



Competitiveness for Egyptian Onion Exports in the International Markets

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Abstract: The Research aimed mainly, the most important indicators of the competitiveness of Egyptian onion exports, through the following goals: (1) A study of the development of both quantities and the global price and the value of global exports of onions, the amount and value of exports and the export price of Egyptian onions during the period (2004-2021), (2) Estimating the instability transactions for the amount and value of the onion exported during the period (2004-2021), (3) a study of the development of the amount of consumption and surplus of onions in Egypt during the period (2004-2021), (4) Estimating some competitive indicators for Egyptian onion exports to foreign markets. The research was relied on achieving its goals on the two methods of descriptive and quantitative economic analysis, where some of the following statistical methods were used: (1) some statistical methods such as: mathematical and engineering averages, percentages, and annual growth rates. (2) Estimating instability transactions for the amount, value and export price of the onion crop. (3) Instability transactions and geographical focus factor for the amount and value of Egyptian exports from Egyptian onions, (4) some indicators of the competitiveness of Egyptian exports from the onion crop in the most important global markets. **The research recommends:** increasing the quantity of Egyptian onion exports and paying attention to the quality of its output, as Egypt faces strong competition within the market of the Russian Federation, the United Kingdom, Northern Ireland and the Kingdom of Saudi Arabia compared to competing countries. **The most important research results were :** The quantity of global onion exports increased at an annual growth rate of about 3.3%. The global onion export price also increased at an annual growth rate of about 2.0% during the study period. The value of global onion exports increased at an annual growth rate of about 5.2% during the study period. It was also shown that the quantity Egyptian onion exports increased at an annual growth rate of about 3.9% and the value of Egyptian onion exports increased at an annual growth rate of about 10.5% during the study period. The amount of domestic product of onions also increased at an annual growth rate of about 7.7%, and the amount of domestic consumption of Onions had an annual growth rate of about 8.9% during the study period. Egypt also ranked fifth in terms of the amount of onions exported during the period (2017-2021), as the amount of Egyptian onion exports reached about 491.89 thousand tons, representing about 5.49% of the amount of global exports. It was also shown that Saudi Arabia is the most important country in the world importing Egyptian onions during the study period. It came in first place in its imports of Egyptian onions, with an average amount of imports amounting to about 115.58 thousand tons, representing about 23.50% of the total amount of Egyptian onion exports to the world It is about 491,89 thousand tons, with a value of about 54.67 million \$, representing about 30.86% of the total value of Egyptian onion exports, amounting to about 177.15 million \$. By studying the value of the geographical concentration coefficient of the quantity and value of Egyptian onion exports during the study period, it was found that it amounted to about 0.43%, 0.37%, respectively, and from that it is clear that the geographical concentration coefficient for both the quantity and value of Egyptian onion exports is relatively low, which indicates that it was characterized by geographical concentration, which calls for an attempt to expand and diversify foreign markets importing Egyptian onions, Egypt also enjoys a visible comparative advantage for onion exports to international markets during the average study period, which indicates the possibility of increasing Opportunities for Egyptian onion exports, The average market share of Egyptian onions within the Kingdom of Saudi Arabia market was about 35.38% as an average for the period (2017-2021). The average market share of Egyptian onions within the Russian Federation market ranged about 10.89% for the average period (2017-2021), While the average market share of Egyptian onions within the market of the United Kingdom of Great Britain and Northern Ireland was about 13.43% for the average period (2017-2021), it was also found that Yemen and India are the most important competitors to Egypt in exporting onions to the Kingdom of Saudi Arabia market, where the ratio between the average export price of Egyptian onions to the average export prices of Yemeni and Indian onions within the Kingdom of Saudi Arabia market was about 1.71 and 1.36 dollars / ton, respectively, which indicates that Egypt does not have an advantage Price competitiveness in exporting onions to the Saudi Arabian market compared

to competing countries, while the average penetration rate of Egyptian onion exports to the Saudi market was about 0.364 which indicates that Egyptian exports of onions to Saudi Arabia represent about 36.4% of the total amount of apparent consumption of onions within this market, which amounted to about 317.39 thousand tons for the average period (2017-2021), and it turned out that Egypt faces strong competition within the Russian Federation market and the United Kingdom market of Great Britain and Northern Ireland.

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Introduction:

The interest in increasing agricultural exports is one of the most important and main permanents to increase the state's foreign exchange earnings, as the total value of exports reached about 40.7 billion dollars, while the total value of Egyptian agricultural exports reached about 2.89 billion dollars, representing about 7.1% of the total value of exports in 2021 (Central Agency 2022).

