The Impact of Implementing The African Free Trade Agreement on Agricultural Foreign Trade between Egypt and The Most Important African Countries

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ABSTRACT: The research mainly aimed to develop and increase African Free Trade Area by studying the impact of implementing the African Free Trade Agreement on agricultural foreign trade between Egypt and the most important African countries, by studying some of the sub-objectives, which are: studying the volume of agricultural trade exchange between Egypt and African countries, studying the relative importance imports of the most important agricultural commodities to African countries from the world, identifying Egypt's promising opportunities in African markets, studying the relative importance of Egypt's exports to African countries in relation to African imports of agricultural commodities, studying and identifying the most important factors affecting the flow of foreign agricultural trade between Egypt and the most important African countries, This is done by studying and analyzing agricultural foreign trade policies using the gravity model. The importance of the research was through identifying the expected impact of Egypt's participation with the countries of the African Free Trade Area, which helps foreign trade policy makers in proposing and setting policies that help develop and increase intra-Egyptian trade, especially agricultural, using the gravity model. The research relied on the descriptive and quantitative analysis method required by the nature of this study. The EViews 9 program was also used to analyze the gravity model for agricultural trade between Egypt and African countries. The research also relied on secondary data through data published in various organizations, ministries and information centers in Egypt and some economic studies related to study subject are used.

Keywords: African Free Trade Agreement, gravity model, Organization, Sadc, Eac, Comesa

INTRODUCTION

In recent years, Egypt has been seeking to conclude many international trade agreements, and the Egyptian state has tended to take many strategies to develop its foreign trade. Trade agreements with African countries considered a great and appropriate opportunity to develop Egyptian foreign agricultural trade, as African countries are similar in their characteristics and features, which helps to Increasing opportunities for trade exchange between them. The African Free Trade Agreement constitutes one of the attempts to develop African trade, as the tripartite free trade agreement was signed between the Southern African Development Community SADC, the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC), during the summit hosted in Sharm El-Sheikh on June 10, 2015. The agreement includes 54 signatory countries, making it the largest free trade area in terms of the number of members, and the largest in terms of population, as the number the population of the African continent is about 1.4 billion people, and its geographical size is second only to the World Trade Organization, with a gross domestic product of about 3.4 trillion dollars.

Problem of the study:

In recent years, Egypt has moved towards concluding many international trade agreements with many economic blocs in Africa with the aim of opening new markets for Egyptian exports, as well as the possibility of diversifying such exports, which would lead to increasing export revenues and improving the balance of payments situation, as well as increasing exchange. Trade through Egypt obtaining the goods it needs from these countries at prices lower than their global counterparts.

Despite what the Free Trade Area Agreement aims to achieve gains by increasing intra-trade and increasing Egyptian exports to the countries of the African continent, and the many advantages and competitive elements that Egypt possesses, the value of intra-trade between Egypt and the African market is low, reaching about 1,937 million. dollars during the year 2022, representing about 18.7%, compared to the volume of trade exchange between Egypt and the countries of the world, which requires work to increase and develop Egyptian-African trade.

Objective of the study:

The research mainly aims to develop and increase Egyptian-African agricultural trade in a way that helps improve the Egyptian agricultural trade balance by studying the impact of implementing the African Free Trade Agreement on agricultural foreign trade between Egypt and the most important African countries, by studying some of the sub-objectives, which are:

- Study the relative importance of exports of the most important Egyptian agricultural commodities to African countries.
- Studying the geographical distribution of exports of the most important Egyptian agricultural commodities to African countries
- Study the relative importance of imports of the most important Egyptian agricultural commodities from African countries.
- Studying the geographical distribution of imports of the most important Egyptian agricultural commodities from African countries.
- Study and identify the most important factors affecting the flow of agricultural foreign trade between Egypt and the most important African countries.
- Importance and justifications for the research:

research helps foreign trade policy makers in proposing and establishing policies that help develop and increase intra-Egyptian trade, especially agricultural ones, in a way that contributes to achieving the desired development, increasing the per capita share of agricultural output, and reducing the deficit in the agricultural trade balance.

Research method and data sources:

The research depends on descriptive and quantitative analysis using some statistical methods such as simple regression as well as analysis of variance and econometric methods required by the nature of this study, with the aim of identifying the relationships that govern the main variables. The gravity model for agricultural trade between Egypt and African countries is also estimated using the EViews 9 program. The research also relies on secondary data published in various organizations, ministries and information centers in Egypt, the International Trade Center, the Commodity Trade Statistics Database (Comtrade) of the United Nations, the Central Agency for Public Mobilization and Statistics (Information Center), the Institute for African Research and Studies, Cairo University, FAO.

