

An Economic Study of the Growth Determinants for the Egyptian Orange Exports to the Global Market

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Abstract

Agricultural exports are drivers of economic growth as, apart from earning valuable foreign currency; it creates sustainable jobs, increases the adaption of advanced technologies and production practices as well as the enhancement of overall competitiveness of the agricultural sector. Egypt's average exports of orange grew at an annual rate of 20% during the period (2001-2012), accounting for about 14% of the total value of agricultural exports. These discussions raised an important research question on what are the most important growth determinants of Egypt's orange exports. The study attempts to investigate the situation of the Egyptian exports of orange in the key importing market, identify the most important competitive countries to Egypt's orange exports, and investigate the determinants of such exports in order to gain knowledge on the factors that influence the value of the Egyptian exports of orange. The results of the augmented gravity model revealed three factors that were found to be most significant namely, exchange rate, population, and the physical distance from Cairo to the capitals of the importers. GDP of Egypt, GDP of the trading partner, and the economic difference are of less importance. The total size of the specific export market for the Egyptian oranges is also of lesser importance to the flows of the Egyptian oranges.

Key words: orange exports; gravity model; determinants of trade; Egypt

1. Introduction

Agricultural exports are drivers of economic growth as, apart from earning valuable foreign currency; it creates sustainable jobs, increases the adaption of advanced technologies and production practices as well as the enhancement of overall competitiveness of the agricultural sector. Therefore, the focus on promoting Egyptian agricultural exports is one of the most important pillars to overcome the deficit of the trade balance and enhancing economic development. In this regard, the Agricultural Sustainable Development Strategy 2030 (SADS) pays considerable attention to increase the competitiveness of agricultural products in local and international markets (MALR, 2009).

Nevertheless, Agricultural exports have a large proportion in Egypt's total exports, representing about 10% of Egypt's total exports during the period (2001-2012). Egypt's agricultural exports have shown strong average growth over the last years from a total value of USD 0.5 billion in 2001 to USD 2.7 billion in 2012, with an average annual increase exceeding 14% in the same period. Egypt has shown some significant expansion in the exports of various agricultural commodities over the last years e.g. oranges, onions, cotton lint, potatoes, rice, grapes, beans, and strawberries (FAOSTAT, 2013).

Besides, Egypt is well-known for its production of oranges. The surplus has found well-established and lucrative markets; earning large amounts of foreign currency and enhancing economic development. Because orange is one of the significant crops among Egypt's agricultural exports, it is important to understand the patterns and determinants of international trade in this fruit in order to promote Egyptian agricultural exports. Nevertheless, orange exports are coming under increasing international competition, which calls for a major concern for competitive countries are likely to stand the competitive pressure in the ever-changing world economy.

Since these exports provide a good indication of potential destinations of the Egyptian exports of orange, it is important to investigate the factors influencing the value of orange exports. Notwithstanding the importance of supply side factors like production cost and climatic conditions, the marketing factors of the Egyptian ranges internationally may provide guidelines for future production strategies. However, the value of orange exports is affected by gross domestic product, the gross national income per capita, the difference between per capita gross national income of Egypt and of the importer, the physical distance from Cairo to the capital of the importer, total imports of the Egyptian oranges by the importer, exchange rate, the total population of the importer ... etc.

These discussions raised an important research question on what are the most important growth determinants of Egypt's orange exports. The study therefore attempts to investigate the situation of the Egyptian exports of orange in the key importing market, identify the most important competitive countries to Egypt's orange exports, and investigate the determinants of such exports in order to gain knowledge on the factors that influence the value of the Egyptian exports of orange. In order to reach the objectives of this research, the study is divided into three further sections. The second section presents the methodological framework with special emphasis to the analytical method and data used whereas, the third section discusses the empirical results and finally, the last section concludes with some remarks and recommendations on policy implications.