Onions are considered one of the most important vegetable crops in Egypt due to its widespread cultivation, as its cultivation area reached about 227 thousand feddans, representing about 11.64% of the total area of Egyptian vegetables of about 1.95 million feddans in 2021, and the amount of output from it amounted to about 3.35 million tons, representing about 15.7% of the total amount of output of vegetable crops in Egypt of about 21.35 million tons for the same year, and the exported quantity of onions amounted to about 392.3 thousand tons with a value of It amounted to about 141.6 million dollars, representing about 4.9%, representing about 4.9% of the total Egyptian agricultural exports in the same year. (Ministry of Agriculture and Land Reclamation 2022).

The deficit in the Egyptian trade balance reached about \$ 33.08 billion in 2021, due to the increase in the value of total Egyptian imports of about \$ 73.78 billion compared to the total Egyptian exports of about \$ 40.70 billion during the same year, while the deficit in the agricultural balance reached about \$ 2.09 billion, due to the increase in the value of agricultural imports of about \$ 4.98 compared to agricultural exports of about \$ 2.89 billion during the same year (Ministry of Agriculture and Land Reclamation 2022).

Research problem:

Despite the importance of the Egyptian onion crop as a export crop, it faces intense competition from other countries, which leads to the fluctuation of the amounts of onions exported from year to year, which led to an attempt to light the most important indicators of the competitiveness of the Egyptian onion crop in foreign markets

Objective:

The research mainly aimed at estimating the most important indicators of the competitiveness of Egyptian onion exports through the following objectives: (1) Studying the evolution of the quantity and global price and value of global onion exports, and the quantity and value of exports and export price of Egyptian onions during the period (2004-2021), (2) Estimating the instability coefficients of the quantity and value of onions exported during the period (2004-2021), (3) Studying the evolution of the quantity and surplus consumption and surplus of onions in Egypt during the period (2004-2021). (4) Estimating some competitiveness indicators for Egyptian onion exports to foreign markets.

Methodology:

The research relied on the methods of descriptive and quantitative economic analysis in achieving its objectives, where some of the following analytical statistical methods were used: (1) Some statistical methods such as: arithmetic and engineering averages, percentages, and annual growth rates. (2) Estimation of instability coefficients for the quantity, value and export price of onion crop. (3) Instability coefficients and geographical concentration coefficient of quantity and value of Egyptian exports of Egyptian onions. (4) Some indicators of the competitiveness of Egyptian exports of onions in the most important international markets.

Data Resources:

The Research relied on published and unpublished secondary data in many official bodies such as: the Ministry of Agriculture and Land Reclamation, the website of trade statistics for the development of international business, the website of the Central Agency for Public Mobilization and Statistics, and the website of the Food and Agriculture Organization of the United Nations, as well as the use of some research, studies, theses, scientific books and Arab and foreign references related to the subject of the research.

Results and Discussion:

1- Development of Both the Quantity and the Global Price and the Value of International and Egyptian Exports of Onions during the period (2004-2021).

A- Evolution of the Quantity and world Price and the Value of World Exports of Onions during the period (2004-2021).

The data of Table (1) showed that the amount of global exports of onions ranged from a minimum of about 5.62 million tons in 2005, to a maximum of about 10.04 million tons in 2021, with an average of about 7.6 million tons during the study period., and by estimating the growth function of the amount of global onion exports, it was found that it increased at an annual growth rate of about 3.3% during the study period (Table 2).

It was also found that the global onion export price ranged from a minimum of about \$ 277.58 / ton in 2005, to a maximum of about \$ 457.29 / ton in 2013, with an average of about \$ 389.1 / ton, and by estimating the growth function, it was found that the global onion export price increased at an annual growth rate of about 2.0% during the study period.

It was found that the value of global onion exports ranged from a minimum of about \$ 1.57 billion in 2004, to a maximum of about \$ 4.26 billion in 2019, with an average of about \$ 3.01 billion, during the study period., and by estimating the growth function, it was found that the value of global onion exports increased at an annual growth rate of about 5.2% during the study period (Table 2).