RESULTS AND DISCUSSION

First: The quantity of agricultural trade between Egypt and African countries during the period (2018-2022):

Data from Table No. (1) indicate that the quantity of Egyptian African agricultural trade exchange, as an average for the period (2018-2022), amounted to about $ 1,655 million. The value of foreign agricultural exports, as an average for the same period, amounted to about $ 1,010 million, compared to the value of imports amounting to about $ 645 million, which means There was an average surplus of about $ 365 million, and the percentage of foreign agricultural exports covering agricultural imports on average during that period was about 158.6%.

Table No. (1) Agricultural trade balance between Egypt and African countries during the period (2018-2022) (value: in thousand dollars)

Year	Egypt's exports To Africa	Egypt imports from Africa	Agricultural trade balance	Trade volume	Export to import coverage ratio* %
2018	921997	664722	257275	1586719	138.7
2019	944432	716089	228343	1660521	131.9
2020	883034	487955	395079	1370989	181
2021	1200216	521060	679156	1721276	230.3
2022	1100931	835842	265089	1936773	131.7
Average	1010122	645134	364988	1655256	158.6

Source: ITC calculations based on UN COMTRADE statistics until January.

Second: The geographical distribution and relative importance of Egyptian agricultural exports to African countries

By calculating the relative importance of the geographical distribution of Egyptian agricultural exports to African countries, the data in Table No. (2) indicates that Egyptian agricultural foreign exports to Africa during the period (2018-2022) are concentrated in five countries at a rate of 63.8%, and these countries are “Libya, Morocco, Algeria, Sudan, Kenya, with an average value of about $ 205, 149.3, 106.5, 102.6, 80.4 million, respectively, representing a relative importance of about (20.3%, 14.8%, 10.5%, 10.2%, 8%) of the average value of Egypt’s total agricultural exports to countries Africa during (2018-2022), and the remaining percentage, amounting to about 36.2%, will be for other countries.

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Table No. (2) Geographical distribution of Egypt's agricultural exports to African countries during the period (2018-2022) (thousand dollars)

Country	2018	2019	2020	2021	2022	Average	%
Libya	247977	217387	149607	175780	234374	205025	20.3
Morocco	144403	128882	116057	197673	159628	149329	14.8
Algeria	60754	87302	122469	151566	110507	106520	10.5
Sudan	5474	43467	68009	203239	192707	102579	10.2
Kenya	80716	88513	71192	76850	84623	80379	8
Total countries	539324	565551	527334	805108	781839	643831	63.8
other countries	382673	378881	355700	395108	319092	366291	36.2
Total	921997	944432	883034	1200216	1100931	1010122	100

https://www.fao.org/faostat/ar/#data/TM

Third: The relative importance of Egypt's exports of agricultural commodities to African countries in relation to African imports:

The data in Table No. (3) indicate that by comparing African countries' imports of agricultural commodities from the world shown in Table No. (4) with African countries' imports of agricultural commodities from Egypt, which are represented by the most important commodities mentioned in Tables No. (1, 2) in the appendix, which show Egyptian agricultural exports to African countries during the period (2018-2022),

It is clear that Egypt has a great opportunity to increase exports of the indicated goods, which are represented in the products (food preparations, raw cane sugar or beet sugar, refined sugar, soybean oil, cigarettes (processed tobacco), skim milk, sunflower oil, raw, Wheat flour) as the value of these commodities represents about $ 293.7 million, which represents about 14.7% of Africa's imports of the same goods from the world, which amount to about $ 65 billion, which gives Egypt a comparative advantage to increase exports of these commodities in addition to other agricultural commodities, especially agricultural commodities Manufacturer, where the value of Egypt's exports of agricultural commodities to African countries amounted to about $1,010 million, representing about 1.1% of the value of African countries' imports of agricultural commodities from the world. It represents a very small percentage compared to the value of African countries' imports, and the benefit from the African Free Trade Agreement, which Egypt joined in 2018.

Table No. (3) The relative importance of African imports of agricultural commodities During the period (2018-2022) (million dollars)

commodity	The value of Africa's imports of agricultural commodities from the world	The value of Egypt's exports of agricultural commodities to Africa	%
Food preparations	3152	88	2.8
Raw cane sugar or beet	2968	18.8	0.6
Refined sugar	2210	56	2.5
Soybean oil	2169	74.4	3.4
Cigarettes	1490	16.8	1.1
Skim milk	1162	12.4	1.1
Sunflower oil, raw	1154	16.5	1.4
Wheat flour	648	10.8	1.7
Total goods	**65008**	**293.7**	**14.7**
Total	**91948**	**1010**	**1.1**

Source: Food and Agriculture Organization (FAO).

