Analysis of Egyptian Grapes Market Shares in the World Markets

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Abstract: The main exported countries of grapes through the period 2001-2006 were Chile, Italy, South Africa, Netherlands, Turkey, Spain and Greece. While the main imported countries through the same period were Germany, United Kingdom, Netherlands, France, Belgium and Saudi Arabia. Grapes is considered one of the promising exported crops in Egypt. The exported quantities of the Egyptian grapes is still 1.4% of the total grapes production through the period 2001-2006. The present study aims mainly at identifying the main factors affecting foreign countries' imports of the Egyptian grapes. The study focuses on methods of estimating the price demand elasticity for the purchases of grapes by, United Kingdom, Netherlands, Italy, Saudi Arabia. Three models for estimating export demand for Egyptian grapes are applied; the direct model, the substitution model and the market share model. Each model deals with Egyptian grapes as a final product. It could be concluded that Egyptian grapes still have the potentialities to increase its exports in both Netherlands and United Kingdom markets. The results obtained from the direct model showed that Netherlands market is the most sensitive market to the imports price of the grapes as the price elasticity was elastic followed by Saudian market. long-run elasticities indicated that Egyptian grapes encounter high competition in terms of price sensitivity in all the studied market. This result implied that the price play a key factor to compete in these markets. Consequently, the Egyptian policy makers have to take an attention to the impact of the price in all imported market.

Key words: Grapes · market share · substitution elasticity and partial adjustment coefficient

INTRODUCTION

Agricultural trade plays an essential role in the Egyptian economy. Since the middle of 1990s the agricultural exports have increased slowly while the imports have increased dramatically. Such phenomenon leads to chronic deficit in agricultural trade balance. As a result, the agricultural exports/imports ratio was 35% in 2006. Consequently, the policy of agricultural development is paying an attention to the magnitude of maximization of agricultural exports depending upon keeping the traditional markets and opening new markets. Such objective can be achieved by optimizing the employment of comparative advantages and growing the competitive advantages of agricultural products.

Widening the diversity of exportable agricultural products especially non-traditional crops is a key factor of increasing agricultural exports. Grapes is one of the promising exportable and one of the major fruit crop in Egypt. Although Egypt produced about 1.48 million ton, grapes exports accounted only 1.4% of the

total production through the period 2001-2006. There are relatively little published researches on export demand for Egyptian grapes. As Atiff and Salah [1] concluded that the export price for Egyptian grapes reached to about 61.9% of the average world price during the period (1990-1995). Where the exporting price of the Turkish grapes reached to about 54.5% of the average world price during the same period. The average world price for exports of grapes was determined by the price of Spain, Italy, Greece, United States and Turkey. Soheir [2] clear that a high degree of competition between Egyptian grapes and Turkey in the imported markets. Samah and Mohamed [3] concluded that Egypt has a comparative advantage with respect to price over each of Morocco and Cyprus as a main imported markets. The present study concerns with analyzing the export demand of Egyptian grapes -with shell in the major import markets. Three models were adopted; the direct model, the substitution elasticity model and market shares model in order to estimate import demand elasticities in the selected markets.

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Objectives: Now, the question is how can Egypt enhance the grapes exports? Starting from this point, the present paper sheds a spot light on the import markets and substitution relations between Egypt and its competitors in these markets.

The present study aims mainly at identifying the key factors that may affect foreign demand of Egyptian grapes as well as estimating their effects on Egyptian exports of grapes. The study focuses mostly on the price elasticity of foreign demand.

Data: The data includes of Egyptian grapes market share in major imported countries; United Kingdom, Netherlands, Italy and Saudi Arabia. The data also include the competitors' export quantities and prices to the mentioned markets during the period 1995-2006. Data were collected from websites of Food and Agricultural Organization (FAO), World Trade Organization (WTO) and www.comtrade.un.org

Analytical Framework: Three models for estimating export demand for Egyptian grapes are applied; the direct model, the substitution model and the market share model. Each model deals with Egyptian grapes as a final product. The costs of transportations are omitted for two reasons: firstly, due to the assumption that the costs of unit transportation remain unchanged for a specified period; Secondly, to overcome the difficulties of obtaining the data. All the prices are converted to real prices by taking year 1995 as the base year. All models were estimated in the double logarithmic form using ordinary least squares (OLS) technique.

1. Direct Model: The direct model estimates the demand of grapes imports in a given country. The GDP is omitted from consideration due to the fact that the income factor has a diminutive impact on non-processed food imports.

$$Q_t = f\left(P_t, M_{t-1}, T\right)$$

Where; Q_t is the quantity of grapes imported in a year t; P_t is the average price of grapes imported by that country from all suppliers in year t; M_{t-1} is the domestic production in that country in year $t-1$; T is the time. This model has been used extensively in tremendous researches such as Abbott [4], Capel and Rigaux [5] and Hyun and Won [6] and Aspermont and Varet [7]. The mentioned variables are hypothesized to have valuable importance for explaining the imports of grapes in each individual market. The sign

on the regression coefficient of price is hypothesized to be negative, as is that on lagged production. The price elasticity can be directly estimated from the coefficient of P_t in logarithmic form, Michael and David [8].