B-Quantity, price and value of Egyptian exports of onions during the period (2004-2021)

The data in Table (3) showed that the amount of Egyptian onion exports ranged from a minimum of about 201.27 thousand tons in 2007, representing about 3.26% of the total amount of global onion exports of about 6.18 million tons in the same year, and a maximum of about 825.38 thousand tons in 2019, representing about 8.35% of the amount of global onion exports of about 9.89 million tons in the same year, with an annual average of about 392.29 thousand tons. During the study period, by estimating the growth function, it was found that the quantity of Egyptian onion exports increased at an annual growth rate of about 3.9% during the study period (Table 4).

Table (1): Evolution of the quantity, world price and value of world exports of onions during the period (2004-2021).

Years	Quantity of World Exports	World Onion Export Price	Value of World Onion Exports
	Million Tons	\$ / Ton	Million \$
2004	5.65	277.88	1567.84
2005	5.62	277.58	1569.4
2006	6.24	299.68	1876.81
2007	6.18	383.49	2379
2008	6.44	377.33	2440.84
2009	6.69	363.23	2438.75
2010	7.35	435.37	3196.52
2011	7.5	429.33	3223.5
2012	7.1	378.87	2689.72
2013	7.96	457.29	3645
2014	7.67	410.69	3152.3
2015	7.64	439.79	3361.64
2016	8.2	412.19	3380.61
2017	8.2	397.56	3257.8
2018	8.4	427.38	3589.95
2019	9.89	430.74	4264.24
2020	10	406	4061.3
2021	10.04	399.4	4021.09
Average	7.60	389.10	3006.46

Source: Compiled and calculated from: ITC estimates, based on UN COMTRADE statistics

While the export price of Egyptian onions ranged from a minimum of about \$ 102.25 / ton in 2004, a maximum of about \$ 716.82 / ton in 2009, with an annual average of about \$ 381.31 / ton during the study

period, and by estimating the growth function, it was found that the export price of Egyptian onions increased at an annual growth rate of about 6.6% during the study period.

While the value of Egyptian exports of onions ranged from a minimum of about \$ 23.84 million in 2006, to a maximum of about \$ 268.96 million in 2015, with an annual average of about \$ 151.04 million during the

study period, and by estimating the growth function, it was found that the value of Egyptian exports of onions increased at an annual growth rate of about 10.5% during the study period.

Table (2): Growth functions of the quantity and price of exports and the value of world exports of onions during the period (2004-2021).

Variables	Functions	Growth Rate (%)	R ²	F
Quantity of World Exports (million ton)	$\text{Ln}Y_t = 1.70 + 0.033 T_t$ (420.1)** (21.67)**	3.3	0.943	(263.5)**
World Onion Export Price (\$/ton)	$\text{Ln}Y_t = 5.76 + 0.020 T_t$ (104.6)** (3.9)**	2.0	0.487	(15.2)**
Value of World Onion Exports (million \$)	$\text{Ln}Y_t = 7.47 + 0.052 T_t$ (117.3)** (8.92)**	5.2	0.833	(79.5)**

** Indicates significance at probability level 0.01, * indicates significance at probability level 0.05

Source: Calculated from Table (1).

Table (3): Development of the quantity, price, and value of Egyptian onion exports during the period (2004-2021).

Years	Quantity of Exports		Export Price	Value of Export
	Thousand tons	% from world onion exports	\$/ton	Million \$
2004	329.4	5.83	102.25	33.68
2005	301	5.36	103.02	31.01
2006	204.65	3.28	116.49	23.84
2007	201.27	3.26	178.96	36.02
2008	246.99	3.84	395.04	97.57
2009	235.15	3.51	716.82	168.56
2010	510.55	6.95	453.12	231.34
2011	490.92	6.55	439.22	215.62
2012	319.25	4.50	492.69	157.29
2013	349.06	4.39	580.27	202.55
2014	416.7	5.43	396.4	165.18
2015	551.68	7.22	487.53	268.96
2016	445.09	5.43	452.34	201.33
2017	566.28	6.91	365.97	207.24
2018	445.99	5.31	264.24	117.85
2019	825.38	8.35	295.5	243.9
2020	354.28	3.54	494.24	175.1
2021	267.52	2.66	529.46	141.64
Average	392.29	4.88	381.31	151.04

Source: Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, Central Administration for Agricultural Economics, Agricultural Statistics Bulletin, various issues.

2- Estimation of instability coefficients for the quantity and value of onions exported during the period (2004-2021)

By studying the instability coefficient of the amount of Egyptian onion exports, it was found that the geometric average of them reached about 14.98%, which indicates that the amount of Egyptian exports of onions is characterized by instability during the study period. Table No. (5)., It was clear from the estimate of the instability coefficient of the price of the export

of Egyptian onions that the geometric average of about 19.28%, which indicates that the export price of Egyptian onions is characterized by instability during the study period. The estimate of the instability coefficient of the value of Egyptian onion exports showed that the geometric average was about 21.58%, which indicates that the value of Egyptian onion exports is characterized by instability during the study period. Table (5).

