.47	56.99	53.92	47.71	42.77	45.52	39.74	49.80	47.67	36.91	37.75	41.59	38.62	37.59	36.57	35.55	34.52
Average	6.45	6.11	5.92	5.13	5.18	4.90	4.34	3.89	4.14	3.61	4.53	4.33	3.36	3.43	3.78	3.51	3.42	3.32	3.23	3.20

Source: www.trademap.org

Table 10. The most important economic variables affecting the individual demand for Egyptian potato exports within the Greek market during the period (2002-2021) (Quantity in kg, Price in dollars)

Year	Average of Greek per capita share from Egyptian potato exports	average of Greek per capita share from national income	Price ratio between Egypt/Holland	Price ratio between Egypt/France	Price ratio between Egypt/Cyprus	The average export price from Holland to Greece	The average export price from France to Greece	The average export price from Cyprus to Greece	The average export price from Egypt to Greece
2002	4.715	20260	45.91	112.22	79.84	0.440	0.180	0.253	0.202
2003	4.999	21360	29.40	78.89	44.99	0.534	0.199	0.349	0.157
2004	10.305	22140	32.08	66.79	39.53	0.583	0.280	0.473	0.187
2005	7.58	24550	48.37	127.27	55.61	0.492	0.187	0.418	0.238
2006	8.02	26350	30.10	53.47	23.82	0.588	0.331	0.602	0.177
2007	5.39	28660	35.92	79.72	41.24	0.799	0.36	0.839	0.287
2008	6.04	29330	70.19	135.41	59.60	0.681	0.353	0.997	0.478
2009	4.06	27380	102.13	247.97	111.26	0.658	0.271	0.799	0.672
2010	5.21	24470	80.64	142.32	59.89	0.563	0.319	0.786	0.454
2011	5.17	23190	73.41	115.97	82.95	0.643	0.407	0.745	0.472
2012	3.22	22430	87.11	155.84	75.24	0.551	0.308	0.596	0.48
2013	4.32	22010	73.45	117.08	63.83	0.644	0.404	0.786	0.473
2014	1.99	20140	67.55	163.53	74.74	0.644	0.266	0.499	0.435
2015	4.70	18550	80.31	176.44	56.03	0.457	0.208	0.559	0.367
2016	3.60	17910	72.34	110.96	63.20	0.546	0.356	0.543	0.395
2017	7.99	18970	52.49	102.60	56.23	0.602	0.308	0.497	0.316
2018	6.12	19750	41.90	69.54	45.14	0.654	0.394	0.577	0.274
2019	11.29	25654	25.47	41.41	25.18	0.691	0.425	0.721	0.376
2020	11.45	24981.20	22.47	33.28	25.23	0.76	0.48	0.69	0.31
2021	13.02	26586.00	19.55	34.85	17.25	0.82	0.53	0.72	0.30
Average	6.46	23233.56	54.54	108.28	55.04	0.62	0.33	0.62	0.35

Source: World Bank website, www.trademap.org

Table 11 . The most important economic variables affecting the individual demand for Greek imports of Egyptian potatoes during the period (2002-2021)

(Quantity in kg, Price in dollars)

Year	Average of Greek per capita share from imports of Egyptian potatoes	average of Greek per capita share from national income	Price ratio between Egypt/Holland	Price ratio between Egypt/France	Price ratio between Egypt/Cyprus	Average price of Greek imports from Holland	Average price of Greek imports from France	Average price of Greek imports from Cyprus	Average price of Greek imports from Egypt
2002	4.156	20260	68.85	114.40	86.47	0.427	0.257	0.34	0.194
2003	2.939	21360	72.83	113.92	70.05	0.427	0.273	0.444	0.511
2004	5.790	22140	66.12	89.58	65.05	0.546	0.403	0.555	0.361
2005	4.508	24550	68.41	104.32	52.07	0.459	0.301	0.603	0.314
2006	4.618	26350	65.06	108.56	65.59	0.624	0.374	0.619	0.406
2007	5.914	28660	58.68	82.51	64.16	0.772	0.549	0.706	0.453
2008	6.608	29330	58.00	107.13	55.24	0.881	0.477	0.925	0.511
2009	6.489	27380	65.92	109.33	48.64	0.622	0.375	0.843	0.41
2010	5.354	24470	63.55	106.93	47.62	0.631	0.375	0.842	0.401
2011	4.705	23190	94.53	139.84	89.41	0.75	0.507	0.793	0.509
2012	3.307	22430	55.70	81.86	54.91	0.632	0.43	0.641	0.352
2013	4.190	22010	77.97	90.53	69.07	0.699	0.602	0.789	0.545
2014	2.102	20140	64.15	127.60	86.32	0.728	0.366	0.541	0.467
2015	5.169	18550	65.90	135.16	58.25	0.525	0.256	0.594	0.346
2016	4.306	17910	63.60	86.72	59.25	0.544	0.399	0.584	0.346
2017	7.865	18970	65.26	111.38	70.45	0.57	0.334	0.528	0.372
2018	5.929	19750	55.20	77.88	51.35	0.587	0.416	0.631	0.324
2019	10.993	20517	71.99	103.24	62.57	0.664	0.463	0.864	0.278
2020	10.83	20871.60	65.52	81.07	60.60	0.67	0.50	0.82	0.29
2021	12.16	21449.00	65.90	73.80	60.67	0.71	0.55	0.88	0.27
Average	5.90	22514.38	66.66	102.29	63.89	0.62	0.41	0.68	0.38