2. Methodological Framework

2.1. Data source

The current study is based on annual data for the period (2001-2012) obtained from the Central Agency for Public Mobilization and Statistics (CAPMAS), the Egyptian Central Department of Agricultural Economics & Statistics, the United Nations Commodity Trade Statistics Database (UN COMTRADE), the United Nations Food and Agriculture Organization statistical database (FAOSTAT), the World Bank, the World Economic Outlook Databases of the International Monetary Fund (IMF), ... etc.

2.2. Analytical method

To reach the objectives of this study, the gravity model will be applied using data of orange exports. Earlier studies have applied the gravity model to investigate the trade flows and trade potential of Egypt (Hassanain, 2010 and Shehata, 2011). However, most of the studies are more aggregate in nature and have not particularly looked at agricultural exports. Nevertheless, the trade gravity model is one of the most successful and widespread methodologies used for estimating the determinants of trade.

The gravity model is an analysis approach that uses historical data to conduct an econometric study of trade. Tinbergen (1962) and Pöyhönen (1963) first applied the gravity model to analyse international trade flows. The traditional model explains the flow of trade between countries by the proportion of their economic mass and by the inversely proportion of the physical distance between them. Frankel (1997) gives recognition to Helpman & Krugman (1985) for the standard gravity model. They provide a rationale for the relationship between trade flows and country size but they do not include a role for distance.

The inclusion of the latter in the gravity model stems from different motivations, such as: distance is a proxy for transport cost, distance is proxy for transaction cost, distance is a proxy for shipping times (especially important for the exports perishable products), distance a proxy for synchronization cost (especially important for the exports of inputs or intermediates), and distance is proxy for cultural differences (cultural differences may impede trade due to differences in preferences, values, language, negotiating styles, ... etc.). Bergstrand (1985) included a role for shipping cost in his version of the imperfect substitution model.

Apart from the traditional variables, income and distance, many models have included other variables to control for differences in geographical factors, trade policy and economic facts. It must be noted that the gravity models does not make provisions for third party effects between country A and B. Furthermore, another important shortcoming of the model is the neglect of supply side constraints which are especially evident for agricultural production (e.g. weather patterns, pests).

This study applies an augmented gravity model which will be specified in the next paragraph. As mentioned, this study aims to estimate the factors determining Egypt's orange exports, thus not

Egypt's total agricultural trade. The departure point of this study is the basic gravity model that can be specified as follows:

$$\log(VExp_{mi}) = \alpha + \beta_1 \log(GDP_m) + \beta_2 \log(GDP_i) + \beta_3 \log(GNIC_m) + \beta_4 \log(GNIC_i) + \beta_5 \log(D_{mi}) + \varepsilon \quad (1)$$

Where

t is a specific year, n is Egypt and i is the Egyptian orange trading partners or importer (Saudi Arabia, Russian Federation and Ukraine).

$VExp_{mi}$:	Value of exports of oranges j from Egypt to the importer i in year t (USD)
GDP_m :	Gross Domestic Product of Egypt in year t (as a proxy of exporting capacity of exporter)
GDP_i :	Gross Domestic Product of the importer i in year t (as a proxy of economic market size of importer)
$GNIC_m$:	Per capita Gross National Income of Egypt in year t (as a proxy of stage of development of exporter)
$GNIC_i$:	Per capita Gross National Income of the importer i in year t (as a proxy of stage of development of importer, income of consumers)
$Dist_{mi}$:	The physical distance in kilometres from Cairo to the capital of the importer i (as a proxy of transaction and transportation costs)

To account for other factors that are expected to influence agricultural trade levels, some variables have been added to Equation 1. This study will therefore use the following augmented gravity model:

$$\log EXP_{mi} = \alpha + \beta_1 \log(GDP_m) + \beta_2 \log(GDP_i) + \beta_3 EconDif_{mi} + \beta_4 \log(IMP_{i-n}) + \beta_5 \log(ER_{mi}) + \beta_6 \log(Pop_i) + \beta_7 \log(Dist_{mi}) + \varepsilon \quad (2)$$

