

The Commodity Structure of the Most Important Egyptian Exports to African Horn Countries

الهيكل السلعي لأهم الصادرات المصرية لدول القرن الأفريقي

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الملخص:

يهدف البحث إلى دراسة التطور والهيكل السلعي للصادرات المصرية إلى دول القرن الإفريقي، والتنافسية السلعية للصادرات المصرية في أسواق دول القرن الإفريقي. تم استخدام البيانات السنوية التي تغطي الفترة 2008-2019 لقياس مؤشرات التجارة الخارجية ومؤشرات التنافسية. استخدم البحث تحليل الانحدار المرحلي لتحديد أهم العوامل المؤثرة على الطلب على الصادرات المصرية في أسواق دول القرن الإفريقي. وتبين أن إجمالي الصادرات المصرية لدول القرن الإفريقي تمثل 0.8% من إجمالي الصادرات المصرية. كشفت النتائج أن إثيوبيا وإريتريا والصومال وجيبوتي تستوعب 37.7%، 28.8%، 19.9%، 13.6% من الصادرات المصرية إلى دول القرن الإفريقي على التوالي. كما تبين أن مجموعة

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المنتجات الحيوانية والنباتية والمشروبات والتبغ تستوعب 31%، 70.5%، 84.5% من إجمالي الصادرات المصرية لكل من جيبوتي وإريتريا والصومال على التوالي، بينما تأتي مجموعة المنتجات الكيماوية والبلاستيكية في المرتبة الأولى بين مجموعات السلع التي تصدرها مصر إلى إثيوبيا بنسبة 38.3%. وتوضح النتائج أن النصيب السوقى لصادرات مصر من الجبن واللبن الرايب إلى جيبوتي تقدر بنحو 0.35 حيث تفوقت على منافسيها. وكشفت النتائج عن أن زيادة كل من معدل اختراق صادرات الجبن واللبن الرايب المصرية إلى جيبوتي، وكمية واردات جيبوتي من الجبن واللبن الرايب بنسبة 1% تؤدي إلى زيادة ذات دلالة إحصائية في كميات صادرات الجبن واللبن الرايب المصرية بنسبة 2.29%. كما تبين أن مجموعة بذور عباد الشمس وزيت بذرة القطن والقرطم استحوذت على 8.2% من إجمالي الصادرات المصرية إلى إثيوبيا من مجموعة المنتجات الحيوانية والنباتية والمشروبات والتبغ، حيث أن زيادة كل من معدل اختراق صادرات بذور عباد الشمس وزيت بذرة القطن والقرطم المصرية إلى إثيوبيا، وواردات إثيوبيا من بذور عباد الشمس وزيت بذرة القطن والقرطم بنسبة 1% سيؤدي إلى زيادة ذات دلالة إحصائية في كمية صادرات بذور عباد الشمس وزيت بذرة القطن والقرطم المصرية بنسبة 1.42%.

Abstract

The research aims to study the evolution and commodity structure of Egyptian exports to the African Horn countries, and the commodity competitiveness of Egyptian exports in the markets of the AH Countries. Annual data covering the period 2008-2019 was used to measure foreign trade and competitiveness indicators. The research conducts stepwise regression analysis to determine most important factors affecting the demand on Egyptian exports in African Horn countries market. It shows that the total Egyptian exports to the African Horn countries represents 0.8% of total Egyptian exports. Results reveal that Ethiopia, Eritrea, Somalia and Djibouti absorb 37.7%, 28.8%, 19.9% and 13.6% of the Egyptian exports to the African Horn countries, respectively. It was also shown that the group of animal and vegetable products, beverages and tobacco absorb 31%, 70.5% and 84.5% of the total Egyptian exports for Djibouti, Eritrea and Somalia respectively, while the group of chemical and plastic products come on top of groups to which Egypt exports to Ethiopia by 38.3%. The results reveal that market share of the Egyptian exports of cheese and yogurt to Djibouti is estimated at 0.35 where it superior its competitors, also the penetration rate of Egyptian cheese and yoghurt exports to the Djibouti market, and the quantity of cheese and yoghurt imports by Djibouti changing by 1% would result in statistically significant increasing the Egyptian cheese and yoghurt exports quantities by 2.29%. It has also been shown that the group of sunflower seeds, cottonseed oil and safflower absorb 8.2% of the total Egyptian exports to Ethiopia from the group of animal and vegetable products, beverages and tobacco, as the market penetration rate of Egyptian Sunflower seeds, cottonseed oil and safflower exports to Ethiopia and the quantities of Sunflower seeds,

cottonseed oil and safflower imports by Ethiopia changing by 1% would result in statistically significant increasing the Egyptian Sunflower seeds, cottonseed oil and safflower exports quantities by 1.42%

Keywords: African Horn- commodity competitiveness- Market Penetration Rate- market share.