Fourth: The geographical distribution and relative importance of Egyptian agricultural imports from African countries

Data from Table No. (4) of the geographical distribution of Egyptian agricultural imports from African countries during the period (2018-2022) indicate that Egyptian foreign agricultural imports

are concentrated in five countries, with 84.5% of Egypt's African agricultural imports during the study period represented in "Kenya, Sudan, Benin, Malawi, and Zimbabwe, with average values ranging between $ 231.4, 227.9, 33.4, 31.2, and 21.5 million, respectively, representing a relative importance of about 35.9%, 35.3%, 5.2%, 4.8%, and 3.3% of the average value of total imports. Egypt's agricultural sector is among African countries during the period (2018-2022), while the remaining percentage, about 15.5%, belongs to other countries.

Table No. (4) Geographical distribution of Egypt's agricultural imports from African countries during the period (2018-2022) (thousand dollars)

Country	2018	2019	2020	2021	2022	Average	%
Kenya	274400	248358	186051	189732	258327	231374	35.9
Sudan	206207	204581	142757	175466	410510	227904	35.3
Binin	40301	32384	17426	22531	54114	33351	5.2
Malawi	26097	93091	12091	18143	6802	31245	4.8
Zimbabwe	8566	28188	48670	20435	1610	21494	3.3
Total countries	555571	606602	406995	426307	731363	545368	84.5
other countries	109151	109487	80960	94753	104479	99766	15.5
Total	**664722**	**716089**	**487955**	**521060**	**835842**	**645134**	**100**

Fifth: The relative importance of African imports of agricultural commodities: Data from Table No. (5) indicate that the most important agricultural commodities that African countries import from the world amount to more than 200 agricultural commodities, and their value amounted to about $ 91,948 million during the period (2018-2022). The wheat crop comes in first place in terms of the value of commodity imports. Agricultural crops amounted to about $ 9.9 billion, representing a relative importance amounting to about 10.8% of the value of African agricultural imports. In second place was milled rice, amounting to about 9.7 billion dollars, representing a relative importance amounting to about 7.3% of the value of African agricultural imports. Palm oil came in third place, amounting to about $ 9.9 billion. $ 5.7 billion, which represents a relative importance of about 6.2% of the value of African agricultural imports during the period (2018-2022), While polished rice came in fourth place with about 5 billion dollars, representing a relative importance of about 5.4% of the value of African agricultural imports.

Table No. (5) The relative importance of African imports of agricultural commodities during the period (2018-2022) (million dollars)

Commodity	Million dollars %	%
wheat	9897	10.76
Ground rice	6720	7.31
Palm oil	5723	6.22
Polished rice	4992	5.43
corn	4830	5.25
Food preparations	3152	3.43
Raw cane sugar or beet sugar	2968	3.23
soybean	2516	2.74
Refined sugar	2210	2.4
Soybean oil	2169	2.36
Chicken meat, fresh or chilled	1775	1.93
Whole milk powder	1743	1.9
Cigarettes	1490	1.62
Soybean cake	1284	1.4
Rice crusher	1229	1.34
Skim milk and whey powder	1162	1.26
Sunflower oil, raw	1154	1.26

Boneless beef	1137	1.24
Tea leaves	921	1
Total goods	**57072**	**62.08**
Other	**34876**	**37.92**
Total agricultural imports	**91948**	**100**

Source: Food and Agriculture Organization (FAO).

The corn crop came in fifth place with about $4.8 billion, representing a relative importance of about 5.3% of the value of African agricultural imports, while in sixth place came (food preparations, sugar cane, beets, soybeans, refined sugar, oil, Soybeans) at about $ 3.2, 3, 2.5, 2.2, 2.2 billion, which represents a relative importance amounting to about (3.4, 3.2, 2.7, 2.4, 2.36) percent of the value of African agricultural imports, respectively, during the period (2018-2022) The total imports of agricultural commodities referred to in the table amounted to about $ 57.1 billion, which represents a relative importance of about 62.1% of the value of African agricultural imports, which amounted to about $ 91.9 billion during the period (2018-2022).

Sixth: Analysis of Egyptian-African agricultural foreign trade policies using the gravity model.