$EconDif_{mi}$:	Economic difference: the difference between per capita Gross National Income (GNI) of Egypt and of the importer i (as a proxy of difference in economic development between the exporter and the importer)
IMP_{i-n} :	Total imports of the Egyptian oranges by the importer i in year t (as a proxy of size of Egypt's orange exports in the importer market)
ER_{mi} :	The exchange rate of the national currency of the importer i and the Egyptian Pound in year t (as a proxy of the impact of financial risk and bilateral currency devaluation)
Pop_i :	The total population of the importer i in year t (as a proxy of physical total market size)

3. Results and Discussion

3.1. Development of the Egyptian Agricultural Exports

Results illustrated in Table 1 revealed that the value of agricultural exports has a large proportion in Egypt's total exports, amounting to about 10% during the period (2001-2012). However, the value of agricultural exports multiplied in 2012 reaching four times its value in 2001. Moreover, Egypt's agricultural exports have shown strong average growth over the last years from a total value of USD 0.5 billion in 2001 to USD 2.7 billion in 2012, amounting to an average of about USD 1.7 billion with an annual increase exceeding 14% in the same period. Besides, orange exports are heading the list of the fruit exports of Egypt. However, orange is a major export product of Egypt (FAOSTAT, 2013).

3.2. Development of Orange Cultivated Area, Production and Yield

Orange Cultivated Area: The results illustrated in Table 2 revealed that orange cultivated area reached about 210 thousand feddans in 2001, as compared to about 334 thousand feddans in 2011, amounting to an average of about 252 thousand feddans with an annual increase of less than about 4% during the period (2001-2011).

Orange Production: Table 2 revealed that orange production reached about 1696 thousand tons in 2001, as compared to about 2578 thousand tons in 2011, amounting to an average of about 2066 thousand tons with an average annual increase of about 3.6% during the period (2001-2011). This result is due to the fact that increased area cultivated by oranges and the development of high-yielding new orange varieties, as well. Considering the quantity of orange exports as a percentage of orange production, the results illustrated in Table 2 showed that about 15% of Egypt's orange production was exported to the global market in 2001 whereas, the quantity of the Egyptian exports of orange reached more than 40% of Egypt's orange production in 2011, amounting to an average exceeding 21% during the study period.

Orange Yield: Table 2 revealed the development of orange yield reaching about 8.52 ton/feddan in 2001, as compared to about 9.81 ton/feddan in 2011, amounting to an average of about 9.53 ton/feddan, growing at an annual exceeding 1% during the period (2001-2011).

Table (1): Development of Egypt's total, agricultural and orange exports during the period (2001-2012).

Years	Value of Total Exports (Million USD)	Value of Agricultural Exports (Million USD)	% of Value of Agricultural Exports to Total Exports	Value of Orange Exports (Million USD)	% of Value of Orange Exports to Agricultural Exports
2001	4141	530	12.8	51	9.5
2002	4678	671	14.3	27	4.0
2003	6161	776	12.6	39	5.0
2004	7680	1105	14.4	66	6.0
2005	10645	918	8.6	75	8.2
2006	13720	855	6.2	65	7.6
2007	16168	1202	7.4	99	8.2
2008	26244	2090	8.0	382	18.3
2009	24258	2968	12.2	495	16.7
2010	26677	3131	11.7	484	15.5
2011	30588	3026	9.9	538	17.8
2012	29264	2684	9.2	456	17.0
Average	16685	1663	10.0	248	14.9
Annual Growth Rate (%)	17.70	14.47	-----	20.11	-----

Source: Compiled and calculated from: 1. CAPMAS, (2013). 2. COMTRADE, (2013).

Table (2): Development of Egypt's orange cultivated area, production, yield and quantity of exports during the period (2001-2011).