Source: World Bank website, www.trademap.org

Table 12. The most important potato exporting countries to Greece according to the relative importance of the quantity of exports during the period (2002-2021)
(Amount: thousand tons)

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Egypt	45.31	32.12	63.43	49.53	50.90	65.35	73.21	72.07	59.54	52.24	36.53	45.95	22.90	55.93	46.40	84.59	63.63	117.81	118.794	134.104
France	22.94	35.53	11.38	21.97	26.46	15.91	15.40	24.27	20.75	28.72	30.44	21.99	27.58	30.26	22.93	23.15	35.68	30.37	31.371	32.241
Holland	3.00	6.17	5.63	2.96	6.20	7.69	13.12	17.93	12.44	27.82	13.74	21.26	29.97	21.84	30.86	34.50	29.82	26.90	30.205	30.554
Cyprus	13.35	23.53	22.46	20.68	21.64	24.74	22.73	27.32	24.05	26.33	16.99	18.68	15.88	15.45	14.76	16.11	15.74	14.52	14.952	14.821
Germany	13.68	8.08	4.44	8.78	6.71	13.92	16.71	13.50	9.07	8.05	17.39	16.63	15.44	12.97	16.34	9.78	12.96	10.05	9.569	8.611
Italy	3.48	4.23	1.00	7.59	4.26	1.53	1.67	4.07	0.90	0.99	0.78	0.87	0.48	0.61	0.37	0.13	3.93	3.12	3.732	4.387
Rest of countries	12.68	23.07	33.02	8.97	10.54	11.78	10.97	27.03	10.85	14.78	13.78	22.35	17.09	12.24	12.39	9.75	14.90	11.07	21.51	26.22
Total	114.45	132.73	141.35	120.48	126.71	140.92	153.79	186.19	137.61	158.93	129.64	147.73	129.34	149.30	144.04	178.01	176.65	213.83	230.14	250.94
Average	16.35	18.96	20.19	17.21	18.10	20.13	21.97	26.60	19.66	22.70	18.52	21.10	18.48	21.33	20.58	25.43	25.24	30.55	32.88	35.85

Source: World Bank website, www.trademap.org

محددات الطلب على صادرات الخضار والفاكهة المصرية لأهم دول الاتحاد الأوروبي

محمد كامل ريجان؛ ممدوح مدبولي نصر؛ إسرائ أحمد مهران السيد عويس

السلع وخاصة في الأسواق الكبيرة منها مثل السوق الهولندي والسوق الألماني والسوق البريطاني قبل انسحابه من الاتحاد وتستهدف الدراسة إلى محاولة تحسين موقف الصادرات الزراعية المصرية مع دول الاتحاد الأوروبي وتبين وجود علاقة طردية بين متوسط نصيب الفرد الإنجليزي من الصادرات المصرية للعنب ومتوسط سعر العنب المصدر من تركيا إلى المملكة المتحدة، حيث أن بانخفاض متوسط سعر العنب المصدر من تركيا إلى المملكة المتحدة بنسبة ١٪ ينخفض متوسط نصيب الفرد الإنجليزي من العنب المصري بنسبة ٣.٢٢٪، كما أوضحت النتائج أيضاً أن سياسة تعويم الجنيه المصري جاءت غير معنوية، أي أنها لا تؤثر على متوسط نصيب الفرد الإنجليزي من العنب المصري.

الكلمات المفتاحية: محددات الطلب، صادرات الخضار والفاكهة، الاتحاد الأوروبي

تهتم مصر بالتجارة الخارجية حيث تعمل على زيادة التدفق التجاري بينها وبين العديد من دول العالم، حيث تسهم بنسبة كبيرة في التجارة العالمية، ويعتبر الاتحاد الأوروبي الشريك التجاري الأكبر لمصر، حيث بلغت نسبة الواردات المصرية من الاتحاد الأوروبي حوالي ٢٦٪ من الواردات المصرية الكلية عام ٢٠٢١، كما وصلت صادرات مصر إلى الاتحاد الأوروبي في نفس العام نحو ٣١٪ من جملة الصادرات المصرية، وعلى الرغم من أهمية الاتحاد الأوروبي بالنسبة للواردات والصادرات المصرية فإن الصادرات البستانية المصرية إلى الاتحاد الأوروبي بصفة خاصة تتصف بعدم الاستقرار من جهة وعدم الاستمرارية من جهة ثانية، والاتجاه أحيانا نحو التناقص من جهة ثالثة وتمثلت مشكلة الدراسة إلى تذبذب الصادرات المصرية من السلع الزراعية إلى دول الاتحاد الأوروبي، وتقلبها من عام لآخر. بمعدلات مرتفعة أدت إلى ضرورة دراسة محددات الطلب الأوروبي على تلك