1-Gravity model for measuring international trade

The use of gravity models has increased in recent years, especially in studies related to foreign trade that aim to explain the reasons for the establishment of trade between many countries and economic blocs, and how to develop and increase it. The name of the gravity model comes from Newton's law of gravity, which states that the force of attraction between two bodies is directly proportional to the product of their masses and inversely proportional to the square of the distance between them. Therefore, the estimates of gravity models are based on the distance between two countries, And the size of the economies of each of them, using the domestic product, which is considered one of the most important determinants of foreign trade, as the high level of domestic product reflects the increased demand for primary and consumer goods and services, and thus the movement of trade between countries increases, while the geographical dimension leads to an increase in transportation costs, which leads to Decreased trade activity. Thus, the gravity model is linked to the theoretical foundations of international trade because it leads to an attractive relationship for trade flows. Some variables are also introduced to the basic model, including the population number, which indicates the increase in the country's needs, and the average per capita share of GDP in both countries with which trade takes place, instead of GDP, the common language.

2-Gravity model to measure agricultural foreign trade between Egypt and the most important African countries.

The gravity model studies the flow of agricultural foreign trade between Egypt and the most important basic trading countries in agricultural foreign trade, whether export or import, during the period (2018-2022). The five most important countries in terms of agricultural foreign exports were chosen, which are (Libya, Morocco, Algeria, Sudan, Kenya), as Egypt exports to those countries about 63.8% of the volume of Egyptian agricultural foreign exports to African countries. The five most important countries in terms of foreign agricultural imports from Africa were chosen: (Kenya, Sudan, Benin, Malawi, Zimbabwe), as Egypt imports from these countries about 84.5% of the volume of Egypt's foreign agricultural imports from African countries as an average for the period (2018-2022).

Gravity model used:

The gravity model used can be illustrated in the following equation:

$$LNT_{ijt} = \alpha_0 + \beta_1 LNGDP_{it} + \beta_2 LNGDP_{jt} + \beta_3 LNGDP_{i\ per\ cait} + \beta_4 LNGDP_{j\ per\ cajt} + \beta_5 Border\ D_{ij} + \beta_6 LNDistance_{ij}$$

T_{ijt}	The value of (total agricultural trade exchange, agricultural foreign exports, or agricultural foreign imports) between country i (Egypt) and country j.
GDP_{it}	GDP in country i.
GDP_{jt}	GDP in country j.
$GDP_{i\ per\ capita}$	Average per capita GDP in country i.

$GDP_{j\ per\ capjta}$	Average per capita GDP in country j.
$Lun.D_{ij}$	A dummy variable that takes the value 1 if there is a common language between countries i and j, zero otherwise.
$Distance_{ij}$	The closest geographical distance between Egypt and the importing or exporting country is in miles.
$Block.D_{ij}$	A dummy variable that takes the value 1 if there is a common bloc between countries i and j, zero otherwise.

3-Problems related to how to measure model variables:

It is necessary to unify the measurement method used for the variables included in the model, and GDP_it, GDP_jt, GDP_(j per capjta), GDP_(I per capjta) are used as a measure of income and per capita national income using the Atlas method, according to the current exchange rate against the US dollar US$.

The geographical distance between countries i and j is calculated in miles according to the data available on the Internet www.wdistances.com.

The common language Lun.Dij Type equation is expressed here. With a nominal variable, because the common language reflects the convergence of cultures between countries, which helps to create some agreement in the pattern of demand and consumption between countries and thus contributes to encouraging bilateral trade between countries i and j.

To get rid of the problem of multicollinearity, the logarithmic formula is used instead of linear using the logarithm of the natural base (LN).

The most important factors affecting the flow of trade between Egypt and the most important African countries:

The gravity model is used to identify the most important factors affecting the flow of trade between Egypt and the most important African countries during the period (2018-2022) using the panel data method, and the results were as follows:

a -Results of the gravity model for the value of Egypt's agricultural foreign exports to African countries:

Equation No. (1) indicates the results of the best model after conducting several attempts, which is the Panel EGLS (Cross-section SUR) model in terms of expressing the factors that are related to the impact on Egypt's foreign agricultural exports to African countries. The significance of the model as a whole was shown at a significance of 0.01. The value of the adjusted coefficient of determination was 0.99, which means that the model variables explain 99% of the changes occurring in Egypt's foreign agricultural exports to African countries. It also appears that there is a direct relationship between the dependent variable and each of Egypt's gross domestic product, as it increases Egypt's gross domestic product (GDP_it). By about 1%, Egypt's foreign agricultural exports to the five African countries increase by about 1.6%. It can be interpreted that increasing Egypt's gross domestic product helps raise the quality of Egyptian agricultural foreign products and thus increase its competitiveness in the group of study countries. It is also directly proportional (positive relationship) to both the gross domestic product of the African countries under study and the population size of the population in the African countries. , the formal variant of the common language.