Years	Orange Total Area (Thousand feddan)	Orange Production (Thousand Ton)	Orange Yield (Ton/feddan)	Quantity of Orange Exports (Thousand Ton)	% of Orange Exports to Orange Production
2001	210	1696	8.52	258	15.2
2002	210	1809	9.09	127	7.0
2003	215	1768	8.94	167	9.4
2004	220	1850	9.34	222	12.0
2005	224	1940	9.64	214	11.0
2006	236	2120	10.14	283	13.3
2007	249	2055	9.66	272	13.2
2008	262	2138	9.62	655	30.6
2009	296	2372	10.11	822	34.7
2010	314	2401	9.96	820	34.2
2011	334	2578	9.81	1042	40.4
Average	252	2066	9.53	444	21.5
Annual Growth Rate (%)	3.94	3.55	1.29	12.34	-----

Source: Compiled and calculated from: 1. COMTRADE, (2013). 2. MALR, (2012).

3.3. Development of the Egyptian exports of orange

Data of Tables 1 and 2 indicated that orange exports undergo an increasing trend during the indicated period, with 258 and 1042 thousand tons recorded in 2001 and 2011, respectively. That was due to the fact that orange exports are subjected to bilateral agreements that are annually signed under varying conditions. In addition, Egypt's value of average orange exports reached about USD 248 million, which grew at an annual rate of 20.11% during the period (2001-2012). Besides, Egypt's average value of orange exports accounted for about 15% of the total value of agricultural exports during the same period.

3.4. The Main Egyptian Orange Importing Markets

Table 3 showed that the main destinations of Egypt's orange exports, accounting for about 72% and 70% of Egypt's total orange exports in terms of quantity and value, respectively during the study period, are Saudi Arabia, Russian Federation and Ukraine. However, Saudi Arabia is the largest market for Egypt's orange imports with a share of 34% of Egypt's total orange exports, with an average imported quantity of about 168 thousand tons, which grew at an annual rate of 7% and with

an average value of about USD 79 million, which grew at an annual rate of about 14%. The Russian Federation ranks second in terms of the total Egyptian orange imports, contributing to about 32% of Egypt's orange exports, with an average imported quantity of about 114 thousand tons, which grew at an annual rate of about 31% and with an average value of about USD 75 million, which grew at an annual rate of about 44%. Nevertheless, Ukraine ranked third in terms of the most important destinations for Egypt's exports of oranges with about 8% of the total Egyptian exports of orange during that period and with an average imported quantity of about 45 thousand tons, growing at an annual rate of 28% and with an average value of about USD 19 million, growing at an annual rate of 38%.

Table (3): Egyptian exports of orange to the main Markets during the period (2001-2012).

Years	Quantity (Thousand Ton)			Value (Million USD)		
	Saudi Arabia	Russian Federation	Ukraine	Saudi Arabia	Russian Federation	Ukraine
2001	83	8	4	24	2	1
2002	109	41	3	31	11	1
2003	179	76	8	49	21	2
2004	159	110	12	48	35	3
2005	197	89	26	117	42	6
2006	197	109	40	63	57	9
2007	174	110	61	64	67	13
2008	159	135	81	103	84	17
2009	182	129	87	117	109	38
2010	182	150	67	113	129	36
2011	205	219	68	109	185	50
2012	193	197	80	111	160	46
Average	168	114	45	79	75	19
Annual Growth Rate (%)	7.29	30.60	28.36	13.61	44.08	37.58

Source: Compiled and calculated from COMTRADE, (2013).

3.5. The Countries Competitive to Egypt's Orange Exports

The Egyptian exports of orange are coming under increasing international competition, which calls for a major concern for only competitive countries are likely to stand the competitive pressure in the ever-changing world economy. In this concern, Table 4 revealed that the Egyptian exports of orange to their main orange importing markets (particularly Saudi Arabia, Russian Federation and Ukraine) are faced by three major competitive countries namely, Spain, South Africa and Turkey.

Table (4): Orange Total Exports from Competitive Countries to Egypt during the period (2001-2012).