Table (4): Growth functions of the quantity and price of exports and the value of Egyptian exports of onions during the period (2004-2021).

Variables	Functions	Growth Rate (%)	R ²	F
Quantity Exports (Thousand tons)	$\text{LnY} = 5.53 + 0.039 X$ (33.6)** (2.56)*	3.9	0.290	6.55
Export Price (\$/ton)	$\text{LnY} = 5.17 + 0.066 X$ (20.78)** (2.88)*	6.6	0.341	8.29
Value of Exports (million \$)	$\text{LnY} = 3.79 + 0.105 X$ (13.27)** (3.98)**	10.5	0.497	15.81

** Indicates significance at probability level 0.01, * indicates significance at probability level 0.05

Source: Calculated from Table (3).

3- Evaluation of consumption and Excess of Onions in Egypt has during the period (2004-2021).

Through the data mentioned in Table (6), it was found that the amount of domestic product of onions ranged between a minimum of about 752.5 thousand tons in 2006, a maximum limit of about 3.35 million tons in 2021, with an average of about 2 million tons during the study period. And by appreciating the growth function, it was found that the amount of domestic product of onions increased by an annual growth rate of about 7.7% during the study period (Table No. 7).

Through the data mentioned in Table (6), it became clear that the amount of local consumption of onions ranged between a minimum of about 553.7 thousand tons in 2006, a maximum limit of about 3.11

million tons in 2021, with an average of about 1.68 million tons during the study period. And by appreciating the growth function, it was found that the amount of local consumption of onions increased by an annual growth rate of about 8.9% during the study period (Table 7).

It was found that the amount of surplus onions ranged from a minimum of about 65.34 thousand tons in 2018, to a maximum of about 952.04 thousand tons in 2017, with an average of about 424.4 thousand tons, during the study period.

It was found that the percentage of self-sufficiency of onions ranged from a minimum of about 102.45% in 2018, to a maximum of about 152.3% in 2017, with a geometric average of about 131.3% during the study period.

Table (5): Instability coefficients for the quantity, price and value of Egyptian exports of onions during the period (2004-2021).

Years	Quantity of Exports	Export Price	Value of Export
2004	25.78	59.88	52.96
2005	8.57	61.81	61.69
2006	30.05	59.07	73.60
2007	34.63	40.25	63.85
2008	23.59	25.66	10.47
2009	30.55	117.72	42.45
2010	44.25	31.67	81.20
2011	32.94	22.35	57.36
2012	17.00	31.78	7.46
2013	12.73	49.27	30.08
2014	0.34	1.79	0.07
2015	28.11	16.50	54.22
2016	0.20	4.38	9.57
2017	22.75	18.36	7.33
2018	6.43	42.94	41.79
2019	67.76	38.18	15.16
2020	30.17	0.28	20.82
2021	48.82	4.28	38.54
G. Average	25.78	59.88	52.96

Whereas: Instability coefficient = $(Y - \bar{Y}) / \bar{Y} \times 100$

Source: Collected and calculated from Table (3).

Table (6): Evolution of the quantity of production, consumption, food gap and self-sufficiency of onions in Egypt during the period (2004-2021).

Years	Production Quantity	Consumption Quantity	Surplus Quantity*	Self-Sufficiency**
	Thousand tons	Thousand tons	Thousand tons	(%)
2004	895.49	630.3	265.19	142.074
2005	1302.13	1017.2	284.93	128.011
2006	752.51	553.7	198.81	135.906
2007	1067.33	716.1	351.23	149.048
2008	1389.26	1102.4	286.86	126.021
2009	1563.36	1140	423.36	137.137
2010	1731.82	1162.4	569.42	148.987
2011	1760.75	1334.1	426.65	131.98
2012	1851.91	1413.7	438.21	130.997
2013	1754.31	1252.9	501.41	140.02
2014	2294.05	1724.8	569.25	133.004
2015	2691.92	2070.8	621.12	129.994
2016	2218.78	1693.9	524.88	130.986
2017	2772.24	1820.2	952.04	152.304
2018	2729.24	2663.9	65.34	102.453
2019	2857.34	2381	476.34	120.006
2020	3104.57	2663	441.57	116.582
2021	3351.81	3108.62	243.19	107.823
Average	2004.93	1580.50	424.43	131.30

(*Food gap = production – consumption., (**) self-sufficiency = (production / consumption) x 100

Source: Ministry of Agriculture and Land Reclamation, Economic Affairs Sector, Central Administration of Agricultural Economics, Agricultural Statistics Bulletin, miscellaneous issues.