LOG(Y)=C(1)+C(2)*LOG(X1)+C(3)*LOG(X2)+C(4)*LOG(X3)+C(5)*LOG(X4)+C(6)*(X5)+C(7)*(X6)

Y=(1)	**-95.9 +**	**1.6X1+**	**1.2X2-**	**0.96X3+**	**8.3X4+**	**6.6X5+**	**8X6**
	T=	(27.3)**	(233.8)**	(-2.4)*	(4.1)**	(6.3)**	(5.5)**
			F=602**			R^2=0.99	

It turns out that increasing the gross domestic product (GDP) in those countries by about 1% leads to an increase in the value of Egyptian exports to those countries by about 1.2% (economically logical). This can be interpreted to mean that by increasing the gross domestic product of those countries, the demand for Egyptian agricultural exports increases, which has a positive impact on Its demand for Egyptian goods, and by increasing the distance by about 1%, Egypt's exports to those countries decrease by about 0.96% (economically logical). On the other hand, increasing the population of African countries by about 1% leads to an increase in the value of Egypt's exports to those countries by about 8.3%.

This may be due to the increase in population, which is followed by an increase in demand for products and its tendency to demand higher quality goods, which provides more goods that can be directed to those countries, from Egypt's agricultural exports. The results also indicate that there are some countries with which Egypt shares a common language and common agreements. It

also explains the next step of the analysis, as the results of the Block.Dij dummy variable, according to the common language between Egypt and the importing countries, indicated an increase in exports to those countries by about 6.6%, which shows that Egypt's exports are concentrated by about 55.8% in both Libya and Morocco. Algeria, Sudan, Table No. (2), The results of the model also indicated that countries participating in joint agreements with Egypt lead to an increase in exports to those countries by about 8%, as there is a preferential advantage for these countries with Egypt in the field of agricultural exports.

b - Results of the gravity model for Egypt's foreign agricultural imports from African countries:

Several attempts were made to estimate the gravity model for Egypt's foreign agricultural imports from African countries. The best of these attempts was the Panel EGLS (Cross-section SUR) model in terms of expressing the factors related to the impact on Egypt's imports from African countries. Equation No. (2) confirmed its significance. The model as a whole was at a significance level of 0.01, and the value of the adjusted coefficient of determination was 0.59%, which means that the model variables explain 59% of the changes occurring in Egypt's agricultural imports from African countries. The results of Equation No. (2) also indicate the significance of the coefficient on the gross domestic product of the Egyptian state, and the sign of the variable is positive as expected, as whenever the Egyptian GDP_it increases by about 1%, the percentage of Egyptian imports from African countries increases by about 8.3%. As well as the significance of the coefficient on the gross domestic product of the foreign country, the sign of the variable is positive as expected, since whenever the domestic product of African countries increases by about 1%, Egypt's imports from African countries increase by about 8.3%, in addition to that increasing the growth rate in exporting African countries pushes countries to... Exporting surplus production to foreign markets, and this indicates an increase in merchandise exports to countries witnessing high growth rates.

LOG(Y)=C(1)+C(2)*LOG(X1)+C(3)*LOG(X2)+C(4)*LOG(X3)+C(5)*LOG(X4) +C(6)*(X5)

Y=(2)	**1179 +**	**8.3X1+**	**0.71X2-**	**72X3-**	**1.9X4+**	**0.64X5+**
	T=	(6.1)**	(1.3)**	(-72)*	(-1.9)	(-0.68)
				F=602**		R^2=0.99

The significance of the population elasticity for exporting and importing countries is unexpectedly negative, as the results indicate that increasing the population leads to a decrease in the movement of Egyptian merchandise imports by about 0.71%, despite the increasing needs of countries with the increase in population, but importing countries may resort to meeting the needs of the growing domestic demand for Other foreign markets, especially with changing consumer tastes.

The geographical dimension (distance) between countries has a negative sign, which means that distance increases the cost of land, sea and air transportation and is therefore considered an obstacle to the exchange of foreign trade, as it leads to an increase in the cost of commodity imports. Therefore, Egyptian imports from exporting countries decline by about 1.9% as the distance between them increases. From a statistical standpoint, the variable has no moral significance.

The common language between countries has a positive effect on the movement of trade. The coefficients of the variable are statistically significant, as the common language is one of the factors that contribute to increasing the movement of foreign trade. The results of the common language nominal variable indicated an increase in Egypt's imports from countries with which Egypt shares a language, which is Sudan, among the most important countries whose study dealt with the import model, by about 35.2%, data in Table No. (4).