Years	Quantity (Thousand Ton)			Value (Million USD)		
	Spain	South Africa	Turkey	Spain	South Africa	Turkey
2001	1332	624	143	638	129	47
2002	1584	660	188	869	131	56
2003	1496	723	177	1006	213	59
2004	1521	737	134	1150	272	52
2005	1142	1235	194	880	272	76
2006	1351	1007	246	1000	313	99
2007	1456	1003	176	1173	391	92
2008	1334	971	162	1294	433	96
2009	1470	952	272	1301	402	169
2010	1342	1097	233	1226	600	157
2011	1506	975	366	1261	589	263
2012	1627	1097	327	1285	584	230
Average	1430	923	218	1090	361	116
Annual Growth Rate (%)	1.68	4.81	7.14	6.01	13.41	14.15

Source: Compiled and calculated from: COMTRADE, (2013).

Spain comes at the top list of such countries with an average quantity of about 1430 thousand tons, which grew at an annual rate of about 1.7% during the period (2001-2012), and with an average value of about USD 1090 million, which grew at an annual rate of about 6% during the same period. Considering South Africa, the results revealed that South Africa ranks second in terms of orange exports with an average quantity of about 923 thousand tons, which grew at an annual rate of about 5% during the period (2001-2012), and with an average value of about USD 361 million, which grew at an annual rate of about 14% during the study period. Moreover, the results showed that Turkey comes third in terms of the major competitive countries to the Egyptian exports of orange in Egypt's main orange importing markets with an average quantity of about 218 thousand tons, which grew at an annual rate of about 7% during the period (2001-2012), and with an average value of about USD 116 million, which grew at an annual rate of about 14% during the study period.

3.6. The Empirical Results of the Trade Gravity Model

The estimation results of the augmented gravity model for the Egyptian exports of orange to the three studied trading partners namely, Saudi Arabia, Russian Federation and Ukraine are portrayed in Table 5. The adjusted coefficient of determination (adj. R^2) indicated that the studied factors of the augmented gravity model explain 92% of the variation in the Egyptian exports of orange to the three studied trading partners. Only the significant estimators at a confidence level of 90% or more are shown in the Table. The T-statistic per estimator is given and the goodness of fit (reflected by the adjusted R-square), F-value, as well as the total number of observations are given in the final rows. Looking at the overall goodness of fit of orange estimations for the gravity model, it can be concluded that the specified model explains orange export flows to a sufficient extend.

Table (5): The Empirical Results of the Trade Gravity Model.

		Coefficients	T-statistic	P-value
α	Constant	6.45	2.00***	0.055
GDP_{it}	Gross Domestic Product of Egypt in year t (million USD)	0.47	1.93***	0.071
GDP_{it}	Gross Domestic Product of the importer i (Saudi Arabia, Russian Federation and Ukraine) in year t (million USD)	1.51	2.50**	0.019
$EconDif_{it}$	Economic difference: the difference between per capita gross national income of Egypt and of the importer i (million USD)	0.25	1.83***	0.095
IMP_{it-n}	Total imports of the Egyptian oranges by importer i in year t (thousand tons)	0.80	2.11**	0.044
ER_{it}	The exchange rate of the national currency of the importer i (Saudi Riyal, Russian Ruble and Ukrainian Hryvnia) and the Egyptian Pound in year t (USD)	-0.48	-2.99*	2E-05
Pop_{it}	The total population of the importer i in year t (million persons)	1.68	4.26*	2E-04
$Dist_{it}$	The physical distance from Cairo to the capital of the importer i (Km)	-4.20	-9.04*	1E-10
F-value	60.64*			
Adj. R^2	0.92			
Number of observations	36			

Notes: 1. (*) statistically significant difference at the 1% level, (**) statistically significant difference at the 5% level, and (***) statistically significant difference at the 10% level.

2. All variables are transformed to their natural log in order to make the model linear.

Source: The results of the model.

The GDP of Egypt was found to be significant in the determination of its orange exports. This significant coefficient is positive, indicating that Egypt's orange domestic supply capacity positively affects Egypt's orange exports. Besides, the estimation of the coefficient of the Egyptian orange trading partners' GDP, reflecting their economic market size, was also significant. However, the sign of this variable has a positive sign, as the expected. This indicates that the large economic market size of these trading partners can accommodate more imports of the Egyptian oranges. These results revealed that an increase of the GDP of Egypt and the studied trading partners by 1% for each

increases the exports of the Egyptian oranges to these markets by about 0.47% and 1.51%, respectively.