Table (7): Growth functions of the quantity of production, consumption, food gap and self-sufficiency of onions in Egypt during the period (2004-2021).

Variables	Functions	Growth Rate (%)	R ²	F
Production Quantity (Thousand tons)	$\text{LnY} = 6.79 + 0.077 X$ (78.20)** (11.69)**	7.7	0.894	134.7
Consumption Quantity (Thousand tons)	$\text{LnY} = 6.79 + 0.077 X$ (78.20)** (11.69)**	8.9	0.895	136.6
Surplus Quantity (Thousand tons)	$\text{LnY} = 5.81 + 0.012 X$ (19.87)** (0.111) ^{n.s}	1.2	0.012 ^{n.s}	0.20 ^{n.s}

** Indicates significance at probability level 0.01, * indicates significance at probability level 0.05

Source: Calculated from Table (6).

4- Current Status of Egypt's Onion Exports to the Most Important International Markets:

By reviewing the data contained in Table (8) of the most important countries exporting onions to foreign markets during the period (2017-2021), where the Netherlands comes in first place with the amount of onion exports amounting to about 1.63 million tons, representing about 18.22% of the total global onion exports of about 8.96 million tons as an average for the period (2017-2021), followed by India in second place with an amount of onion exports of about 1.53 million tons, representing about 17.09%, then China came in third place with the amount of exports of onions amounted to about 872.23 thousand tons, representing

about 9.74%, and Mexico comes in fifth place with the amount of onion exports amounting to about 550.1 thousand tons, representing about 6.14% of the total global onion exports.

As for Egypt, it ranked fifth in terms of the amount of onions exported during the period (2017-2021), as the amount of Egyptian onion exports reached about 491.89 thousand tons, representing about 5.49% of the amount of global exports.

It turned out that it was possible to rank the most important exporting countries in terms of the value of onion exports, as the Netherlands occupied the first place with a value of about 720.74 million dollars, representing about 18.77% of the total value of global

onion exports as an average for the period (2017-2021) - (Table 8), followed by China, where the value of its export of onions amounted to about 510.37 million dollars, representing about 13.29%, and in third place came India, where the value of its export of onions amounted to about 401.44 million dollars, representing about 10.46%. Then comes Mexico, where the value of its exports of onions is about \$ 390.5 million, representing about 10.17%, and the United States of

America came in fifth place, with the value of its export of onions about \$ 250.56 million, representing about 6.53% of the total value of global onion exports.

While Egypt ranked sixth globally in the value of its onion exports during the period (2017-2021), where the value of Egyptian onion exports amounted to about \$ 177.15 million, representing about 4.61% of the value of global onion exports.

Table (8): The Most Important Countries for Onions in the Foreign Markets during the period (2017-2021).

Exporting Country	Quantity of Exports		Value of Exports	
	Thousand tons	(%)	Million \$	(%)
Netherlands	1632.33	18.22	720.74	18.77
India	1530.87	17.09	401.44	10.46
China	872.23	9.74	510.37	13.29
Mexico	550.07	6.14	390.5	10.17
Egypt	491.89	5.49	177.15	4.61
United States	357.4	3.98	250.56	6.53
Iran	349.13	3.9	93.47	2.43
Peru	239.6	2.67	84.05	2.19
Turkey	216.08	2.41	41.61	1.08
Other countries	2719.58	30.36	1168.98	30.47
World	8959.18	100	3838.87	100

Source: www.trademap.org

5- Study the current status of the distribution and geographical concentration of Egyptian onion exports in foreign markets:

It was clear from the data of Table (9) that Saudi Arabia is the most important importer of Egyptian onions in the world during the study period, as it ranked first in its imports of Egyptian onions with an average amount of imports of about 115.58 thousand tons, representing about 23.50% of the total amount of Egyptian onion exports to the world, amounting to about 491.89 thousand tons, and a value of about 54.67 million dollars, representing about 30.86% of the total value of Egyptian onion exports, amounting to about 177.15 million dollars as an average during the study period, followed by In the ranking of the Russian Federation, whose average amount of imports of Egyptian onions is about 40.34 thousand tons, representing about 8.20% of the total amount of Egyptian onion exports to foreign markets, and a value of about 19.41 million dollars, representing about 10.94% of the total value of Egyptian onion exports as an average for the study period, and the United Kingdom of Great Britain and Northern Ireland comes in third place, with an average quantity of Egyptian onions exported to about 38.60 thousand tons, representing about 7.85% of the total amount of Egyptian exports from onions to the world, and at a value of about 19,73 million dollars, represented by about 11.14% of the total value of Egyptian onion

exports as an average for the study period, then the Netherlands came in the fourth place, the average amount issued to it from the Egyptian onions reached about 37, 79 thousand tons represents about 7.68% of the total amount of Egyptian exports from onions to the world, and at a value of about 19,19 million dollars representing about 10.84% of the total value of Egyptian onion exports as a average for the study period, and the UAE markets, Amman, Germany, Italy in the fifth to eighth positions, respectively, where the amount of its imports of Egyptian onions reached about 19,31, 11,79, 10,04, 9,92 thousand tons, respectively, represented by about 3.93%, 2.39% , 2,04%, 2,02%, respectively, from the total amount of Egyptian onion exports, with a value of about 8,99, 5,55, 5,14, 5,12 milligors, respectively, representing about 5.07%, 3, 14%, 2.90%, 2.89%, respectively, of the total value of Egyptian onion exports as a average period (2017-2021).

It was also found that the value of the geographical concentration coefficient for the quantity and value of Egyptian onion exports during the study period amounted to about 0.43% and 0.37%, respectively, and it is clear that the geographical concentration coefficient for both the quantity and value of Egyptian onion exports is relatively low, which indicates that it was characterized by geographical concentration, which calls for an attempt

to expand and diversify foreign markets importing Egyptian onions.

6- Competitiveness for Egyptian onion exports in the most important imported markets:

(1)The apparent relative feature:

By studying the data contained in the schedule (10) it is clear that the relative feature factor for

Egyptian onion exports during the period (2017-2021) ranged between a minimum of about 17,15 in 2018, a maximum limit of about 31,99 years 2017 with an average of about 24, 65, which confirms that Egypt has enjoyed a relative advantage of onion exports to international markets during the average study period, which indicates the possibility of increasing the opportunities for Egyptian onion exports.

Table (9): Distribution and Geographical Concentration of Egyptian Onion Exports in the Import Markets as an average for the period (2017-2021).

Country	Quantity of Exports		Value of Exports	
	Thousand tons	(%)	Million \$	(%)
Saudi Arabia	115.58	23.50	54.67	30.86
Russian Federation	40.34	8,20	19.41	10.94
United Kingdom of Great Britain and Northern Ireland	38.60	7.85	19.73	11.14
Netherlands	37.79	7.68	19.19	10.84
U.A.E	19.31	3.93	8.99	5.07
Oman	11.79	2.39	5.55	3.14
Germany	10.04	2.04	5.14	2.90
Italy	9.92	2.02	5.12	2.89
Other countries	208.52	42.39	39.35	22.22
World	491.89	100.00	177.15	100.00
Geographic Concentration Coefficient (%)	0.43		0.37	

Source: www.trademap.org

Table (10): The Apparent Comparative Advantage Coefficient for Egyptian Onion Exports during the period (2017-2021).

years	Value of Egyptian Onion Exports	Value of Egyptian Agricultural Exports	Value of Global Onion Exports	Value of Global Agricultural Exports	Apparent Comparative Advantage
	Million \$	Million \$	Million \$	Million \$	
2017	207.24	2801.5	3257.80	1411716.0	31.99
2018	117.85	2791.7	3589.95	1456978.0	17.15
2019	243.90	2808.9	4264.24	1447956.0	29.52
2020	175.10	2770.2	4061.30	1493473.0	23.24
2021	141.64	2892.4	4021.09	1754667.0	21.35
Average	177.15	2812.94	3838.88	1512958.0	24.65

Source: Calculated from:

- Website of the Central Agency for Public Mobilization and Statistics www.capmas.gov.eg
- World Trade Map website www.trademap.org

(2)Market share:

It became clear from Table (11) that the market share of the Egyptian onions inside the Kingdom of Saudi Arabia market ranged between a minimum of about 27.12% in 2020, and a maximum of about 45,81% in 2017, with an average of about 35.38% as average For the period (2017-2021), and the import energy of the Kingdom of Saudi Arabia from the global onions reached about 320.61 thousand tons during the average of the same period.