RESEARCH SUMMARY

The research mainly aimed to develop and increase African free trade by studying the impact of implementing the African Free Trade Agreement on agricultural foreign trade between Egypt and the most important African countries, by studying some of the sub-objectives, which are: studying the volume of agricultural trade exchange between Egypt and African countries, studying the relative importance Imports of the most important agricultural commodities to African countries from the world, identifying Egypt's promising opportunities in African markets, studying the relative importance of Egypt's exports to African countries in relation to African imports of agricultural commodities, studying and identifying the most important factors affecting the flow of foreign agricultural trade between Egypt and the most important African countries, This is done by studying and analyzing agricultural foreign trade policies using the gravity model. The importance of the research was through identifying the expected impact of Egypt's participation with the countries of the

African Free Trade Area, which helps foreign trade policy makers in proposing and setting policies that help develop and increase intra-Egyptian trade, especially agricultural, using The gravity model. The research relied on the descriptive and quantitative analysis method required by the nature of this study. The EViews 9 program was also used to analyze the gravity model for agricultural trade between Egypt and African countries. The research also relied on secondary data through data published in various organizations, ministries and information centers. In Egypt.

THE RESULTS

1- The largest share of foreign agricultural exports was to five countries, with a percentage of about 63.8% of Egypt's exports to those countries over the years of that period, represented by "Libya, Morocco, Algeria, Sudan, and Kenya, respectively."

2- The largest share of foreign agricultural imports was for five countries, amounting to about 84.5% of Egypt's imports to those countries over the years of that period, represented by "Kenya, Sudan, Benin, Malawi, and Zimbabwe, respectively."

3- The most important agricultural commodities that African countries import from the world amount to more than 200 agricultural commodities, whose value amounted to about 91,948 million dollars during the period (2018-2022).

4- Africa's imports from the world represented wheat, milled rice, palm oil, polished rice, corn, food preparations, cane sugar, beets, soybeans, refined sugar, and soybean oil, bringing the total imports of agricultural commodities referred to in about 65 billion. Dollars, which represents a relative importance amounting to about 70.7% of the value of African agricultural imports, which amounted to about 91.9 billion dollars during the period (2018-2022).

5- By comparing African countries' imports of agricultural commodities from the world with African countries' imports of agricultural commodities from Egypt, it became clear that Egypt has a great opportunity to increase exports of agricultural commodities, which were represented in (food preparations, raw cane sugar or beet sugar, refined sugar, soybean oil). , cigarettes (manufactured tobacco), skim milk, sunflower oil, crude oil, wheat flour), where the value of these goods represents about 293.7 million dollars, representing about 14.7% of Africa's imports, which gives Egypt a comparative advantage to increase exports of these goods. In addition to other agricultural commodities, especially manufactured agricultural commodities.

6-The gravity model was used to determine whether Egypt's foreign agricultural trade with the most important African countries was less or more than expected in light of studying the effectiveness of Egypt's accession to the African.

Free Trade Area, and it concluded:

First: With regard to Egyptian agricultural exports to Africa

1- The coefficient on the gross domestic product of the Egyptian state is significant, and the sign of the variable is positive as expected, as the greater the Egyptian domestic product, the greater the percentage of Egyptian exports.

2-The significance of the coefficient on the gross domestic product of the foreign country is that the sign of the variable is positive as expected, as the greater the domestic product of African countries, the greater the proportion of Egyptian exports to these countries. In addition, the increase in the growth rate in Egypt prompts the country to export surplus production to foreign markets.

3- The geographical distance (distance) between countries increases the cost of land, sea and air transportation and is therefore considered an obstacle to the exchange of foreign trade, as it leads to an increase in the cost of commodity imports. Therefore, Egyptian exports decline as the distance between them increases. From a statistical standpoint, the variable has a significant significance.

4- The significance of the population elasticity for exporting and importing countries is unexpectedly negative, as the results indicate an increase in the movement of Egyptian merchandise exports with the increase in population, so importing countries resort to meeting the needs of the increasing domestic demand from foreign markets.

5- The common language between countries has a positive effect on the movement of trade. The coefficients of the variable are statistically significant, as the common language is one of the factors that contribute to increasing the movement of foreign trade.

6- The common borders between countries have a positive effect on the movement of trade. The coefficients of the variable are statistically significant, as the common borders are among the factors that contribute to increasing the movement of foreign trade.

Second: Regarding Egyptian imports from Africa

1- The coefficient on the gross domestic product of the Egyptian state is significant, and the sign of the variable is positive as expected, as the greater the Egyptian domestic product, the greater the proportion of Egyptian imports.

2- The significance of the coefficient on the gross domestic product of the foreign country is that the sign of the variable is positive as expected, since

the greater the domestic product of African countries, the greater the proportion of exports to these countries. In addition, the increase in the growth rate in exporting African countries pushes countries to export surplus production to foreign markets. This indicates an increase in merchandise exports to countries witnessing high growth rates.