2. Substitution Elasticity Model: The elasticity of substitution between Egypt and major competitors in an individual importing market can be determined by the following equation:

$$\left(\frac{Q_{Ej}}{Q_{ij}}\right)_t = f\left(\left(\frac{P_{Ej}}{P_{ij}}\right)_t, T\right)$$

Where Q_{Ej} is the quantity of grapes exported from Egypt to the market j in year t; Q_{ij} is the quantity of grapes exported by a competitor i to the market j; P_{Ei} is the price of Egyptian export of grapes to the market j; P_{ij} is the price of competitor i supplies to the market j; T is the time factor. The sign on the regression coefficient of price ratio is hypothesized to be negative according to the economic theory. The elasticity of substitution can be estimated simply from the coefficient of the price ratio in logarithmic form. The estimated elasticity of substitution reflects the short-run elasticity rather than the long-run elasticity as the observed elasticity relates to one year length [9].

3. Market Share Model: Market share model concerns with the formulation of the model and estimation of elasticities of market shares in both short-run and long-run with respect to the price ratio. The dependent variable is the Egyptian grapes market share. Then:

$$\left(\frac{Q_{Ej}}{Q_j}\right)_t = f\left(\left(\frac{P_{Ej}}{P_\circ}\right)_t, T\right) \tag{1}$$

Where: Q_j is a total grapes import of the market j; P_o is the average price of all competitors in the same market. It is desirable to apply the distributed lag mechanism on equation (1) because responses to price are gradual rather than instantaneous [10]. In the present application:

$$\left(\frac{Q_{Ej}}{Q_j}\right)_t^* = f\left(\left(\frac{P_{Ej}}{P_\circ}\right)_t, T\right) \tag{2}$$

Where $\left(\dfrac{Q_{Ej}}{Q_j}\right)_t^*$ is the desired/ optimal long run

market share. There is no error here since $\left(\dfrac{Q_{Ej}}{Q_j}\right)^{*}_{t}$ is not

stochastic. We suppose actual market share adjusts slowly towards its desired ratio. Then:

$$\left(\frac{Q_{Ej}}{Q_j}\right)_{t} - \left(\frac{Q_{Ej}}{Q_j}\right)_{t-1} = \lambda\left(\left(\frac{Q_{Ej}}{Q_j}\right)^{*}_{t} - \left(\frac{Q_{Ej}}{Q_j}\right)_{t-1}\right) \quad (3)$$

Where λ is the partial adjustment fraction? The linear estimating equation then becomes:

$$\left(\frac{Q_{Ej}}{Q_j}\right)_{t} = \beta_0 + \lambda\beta_1\left(\frac{P_{Ej}}{P_\circ}\right)_{t} + (1-\lambda)\left(\frac{Q_{Ej}}{Q_j}\right)_{t-1} \quad (4)$$

by estimating the parameters of the regressors in the logarithmic form, then it becomes:

$$\ln\left(\frac{Q_{Ej}}{Q_j}\right)_{t} = \ln(\beta_0) + \lambda\beta_1\ln\left(\frac{P_{Ej}}{P_\circ}\right)_{t} + (1-\lambda)\ln\left(\frac{Q_{Ej}}{Q_j}\right)_{t-1} \quad (5)$$

This equation is the partial adjustment model for Nerlove [11].

While 1-λ is known, the short run elasticity of the price ratio can be simply equal $\lambda\beta_1$. On the other hand, Johnston [12], mentioned that the long-run elasticity of market share with respond to price ratio is equal to β_1.

Empirical Results: The main exporters of grapes through the period 2001-2006 were Chile, Italy, South Africa, Netherlands, Turkey, Spain and Greece. While the main importers through the same period were Germany, United Kingdom, Netherlands, France, Belgium and Saudi Arabia. Four importer markets were selected on the base of the magnitude and loyalty of importing Egyptian grapes which were United Kingdom, Netherlands, Italy and Saudi Arabia. During the period (2001 – 2006) United Kingdom imported about 45.78 percent on average of the total exports of Egyptian grapes followed by Netherlands market by 27.52 percent, Italian market by 9.2 percent and Saudi Arabia market by 4.46 percent. Then, the mention markets import about 87.1 percent on average of the total exports of Egyptian grapes during the mentioned period (Table1).