1. Introduction

The issue of exports is of great importance in the Egyptian economy, and it is included in successive development plans with great interest as a source of foreign exchange necessary for national development projects. The Horn of Africa region, whether with its narrow or wide borders, is considered a strategic area, as it overlooks the Gulf of Aden and strait of Bab al-Mandab, and is adjacent to the region The Great Lakes in Central Africa, which is characterized by the richness of its water, oil and mineral resources, and these countries are an open market for exports of all kinds, as these countries are considered a geographical extension of Egypt, in addition to the strategic dimension and the historical ties that link them.

The AH countries consist of Somalia, Djibouti, Eritrea and Ethiopia, where Somalia occupies most of the coastal regions of the Horn that lie on the Indian Ocean and the Gulf of Aden. Djibouti and Eritrea include the rest of the coastal regions of the Horn that lie on the Bab al-Mandab Strait and the Red Sea

2. Justifications and research problem

Despite the great importance of bilateral relations between the AH countries and Egypt, in addition to the strategic and regional dimension, it has been noted that the volume of intra-regional trade between these countries and Egypt, especially Egyptian exports, has decreased, despite the

importance of the markets of these countries in increasing Egyptian exports because they are an open market for many exports, especially Small industries and investment.

3. Objectives

The research aims to study the volume and commodity structure of Egyptian exports to the African Horn countries, and the commodity competitiveness of Egyptian exports in the markets of the AH Countries.

4. Data and measurement procedures:

The research relied on secondary data published by Food and Agriculture Organization (FAO), Trade Statistics for International business development Database (UN Comtrade), Trade statistics for international business development (Trade map), the Central Agency for Public Mobilization and Statistics (CAPMAS) in addition to a number of research papers, theses, studies and scientific books relevant to the research subject.

Annual data covering the period 2008-2019 was used to measure foreign trade and competitiveness indicators. The research also conducts stepwise regression analysis to determine most important factors affecting the demand on Egyptian exports in African Horn countries market.

5. Methodology and model specification

In this section, the regression model was used to explain the most important factors affect demand on Egyptian exports in African Horn countries market, as well as indicators of the Egyptian exports indicators and competitiveness, the indicators was formulated as follows:

- Market Penetration Rate:

$$MPR_{ij} = \frac{EX_{ij}}{Q_{ij} + M_{ij} - X_{ij}} ; \text{ where:}$$

EX_{ij} : The quantities of Country's export of a commodity j to importing country i .

Q_{ij} : The production of importing Country i of a commodity j .

M_{ij} : The imports of importing country i of a commodity j .

X_{ij} : The exports of importing country i of a commodity j .

- Relative Price:

$$RP = P_{ci}/P_{ei} , \text{ where,}$$

P_{ci} : The exports price of a commodity i for a competing country c .

P_{ei} : The exports price of a commodity i for a country e .

- Market Share:

$$\frac{X_{ij}}{M_{ik}} * 100 : \text{ where,}$$

X_{ij} : Exports of the exporting country j of the commodity i .

M_{ik} : The total imports of the importing country k of a commodity i .

- Non-stability Coefficient:

$$= \frac{|(y_i - \hat{y}_i)|}{\hat{y}_i} * 100 \text{ where:}$$

y_i : is the actual value of Country's export of a commodity to importing country.

\hat{y}_i : Is estimated value of Country's export of a commodity to importing country.