3- The significance of population elasticity for exporting and importing countries is unexpectedly negative, as the results indicate a decrease in the movement of Egyptian merchandise imports despite the increasing needs of countries with the rise in population. However, importing countries may resort to meeting the needs of increasing domestic demand from other foreign markets, especially with changing tastes. The owner.

4- The geographical distance (distance) between countries increases the cost of land, sea and air transportation and is therefore considered an obstacle to the exchange of foreign trade, as it leads to an increase in the cost of commodity imports. Therefore, Egyptian imports from exporting countries decline as the distance between them increases. From a statistical standpoint, the variable has no moral significance.

5- The common language between countries has a positive effect on the movement of trade. The coefficients of the variable are statistically significant, as the common language is one of the factors that contribute to increasing the movement of foreign trade.

RECOMMENDATIONS

1- Taking advantage of countries with common borders and close distances and focusing on them to increase Egyptian exports, and establishing collection centers for Egyptian agricultural goods in these countries.

2- Egypt must benefit from Egypt's preferential advantage with the bloc countries that Egypt partners with to open new areas, especially in agricultural exports.

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APPENDIX

Table (1) The value of Egypt's exports of agricultural processing products to African countries During the period (2018-2022) thousand dollars

the product	2018	2019	2020	2021	2022	Average	% of total exports	% manufacturing
Wheat flour	126939	112987	112987	122705	84014	108205	10.7	16.0
Food preparations	45665	55936	55936	157636	116004	87603	8.7	12.9
Soybean oil	23858	64154	64154	156268	37951	74415	7.4	11.0
Refined sugar	85559	42753	42753	81941	23713	56153	5.6	8.3
uncooked pasta,	50033	50027	50027	57324	45324	51607	5.1	7.6
Candy	27023	29813	29813	36915	47105	32245	3.2	4.8
Unbranded fruit juice	44557	29716	29716	28992	25265	30487	3.0	4.5
Chocolate not mentioned elsewhere	17319	25083	25083	27422	27591	24617	2.4	3.6
Pies	14571	15359	15359	24237	26649	19534	1.9	2.9
Glucose and dextrose	8328	13877	13877	20311	35346	17711	1.8	2.6
Manufactured tobacco and other manufactured tobacco substitutes	13113	20513	20513	17463	14396	16756	1.7	2.5
Sunflower seed oil, raw	11793	19876	19876	16083	15706	16548	1.6	2.4
Total goods	468758	480094	480094	747297	499064	535882	53.1	79.1
Other	149863	158038	158038	121897	176035	141447	14	20.9
Total manufactured goods	618621	638132	638132	869194	675099	677329	67.1	100
Total agricultural exports to Africa	**921997**	**944432**	**944432**	**1200216**	**1100931**	**1010122**	**100**	-

https://www.fao.org/faostat/ar/#data/TM

Table (2) The value of Egypt's agricultural exports of plant products to African countries During the period (2018-2022) thousand dollars

The product	2018	2019	2020	2021	2022	Average	% of total exports	% of plant products
Beans, dry	58479	30917	30917	59872	57839	50687	5.0	20.1
dates	21778	16305	16305	14011	31178	19546	1.9	7.7
Sesame seeds	8661	17787	17787	20413	25569	19311	1.9	7.7
Raw cane or beet sugar	17039	23149	23149	11134	26438	18873	1.9	7.5
Unclassified prepared fruit	18201	19078	19078	16148	18704	17403	2	6.9
grapes	11755	17864	17864	14316	14173	14786	1.5	5.9
an orange	7708	11840	11840	15150	17841	13128	1.3	5.2
Preserved vegetables	6349	10448	10448	11120	18468	11203	1.1	4.4
Medicinal and aromatic products	5989	11469	11469	8960	14776	10508	1.0	4.2
Frozen vegetables	9102	7622	7622	9856	13064	9780	1.0	3.9
Peeled peanuts	5245	5535	5535	12475	15997	8730	0.9	3.5
Dry lentils	5615	2377	2377	12325	9620	6857	0.7	2.7
Broad beans and dried beans	5050	3095	3095	7393	8851	5719	0.6	2.3
Total goods	**180971**	**177486**	**177486**	**213173**	**27251**	**206530**	**20.4**	**81.8**
Other	35176	41558	41558	40688	74057	45802	4.6	18.2
Total plant products	216147	219044	219044	253861	346575	252332	25.0	100
Total agricultural exports to Africa	**921997**	**944432**	**944432**	**1200216**	**1100931**	**1010122**	**100**	**-**

الملخص العربي

أثر تطبيق اتفاقية التجارة الحرة الإفريقيةعلى التجارة الخارجية الزراعية بين مصر وأهم الدول الأفريقية