The market share of Egyptian onions within the Russian Federation market ranged between a

minimum of about 7.86% in 2018, and a maximum of about 14.34% in 2021, with an average of about 10.89% for the average period (2017-2021), and the import capacity of the Russian Federation of global onions reached about 360.66 thousand tons during the average of the same period.

The market share of Egyptian onions within the market of the United Kingdom of Great Britain and Northern Ireland ranged between a minimum of about 10.50% in 2018, and a maximum of about 22.43% in 2019, with an average of about 13.43% for the average period (2017-2021), and the import capacity of the

United Kingdom of global onions reached about 267.53 thousand tons during the average of the same period.

From the above, it is clear the need to pay attention to increasing the quantities exported of Egyptian onions in foreign markets.

Table (11): Market share of Egyptian Onions in the Most Important Markets during the period (2017-2021) (Quantity: thousand tons)

years	Saudi Arabia			Russian Federation			United Kingdom of Great Britain and Northern Ireland		
	Imports from Egypt	Imports from World	Egyptian Market Share (%)	Imports from Egypt	Imports from World	Egyptian Market Share(%)	Imports from Egypt	Imports from World	Egyptian Market Share(%)
2017	175.31	382.69	45.81	27.20	341.98	7.95	30.69	223.42	13.74
2018	125.69	381.31	32.96	31.54	401.47	7.86	26.25	249.92	10.50
2019	109.33	296.02	36.93	61.63	457.19	13.48	74.49	332.12	22.43
2020	89.44	329.85	27.12	38.86	306.48	12.68	27.03	225.40	11.99
2021	78.13	213.19	36.65	42.47	296.20	14.34	34.54	306.77	11.26
Average	115.58	320.61	35.38 *	40.34	360.66	10.89 *	38.60	267.53	13.43 *

* It means calculated as a geometric mean

Source: World Trade Map website www.trademapp.org

(3) Price Competitiveness:

By studying the data contained in Table (12), it became clear that Yemen and India are the most important competitors to Egypt in exporting onions to the Kingdom of Saudi Arabia market, where the ratio between the average export price of Egyptian onions to the average export prices of Yemeni and Indian onions within the market of the Kingdom of Saudi Arabia is about 1.71 and 1.36 dollars / ton respectively, which indicates that Egypt does not have a competitive price advantage in exporting onions to the Kingdom of Saudi Arabia market compared to competing countries, and therefore the inability of The market of the Kingdom of Saudi Arabia to absorb the largest possible amount of Egyptian onions during the average period (2017-2021).

Kazakhstan, Uzbekistan, and Turkey are also the most important competitors of Egypt in exporting onions to the Russian Federation market, as the ratio between the average export price of Egyptian onions to the average export price of Kazakh, Uzbekistan, and Turkish onions within the Russian Federation market was about 1.07, 0.88, and 1.12 dollars / ton, respectively, which indicates that Egypt enjoys a competitive price advantage in exporting onions than those in competing countries to the Russian Federation market except Kazakhstan and Turkey during the average period (2017-2021).

The Netherlands, Spain and Poland are the most important competitors of Egypt in the export of onions to the market of the United Kingdom of Great Britain and Northern Ireland, where the ratio between the average export price of Egyptian onions to the average export prices of Dutch, Spanish and Polish onions within the market of the United Kingdom of Great

Britain and Northern Ireland is about 1.92, 2.41 and 1.57 \$ / ton respectively, which indicates that Egypt does not have a competitive price advantage in exporting onions to the United Kingdom of Great Britain and Northern Ireland market compared to countries. Competition during the average period (2017-2021).

From the above, it is clear that it requires the adoption of price and export policies that lead to increasing the level of competitiveness of Egyptian onions with other countries.

(4) Market penetration rate:

It is clear from the data of Table (13) that the penetration rate of Egyptian onion exports to the Kingdom of Saudi Arabia market ranged between a minimum of about 0.271 in 2020, and a maximum of about 0.461 in 2017 with an average of about 0.364, which indicates that Egyptian exports of onions to the Kingdom of Saudi Arabia represent about 36.4% of the total amount of apparent consumption of onions within this market, which amounted to about 317.39 thousand tons for the average period (2017-2021)

The penetration rate of Egyptian onion exports to the Russian Federation market ranged between a minimum of about 0.087 in 2017, and a maximum of about 0.166 in 2020, with an average of about 0.132, which indicates that Egyptian exports of onions to the Russian Federation represent about 13.2% of the total amount of apparent consumption of onions within this market, which amounted to about 310.87 thousand tons for the average period (2017-2021), and this indicates that Egypt faces strong competition within the Russian Federation market.