Egyptian exports competitiveness: is measured by the following equation;

$$\hat{Y} = a \pm b_1 x_1 \pm b_2 x_2 \pm b_n x_n \text{ where;}$$

\hat{Y} : The quantities of Country's export of a commodity j to importing country i .

x_1 : Percentage of the quantity of the competing country's exports to the quantity of Egypt's exports of commodity j .

x_2 : Percentage of the exporting price of competing country's to Egypt's export price of commodity j .

x_3 : Non- stability Coefficient of Egypt's exports quantities or competing countries for a commodity j .

x_4 : Market penetration rate of Egypt or competing countries for a commodity j .

x_5 : Imports quantities of importing country i for commodity j .

b_1, b_2, b_3, \dots are regression coefficients.

6. Empirical Results

Table (1) presents the value of Egypt's total exports to African Horn countries which recording US\$ 232.1 million over the period 2008-2019 representing 0.8% of the period's average value of Egypt's total exports. Also it can be noted that Djibouti, Ethiopia, Somalia, and Eritrea absorbing 13.6%, 37.7%, 19.9% and 28.8% of Egypt's total exports to AH countries. Regression analysis results reveal that the value of Egypt's total exports to AH countries followed a statistically significant increasing trend except Djibouti. Non-stability coefficients reveal that stability in the value under study.

Table (1): Relative Importance of Egypt's Exports to Horn Countries over the Period (2008-2019).

Countries	Value*	% To Horn Counts. exports	% of Egypt's exports
Djibouti	31.7	13.6	0.12
Ethiopia	87.5	37.7	0.33
Somali	46.4	19.9	0.17
Eretria	66.5	28.8	0.24
Sum of Afr. Horn counts.	232.1	100.0	0.86

- In million dollar.

Source: www.comtrade.un.org

Table (2): Simple Regression Equations

Item	Equation	T	R ²	Sig.	Average	Growth Rate	Non-stability Coefficient
Egypt's total exports value to Afri. Horn countries	$\hat{Y}=60.9+25.9x$	7.5	0.85	*	232.1	11.3	15.9
Egypt's total exports value to Djibouti	$\hat{Y}=26.7+0.8x$	0.9	0.68	-	31.7	2.6	21.08
Egypt's total exports value to Ethiopia	$\hat{Y}=19.7+10.4x$	6.3	0.80	*	87.5	11.9	23.08
Egypt's total exports value to Somalia	$\hat{Y}=16.5+7.8x$	5.6	0.76	*	66.5	11.5	22.77
Egypt's total exports value to Eretria	$\hat{Y}=7.7+5.9x$	3.8	0.59	*	46.4	12.8	38.21

* 0.05 level of significance.

Source: table (1).

6.1 Distribution of Egyptian Commodities' Exports to African Horn Countries

Table 3 presents a list of major commodities exported to AH countries over the period 2008-2019. It can be noted that Plant, animal, beverages and tobacco group comes on top of

the commodities group to which Egypt exports to AH countries except Ethiopia, which Chemicals products and plastic comes on top of the commodities group to which Egypt exports to.

Table (3): Relative importance of Egypt's Commodities Exports to African Horn Countries over the period (2008-2019).

Groups	Djibouti		Ethiopia		Eretria		Somalia	
	Value *	%	Value	%	Value	%	Value	%
plant, animal, beverages and tobacco	9.5	31.0	13.52	15.9	45.84	70.52	37.14	84.52
Mineral fuels, oils	2.3	7.6	8.64	10.2	3.14	4.83	0.37	0.85
Chemicals products and plastic	7.5	24.7	32.64	38.3	10.50	16.16	5.22	11.88
Rubber, leather, Wood and paper group	1.4	4.7	7.69	9.0	1.57	2.42	0.52	1.19
textile fabrics, Threads and fibers	1.2	4.0	1.82	2.1	0.12	0.19	0.32	0.72
Articles of marble, stone, porcelain, and glass.	1.0	3.4	1.81	2.1	0.83	1.27	0.05	0.12
Metal products	4.5	14.6	8.48	10.0	2.36	3.63	0.14	0.31
Machinery, mechanical and transport equipment	3.0	9.9	10.54	12.4	0.64	0.99	0.18	0.40
Total	30.5	100.0	85.15	100.0	65.01	100.0	43.94	100.0

- In million dollar.

Source: www.comtrade.un.org

6.2 The commodity competitiveness of AH Countries.

In this part, the commodity competitiveness indicators of Egyptian exports to AH countries will be conducted to measure the extent of the importance of Egyptian exports to AH countries.