However, the GNI per capita of the trading partner, reflecting stage of economic development, was found to be insignificant in the estimation for orange exports to the three studied trading partners. The results imply that the stage of development of the three studied trading partners and incomes of the consumers do not significantly affect the exports of the Egyptian oranges to these markets. Similar results for the GNI per capita of Egypt. This indicates that the Egyptian exports of orange are not impacted by its stage of development.

The economic difference (or the difference between per capita gross national income of Egypt and of the importer) was found to be positively significant in the estimation, implying that the Egyptian oranges tend to be exported to countries that differ to a higher extend in economic development from Egypt. These results revealed that an increase of the economic difference between Egypt and the three studied trading partners by 1% increases the exports of the Egyptian oranges to these markets by about 0.25%.

The total size of the specific export market for the Egyptian oranges, reflected by the total imports of such oranges by the trading partners, was positively significant. This entails that such products are exported to countries which rely more heavily on imports for the supply of the Egyptian oranges. The physical total market size, reflected by the total population of the trading partner (importer), was found to be significant in the estimation. The sign of the coefficient in the model was positive as expected. This implies that the exports of the Egyptian oranges to the studied markets are positively related to the physical market size of the trading partner. These results revealed that an increase of the total imports of the Egyptian oranges by the studied trading partners by 1% increases the exports of the Egyptian oranges to these markets by about 0.80% whereas, an increase of the total population of the studied trading partners by 1% increases the exports of the Egyptian oranges to these markets by about 1.68%.

The exchange rate, reflecting financial risk and currency devaluation, was negatively significant. This indicates that the lower the relevant exchange rate, the more of the Egyptian oranges is exported to the studied markets. However, an increase of the exchange rate by 1% decreases the exports of the Egyptian oranges to the studied markets by about 0.48%. Regarded as an important estimator of trade flows; the physical distance from the capital of the exporter to the capital of the importer; Cairo-Riyadh, Cairo-Moscow, and Cairo-Kiev, reflecting transaction and transportation costs, was found to be of significance. The sign of the coefficient for distance was negative, as expected. Thus for the exports of the Egyptian oranges to the studied markets, transaction and transportation costs are of significant importance. These results revealed that an increase of such distances by 1% decreases the exports of the Egyptian oranges to these markets by about 4.20%.

4. Concluding remarks, recommendations and policy implications

The primary objectives of this study were to investigate the situation of the Egyptian exports of orange in the key importing market, identify the most important competitive countries to Egypt's orange exports, and investigate the determinants of such exports in order to gain knowledge on the factors that influence the value of the Egyptian exports of orange by applying the gravity model. The results from the gravity model are not one-sided, as variety of the investigated factors were found significant. One of the main findings was that the specified model explains the export flows of the trading partners. Thus, exogenous factors will have a limited effect on the exports of the Egyptian oranges. The three factors that were found to be most significant in the gravity model are exchange rate (reflecting financial risk and currency devaluation), population (reflecting physical market size), and the physical distance from the capital of the exporter to the capital of the importer; Cairo-Riyadh, Cairo-Moscow, and Cairo-Kiev (reflecting transaction and transportation costs). GDP of Egypt (reflecting supply capacity), GDP of the trading partner (reflecting economic market size), and the economic difference (reflecting difference in economic development between the exporter and the

importer) are of less importance. The total size of the specific export market for the Egyptian oranges is also of lesser importance to the flows of the Egyptian oranges.