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استهدف البحث بصفة رئيسية تنمية وزيادة التجارة الحرة الإفريقية بدراسة أثر تطبيق اتفاقية التجارة الحرة الإفريقية على التجارة الخارجية الزراعية بين مصر وأهم الدول الأفريقية، وذلك من خلال دراسة بعض الأهداف الفرعية والتى تتمثل فى: دراسة حجم التبادل التجاري الزراعى بين مصر ودول أفريقيا، دراسة الأهمية النسبية لواردات أهم السلع الزراعية للدول أفريقيا من العالم، التعرف على فرص مصر الواعدة بالأسواق الأفريقية، دراسة الأهمية النسبية لصادرات مصر للدول الأفريقية بالنسبة للواردات الأفريقية من السلع الزراعية، دراسة وتحديد أهم العوامل المؤثرة على تدفق التجارة الخارجية الزراعية بين مصر وأهم الدول الأفريقية، وذلك من خلال دراسة وتحليل سياسات التجارة الخارجية الزراعية باستخدام نموذج الجاذبية، وكان لأهمية البحث من خلال التعرف على الاثر المتوقع لاشتراك مصر مع دول منطقة التجارة الحرة الافريقية بما يساعد واضعى السياسات التجارية الخارجية فى اقتراح ووضع سياسات تساعد على تنمية وزيادة التجارة البينية المصرية خاصة الزراعية باستخدم نموذج الجاذبية، واعتمد البحث على أسلوب التحليل الوصفى والكمي التي تتطلبها طبيعة هذه الدراسة، كما تم استخدام برنامج EViews 9 فى تحليل نموذج الجاذبية للتجارة الزراعية بين مصر والدول الأفريقية، كما اعتمد البحث على البيانات الثانوية وذلك من خلال البيانات المنشورة في مختلف المنظمات والوزارات ومراكز المعلومات في مصر.

وتوصلت الدراسة إلى:

1- معنوية معامل الناتج المحلي الاجمالي

2- بالنسبة للصادرات كانت معنوية للدولة الأجنبية وإشارة المتغير موجبة كما هو متوقع، حيث أنه كلما زاد الناتج المحلى للدول الأفريقية زادت نسبة الصادرات المصرية لهذه الدول، إضافة إلى أن زيادة معدل النمو في مصر يدفع بالدولة إلى تصدير فائض الانتاج إلى الأسواق الخارجية.

3- بالنسبة للواردات كانت معنوية للدولة المصرية واشارة المتغير موجبة كما هو متوقع، حيث أنه كلما زاد الناتج المحلى المصرى زادت نسبة الواردات المصرية. ، إضافة إلى أن زيادة معدل النمو في الدول الأفريقية المصدرة يدفع بالدول إلى تصدير فائض الانتاج إلى الأسواق الخارجية.

4- أن البعد الجغرافي (المسافة) بين الدول يزيد من تكلفة النقل البري والبحري والجوي وبالتالي يعتبر عائقاً امام تبادل التجارة الخارجية، حيث يؤدى إلى ارتفاع تكلفة الواردات السلعية . ولذلك تتراجع الصادرات المصرية مع زيادة المسافة بينهما، أما من الناحية الإحصائية فالمتغير له دلالة معنوية.

كذلك تراجعت الواردات المصرية من الدول المصدرة مع زيادة المسافة بينهما، أما من الناحية الإحصائية فالمتغير ليس له دلالة معنوية.

5- معنوية مرونة السكان للدول المصدرة والمستوردة وعلى غير المتوقع سلبية، حيث تشير النتائج إلى زيادة حركة الصادرات المصرية السلعية مع ارتفاع عدد السكان، لذا تلجأ الدول المستوردة لتلبية احتياجات الطلب المحلي المتزايد من الأسواق الخارجية خاصة مع تغير ذوق المستهلك.

5- اللغة المشتركة بين الدول تؤثر ايجابي في حركة التجارة، أن معاملات المتغير معنوية من الناحية الإحصائية حيث أن اللغة المشتركة من العوامل التي تساهم في زيادة حركة التجارة الخارجية.

6- الحدود المشتركة بين الدول تؤثر ايجابي في حركة التجارة، أن معاملات المتغير معنوية من الناحية الإحصائية حيث أن الحدود المشتركة من العوامل التي تساهم في زيادة حركة التجارة الخارجية.

الكلمات الاسترشادية: اتفاقية التجارة الحرة الأفريقية، نموذج الجاذبية، مجموعة تنمية الجنوب الأفريقي (**SADC**)، مجموعة شرق أفريقيا (**EAC**)، السوق المشتركة لشرق أفريقيا والجنوب الأفريقي (**الكوميسا**)**Comesa**