6.2.1 Commodity competitiveness of Egyptian exports to Djibouti

As mentioned previously according to the commodity distribution of Egyptian exports from the commodities groups to Djibouti, the data indicated that the group of animal and vegetable products, beverages and tobacco accounted for about 31% of the Egyptian exports from the commodity groups to Djibouti, this group includes 24 commodities or sub-commodity groups according to a database classification of Trade Statistics for International business development Database (UN Comtrade), Trade statistics for international business development (Trade map), the group of products of animal origin, "dairy products, eggs, birds, natural honey", accounted of 9.2% of total Egyptian exports to Djibouti from this group.

Table 4: The relative importance of the Egyptian exports of cheese and yoghurt to Djibouti during the period (2008-2019).

Indicator	The value of Egypt's exports of cheese and yoghurt	The value of Egypt's exports of animal and vegetable products and beverages	%
Value*	0.87	9.46	9.2

- In million dollar.

Source: www.comtrade.un.org

Market penetration rate of cheese and yoghurt exports obtained in Table 5 indicate that an increasing of Market Penetration rate for Egypt, where estimated at 0.35, compared to competing countries such as Italy, UAE, except France where estimated at 0.44 because of excels in its

production of dairy products and its factories, in addition to Djibouti's production weak of dairy products, and therefore it doesn't export these products. It is clear from Table 5 that Egypt has **competitive price** comparative advantage in Djibouti's market, where it is estimated 1.48, 1.25 and 1.02 for France/Egypt, Italy/Egypt and UAE/Egypt respectively. It is noted from Table 5 that the **market share** of the Egyptian exports of cheese and yogurt to Djibouti is the same as the market penetration rate indicators, because the composition of the market penetration rate index consists of Djibouti's production and exports of cheese and yogurt, and it has no significant production or exports. Table 5 shows the weakness of Egypt's competitive position in Djibouti market, where the Egyptian exports of cheese and yoghurt to Djibouti fluctuated over the period (2008-2019) according to the **Non-stability coefficient**, as it reached in Egypt, France, Italy and UAE about 69%, 21% , 41%, 83%, respectively.

Table 5: commodity competition Indicators for Egyptian exports of cheese and yoghurt to Djibouti over the period (2008-2019).

Indicator	Egypt's exports quantity of cheese and yoghurt to Djibouti (ton)	France's exports quantity of cheese and yoghurt to Djibouti (ton)	Italy's exports quantity of cheese and yoghurt to Djibouti (ton)	UAE's exports quantity of cheese and yoghurt to Djibouti (ton)
Value	200	174	11	55
Indicator	Egypt's Export price	France's Export price	Italy's Export price	UAE's Export price
Value*	4560	6455	5497	4345
Indicator	France /Egypt (quantity)	Italy /Egypt (quantity)	UAE /Egypt (quantity)	France /Egypt (price)
Value	1.55	0.11	0.42	1.48
Indicator	Italy /Egypt (price)	UAE /Egypt (price)	Non-stability coefficient (Egypt)	Non-stability coefficient (France)
Value	1.25	1.02	69	21
Indicator	Non-stability	Non-stability	Market	Market

	coefficient (Italy)	coefficient (UAE)	penetration rate (Egypt)	penetration rate (France)
Value	41	83	0.35	0.44
Indicator	Market penetration rate (Italy)	Market penetration rate (UAE)	Djibouti's imports quantity of cheese and yoghurt	market share for Egypt
Value	0.03	0.12	489	34.6

- US\$/ton

Source: www.comtrade.un.org

Competitive position Determinants

The most important variables that determine the competitive position were identified and determined which represented in (the quantity of exports of cheese and yoghurt for the competing country vs Egypt x_{i1} , The export price of cheese and yoghurt for the competing country /Egypt x_{i2} , Non-stability coefficient for Egyptian cheese and yoghurt exports or competing countries x_{i3} , The market penetration rate of cheese and yoghurt for Egypt or competing countries x_{i4} , the Egyptian exports quantity of cheese and yoghurt x_{i5} , and the quantity of cheese and yoghurt imports by Djibouti x_{i6}). Stepwise regression analysis has been conducted to estimate the function. It can be noted that the positive sign of the three independent variables (the quantities of cheese and yoghurt exports of France/Egypt x_{i1} , the market penetration rate of Egyptian cheese and yoghurt exports to the Djibouti x_{i11} , and the quantities of cheese and yoghurt imports by Djibouti x_{i15} .