The penetration rate of Egyptian onion exports to the United Kingdom of Great Britain and Northern Ireland market ranged between a minimum of about 0.067 in 2018, and a maximum of about 0.158 in 2019 with an average of about 0.092, indicating that Egyptian exports of onions to the United Kingdom of Great Britain and Northern Ireland represent about 9.2% of the total apparent consumption of onions

within this market, which amounted to about 410.17 thousand tons for the average period (2017-2021), and this indicates that Egypt faces competition. Strong within the UK market of Great Britain and Northern Ireland.

From the above, it became clear that it is necessary to take all necessary means to increase the exports of Egyptian onions in foreign markets.

Table (12): The Relative Price of Egyptian Onions with the Price of Onions for the Most Important Competing Countries within the Most Important Markets during the period (2017-2021). (Price: \$ /Ton)

Statement		2017	2018	2019	2020	2021	Average
Saudi Arabia	Egypt Price	461.85	316.16	279.83	258.43	480.93	359.44
	Price of Yemen	123.57	267.84	267.51	273.34	294.98	245.45
	Relative price	3.74	1.18	1.05	0.95	1.63	1.71
	India price	208.61	254.63	222.00	269.51	419.20	274.79
	Relative price	2.21	1.24	1.26	0.96	1.15	1.36
Russian Federation	Egypt Price	521.10	604.8	718.00	525.30	835.53	640.95
	Kazakhstan price	854.61	703.64	433.99	425.09	828.98	649.26
	Relative price	0.61	0.86	1.65	1.24	1.01	1.07
	Uzbekistan Price	811.29	713.10	856.20	808.87	586.16	755.12
	Relative price	0.64	0.85	0.84	0.65	1.43	0.88
	Turkey price	396.02	482.53	769.96	678.72	627.17	590.88
Relative price	1.32	1.25	0.93	0.77	1.33	1.12	
United Kingdom of Great Britain and Northern Ireland	Egypt price	1011.26	1010.55	788.10	1028.35	1074.26	982.50
	Netherlands price	427.06	516.01	661.76	555.81	479.87	528.10
	Relative price	2.37	1.96	1.19	1.85	2.24	1.92
	Spain price	333.50	446.03	447.14	392.25	449.17	413.62
	Relative price	3.03	2.27	1.76	2.62	2.39	2.41
	Poland price	507.59	552.45	744.31	743.03	685.30	646.54
Relative price	1.99	1.83	1.06	1.38	1.57	1.57	

Source: Compiled and calculated from: World Trade Map website www.trademap.org

Table (13): The Rate of Penetration of Egyptian Onion Exports for the Most Important Markets during the period (2017-2021). (Quantity: Thousand tons)

Statement		2017	2018	2019	2020	2021	Average
Saudi Arabia	Imports from Egypt	175.31	125.69	109.33	89.44	78.13	115.58
	Production	0.00	0.00	0.00	0.00	0.00	0.00
	Imports	382.69	381.31	296.02	329.85	213.19	320.61
	Exports	2.32	0.79	0.00	0.00	13.00	3.22
	Penetration Rate	0.461	0.330	0.369	0.271	0.390	0.364
	Penetration Rate	0.461	0.330	0.369	0.271	0.390	0.364
Russian Federation	Imports from Egypt	27.20	31.54	61.63	38.86	42.47	40.34
	Production	0.00	0.00	0.00	0.00	0.00	0.00
	Imports	341.98	401.47	457.19	306.48	296.20	360.66
	Exports	29.62	45.28	71.94	62.20	39.93	49.79
	Penetration Rate	0.087	0.089	0.160	0.159	0.166	0.132
	Penetration Rate	0.087	0.089	0.160	0.159	0.166	0.132
United Kingdom of Great Britain and Northern Ireland	Imports from Egypt	30.69	26.25	74.49	27.03	34.54	38.60
	Production	147.35	154.67	149.90	149.31	150.36	150.32
	Imports	223.42	249.92	332.12	225.40	306.77	267.53
	Exports	10.35	11.81	10.52	0.00	5.71	7.68
	Penetration Rate	0.085	0.067	0.158	0.072	0.077	0.092
	Penetration Rate	0.085	0.067	0.158	0.072	0.077	0.092

Source: Compiled and Calculated from: World Trade Map website www.trademap.org

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2024/22/2