The implication of these outcomes is that the focus of Egypt's future orange exports should be strategized along the following guidelines from a marketing perspective:

- Economic and physical market size play an important role in the growth of the Egyptian orange exports to the studied markets, so those markets should be targeted first.
- Economic growth in Egypt motivates growth in orange exports, and growth in orange exports stimulates economic development. Thus, a synergetic relationship between the two exists.
- The stage of development of the studied markets is not of high importance to the growth of the Egyptian orange exports. Thus, orange exports should focus on importing markets in all stages of economic development; developing, emerging and developed.
- Exchange rate is subject to various endogenous and exogenous factors which are outside the control of the exporter; which has to bear the risk. However, fluctuation in exchange rates is of significance to orange export flows.
- The focus of the Egyptian exports of orange should not solely be on traditional large import markets, as this is not necessary were the growth can be achieved.
- All Egypt's trading partner's propensity to import Egyptian oranges should be taken into account sufficiently and adequately when trade policy is formulated.

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دراسة اقتصادية لمحددات نمو صادرات البرتقال المصري إلى السوق العالمي

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باحث - معهد بحوث الاقتصاد الزراعي - مركز البحوث الزراعية

الملخص

تُعد الصادرات الزراعية المحرك الأساسي للنمو الاقتصادي وتُمثل الصادرات الزراعية المصرية حوالي ١٠٪ من إجمالي الصادرات المصرية خلال الفترة (٢٠٠١-٢٠١٢). وقد حققت الصادرات الزراعية المصرية معدل نمو قوي خلال السنوات الماضية من نحو ٥.٠ مليار دولار أمريكي في عام ٢٠٠١ لتصل إلى نحو ٢.٧ مليار دولار في عام ٢٠١٢ ، أي بمعدل نمو سنوي بلغ حوالي ١٤٪ خلال فترة الدراسة ، فقد تزايدت صادرات مصر من بعض السلع الزراعية على مدى السنوات الماضية كالبرتقال والبصل والقطن والبطاطس والأرز والعنب والفاصوليا والفراولة. وقد حقق إنتاج البرتقال المصري زيادة ملحوظة خلال نفس الفترة ، إذ بلغ نحو ١.٧ مليون طن في عام ٢٠٠١ وازداد ليصل إلى نحو ٢.٦ مليون طن في عام ٢٠١١ ، وذلك بمعدل نمو سنوي بلغ حوالي ٤٪ ، في حين بلغ متوسط قيمة صادرات مصر من البرتقال خلال فترة الدراسة نحو ٢٤٨ مليون دولار أمريكي تُمثل حوالي ١٥٪ من إجمالي قيمة الصادرات الزراعية المصرية. وتُمثل صادرات البرتقال المصري لأسواق كل من المملكة العربية السعودية وروسيا الاتحادية وأوكرانيا حوالي ٧٢٪ من إجمالي كمية صادرات البرتقال المصري خلال نفس الفترة ونحو ٧٠٪ من إجمالي قيمة صادرات البرتقال المصري خلال نفس الفترة ، على الترتيب. وقد أثارت هذه المناقشات تساؤلاً حول أهم محددات نمو هذه الصادرات ، لذا فقد استهدفت هذه الدراسة الإجابة على هذا التساؤل من خلال التعرف على وضع صادرات البرتقال المصري في السوق العالمية وأهم الدول المنافسة له ومن ثم تحديد أهم محددات نمو صادرات البرتقال المصري وذلك باستخدام نموذج الجاذبية المعدل. وقد أوضحت نتائج النموذج وجود ثلاثة محددات هي الأكثر أهمية لنمو صادرات البرتقال المصري وهي سعر الصرف وعدد السكان وكذا المسافة الجغرافية بين القاهرة وبين عواصم الدول المستوردة ، في حين أن الناتج المحلي الإجمالي لمصر والناتج المحلي الإجمالي للدول المستوردة هي المحددات الأقل أهمية لنمو صادرات البرتقال المصري. لذا فإن الدراسة توصي بإزالة كافة المعوقات أمام تصدير البرتقال المصري للأسواق التقليدية وفتح أسواق جديدة للتصدير من خلال الالتزام بالموصفات القياسية للإنتاج وتطبيق مفهوم الإنتاج للتصدير كبديل عن تصدير فائض الاستهلاك المحلي وهذا ما يجب أن يؤخذ في الاعتبار بشكل كافٍ عند صياغة استراتيجية تنمية الصادرات الزراعية المصرية.