$$\hat{Y} = -531.04 + 69.73X_{i1} + 1022.2 X_{i11} + 0.55 X_{i15}$$

(4.55)* (7.09)* (16.03)*

$$R^2 = 0.99 \quad F = 359.55* \quad DW = 1.503$$

The second phase is by excluding the independent variables that do not consistence with the statistical logic (the quantity of exports of cheese and yoghurt of France / Egypt), the best

linear mathematical model expressing this relationship were conducted and consistence with the economic and statistical logic as well as the significance of (T), (F) test.

$$\hat{Y} = -259.77 + 515.31 X_{11} + 0.57 X_{15} \quad (3.01)^* \quad (9.14)^*$$

$$R^2 = 0.96 \quad F = 152.57^* \quad DW = 1.82$$

It can be noted that the positive sign of the two independent variables (the penetration rate of Egyptian cheese and yoghurt exports to the Djibouti market, and the quantity of cheese and yoghurt imports by Djibouti) changing by 1% would result in statistically significant increasing the Egyptian cheese and yoghurt exports quantities by 2.29%¹.

6.2.2 Commodity competitiveness of Egyptian exports to Ethiopia

The animal and vegetable products, beverages and tobacco group accounted for about 16% of the Egyptian exports from the commodity groups to Ethiopia, this group includes 24 commodities or sub-commodity groups, the group of "Sunflower seeds, cottonseed oil and safflower", accounted of 8.2% of total Egyptian exports to Ethiopia from this group, Table 6.

Table 6: The relative importance of the Egyptian exports of Sunflower seeds, cottonseed oil and safflower to Ethiopia during the period (2008-2019).

Indicator	The value of Egypt's exports of Sunflower seeds, cottonseed oil and safflower	The value of Egypt's exports of animal and vegetable products and beverages	%
Value*	1.2	13.1	8.22

- In million dollar.

Source: www.comtrade.un.org

(¹) Elasticity was calculated as $\beta_j \frac{\bar{x}}{\bar{y}}$, where β_j is the coefficient of the specific variable j , and \bar{x} and \bar{y} are the means of the specific variable j and the mean of the dependent variable, respectively.

Table 7 presents the Egypt's competitiveness indicators in Ethiopia market over the period 2008-2019. It can be noted that **Market penetration rate** of Sunflower seeds, cottonseed oil and safflower exports indicate that an increasing of Market Penetration rate for Egypt, where estimated at 0.06, compared to competing countries such as Belgium, Italy, and UAE except Turkey where estimated at 0.16, that means Ethiopia depends on Turkey to meet 16% of their needs. It is clear from Table 7 that Egypt has **competitive price** comparative advantage in Ethiopia's market, where it is estimated 1.54, 1.45, 1.07 and 2.18 for Belgium/Egypt, Italy/Egypt, Turkey/Egypt and UAE/Egypt respectively. It is noted that the **market share** of the Egyptian exports of sunflower seeds, cottonseed oil and safflower to Ethiopia amounted to about 22.71%, which is exceed its competitors such as Belgium, Italy, UAE, with the exception of Turkey. Table 7 shows the weakness of Egypt's competitive position in Ethiopia market, where the Egyptian exports of sunflower seeds, cottonseed oil and safflower to Ethiopia fluctuated over the period (2008-2019) according to the **Non-stability coefficient**, as it reached in Egypt about 77.3%.

Competitive position Determinants

The most important variables that determine the competitive position of the Egyptian exports of Sunflower seeds, cottonseed oil and safflower to Ethiopia were identified and determined which represented in (the quantity of exports of Sunflower seeds, cottonseed oil and safflower for the competing country vs Egypt x_{i1} , The export price of Sunflower seeds, cottonseed oil and safflower for the competing country /Egypt x_{i2} , Non-stability coefficient for Egyptian Sunflower seeds, cottonseed oil and safflower exports or competing countries x_{i3} , The market penetration

rate for the exports of Egypt or competing countries of Sunflower seeds, cottonseed oil and safflower to Ethiopia x_{i4} , the Egyptian exports quantity of Sunflower seeds, cottonseed oil and safflower x_{i5} , and the quantity of Sunflower seeds, cottonseed oil and safflower imports by Ethiopia x_{i6} . Stepwise regression analysis has been conducted to estimate the function. It can be noted that the positive sign of the two independent variables (the market penetration rate of Egyptian Sunflower seeds, cottonseed oil and safflower exports to Ethiopia x_{i4} , and the quantities of Sunflower seeds, cottonseed oil and safflower imports by Ethiopia x_{i20}).

$$\hat{Y} = -496.2 + 13206.6X_{i15} + 0.12 X_{i20}$$

(5.69)* (4.29)*

$$R^2 = 0.96 \quad F = 144.94* \quad DW = 2.81$$

It can be noted that the positive sign of the two independent variables changing by 1% would result in statistically significant increasing the Egyptian Sunflower seeds, cottonseed oil and safflower exports quantities by 1.42%.

Table 7: commodity competition Indicators for Egyptian exports of Sunflower seeds, cottonseed oil and safflower to Ethiopia over the period (2008-2019).

Indicator	Egypt's exports quantity of Sunflower seeds, cottonseed oil and safflower to Ethiopia	Belgium's exports quantity of Sunflower seeds, cottonseed oil and safflower to Ethiopia	Italy's exports quantity of Sunflower seeds, cottonseed oil and safflower to Ethiopia	Turkey's exports quantity of Sunflower seeds, cottonseed oil and safflower to Ethiopia
Value	1002.65	57.4	37.0	2003.1
Indicator	UAE's exports quantity of Sunflower seeds, cottonseed oil and safflower to Ethiopia	Egypt's Export price	Belgium's Export price	Italy's Export price
Value	42.3	1230.1	2006.4	1786.3
Indicator	Turkey's Export price	UAE's Export price	Belgium /Egypt (quantity)	Italy /Egypt (quantity)
Value	1313.6	2626.3	0.17	0.13
Indicator	Turkey /Egypt (quantity)	UAE /Egypt (quantity)	Belgium /Egypt (price)	Italy /Egypt (price)
Value	6.31	0.23	1.54	1.45
Indicator	Turkey /Egypt (price)	UAE /Egypt (price)	Non-stability coefficient (Egypt)	Non-stability coefficient (Belgium)
Value	1.07	2.18	77.4	156.6
Indicator	Non-stability coefficient (Italy)	Non-stability coefficient (Turkey)	Non-stability coefficient (UAE)	Market penetration rate (Egypt)
Value	54.0	44.7	68.8	0.06
Indicator	Market penetration rate (Belgium)	Market penetration rate (Italy)	Market penetration rate (Turkey)	Market penetration rate (UAE)
Value	0.005	0.003	0.16	0.004
Indicator	Ethiopia's imports quantity of Sunflower seeds, cottonseed oil and safflower(Ton)	market share for Egypt		
Value	5223.9	22.7		

Quantity: Ton

Price: US\$/Ton

Source: www.comtrade.un.org

References:

- 1- Trade statistics for international business development (Trade map).
- 2- Food and agriculture organization (FAO).
- 3- Heller, Robert H. (1979). "International Trade Theory and Empirical Evidence", Prentice Hall of India, 2nd Edition.
- 4- United Nation, Department of Economic and Social Affairs, Statistics Division, Trade Statistics (UN Comtrade).
- 5- Eltawel A., "Features of the third wave of international and regional competition on Africa", <https://futureuae.com/ar-AE/Activity/Item/150>, 2018.
- 6- Ayad B., "Young Africa's experts raise ambitions, and the Arab international conflict turns it into a powder keg", 2018.
<https://www.elwatannews.com/news/details/3728476>.
- 7- Hassan R., "Cairo's interests in the Horn of Africa and the nature of regional and international competition", The Egyptian Center for Thought and Strategic Studies, 2019.
<https://marsad.ecsstudies.com>.
- 8- Ali A., "Ankara and Mogadishu Multiple interests and growing influence growing", The Egyptian Center for Thought and Strategic Studies, <https://marsad.ecsstudies.com>, 2020.
- 9- Al ameen H., "The international and regional conflict over the southern entrance of the Red Sea and its impact on neighboring countries", African Researches and Studies Center, Journal of African Studies, 1999.