There are notable variations in each individual market over the period (1995- 2006). British market had been loyal to Egyptian grapes with notable variations

Table 1: Distribution of Egyptian grapes exports to foreign markets during 2001-2006

Market	Quantity exported 000 ton	% of the total quantity exported	Egyptian market share			
			Min	Year	Maxim	Year
United Kingdom	9.55	45.78	3.3%	1997	5.7%	2006
Netherlands	5.74	27.52	0.9%	1998	4.0%	2005
Italy	1.92	9.20	2.1%	1995	3.5%	2006
Saudi Arabia	0.96	4.60	0.5%	1999	6.0%	2004
Kuwait	0.75	3.59	0.3%	2003	1.5%	2000
Germany	0.56	2.69	0.1%	1997	0.8%	2005
Belgium	0.51	2.44	0.2%	1996	1.7%	2002
Others	0.87	4.17				
Total	20.86	100				

Source: Central agency for public mobilization and statistics, annual trade statistics, various issues, Cairo, Egypt 2007.

during 1995- 1999. Once more, British imports of Egyptian grapes had been increased since year 2000 until 2006 with only small variation as the market share reached about 5.7% Such result implied that the Egyptian grapes is still having potentiality to be increased in the British market.

Italian market showed a stable market share with minimum variation 1.2% ranged between 2.1% in 1995 to 3.5% in year 2006. On the other hand, such market share witnessed a continuous increase during the period (2001-2006). As a result, Egypt is still having the potentiality to increase its market share in the Italian market.

Regarding to Netherlands market, Egyptian export share of grapes showed significant fluctuations in 1990s. Meanwhile, the Egyptian market share showed small variance during the period 1998 to 2001 and continue the increasing during (2000-2006). Such market share reached the maximum in 2005 by 4.0%.

Regarding to Saudian market, Egyptian export share of grapes showed significant fluctuations in 1990s. Saudi Arabia imports of Egyptian grapes has been increased since year 2001 until 2006 with only small variation as the market share reached about 6%. Such result implied that the Egyptian grapes is still having potentiality to be increased in the Saudian market.

The main factors of competition in the world markets of grapes are time of export, export prices of competitors and quality of the product. Figure 1 showed that Egyptian grapes exports of through may to September every year. The main competitors that export grapes through that period were Chile, Greece, Morocco, Spain, Germany, U S A, Turkey, Syria, Netherlands and Italy. South Africa, Brazil and Argentina are not time export competitors for Egypt.

Country	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Egypt					————————							
Chile				————————								
Greece						————————						
Morocco					————————							
Spain					————————							
Germany					————————							
U S A					————————							
Turkey					————————							
Syria					————————							
Netherlands						————————						
Italy						————————						
South Africa	————————											——
Brazil	————————											——
Argentina	————————											——

Fig. 1: Country export months for Grapes in the world markets
Source: Union of Producing and Exporting Horticultural Crops, Cairo, Egypt 2006.

Table 2: Competitors Export Prices of grapes in British and Netherlands markets on average of the period 2001-2006

	British market			Netherlands market	
Country	Export Price $ ton	% of British import price	Country	Export price $ ton	% of Netherlands import price
Egypt	1832	96.3	Egypt	1233	93.0
Chile	1723	90.6	South Africa	1730	130.6
Greece	2181	114.7	Chile	1675	126.4
Spain	1803	94.8	Turkey	945	71.3
Netherlands	1885	99.1	Italy	1079	81.4
South Africa	2050	107.8	Greece	1218	91.9
U S A	2223	116.9	Brazil	1587	119.8
Turkey	1450	76.2	Germany	1342	101.3
Italy	1970	103.6			
Germany	1820	95.7			
Average import price of British	1902	100	Average import price of Netherlands	1325	100

Source: FAO Internet Site, http://www.fao.org

Table 3: Competitors Export Prices of grapes in Italian and Saudian markets on average of the period 2001-2006

	Italian market			Saudian market	
Country	Export price $ ton	% of Italian import price	Country	Export price $ ton	% of Saudian import price
Egypt	1274	82.9	Egypt	815	91.1
Turkey	1149	74.8	Iran	736	82.4
Spain	1560	101.6	Chile	929	104.0
France	1742	113.4	South Africa	1011	113.2
Netherlands	1866	121.5	Italy	960	107.5
South Africa	1911	124.4	Syria	741	83.0
Greece	1500	97.7	Lebanon	802	89.8
Chile	1759	114.5	Turkey	800	89.5
Average import price of Italian	1536	100	Average import price of Saudian	893	100

Source: FAO Internet Site, http://www.fao.org

Regarding to price competition in the British market, Table 2 show that the export price of Egyptian grapes is competitive for export prices of Greece, Netherlands, U S A and Italy, but not competitive for grapes export prices of Chile, Spain, Turkey and Germany.

In Netherlands market, the export price of Egyptian grapes is competitive for export prices of Chile and Germany, but not competitive for grapes export prices of Turkey, Italy and Greece.

In Italian market, Table 3 show that the export price of Egyptian grapes is competitive for export prices of Spain, France, Netherlands, Greece and Chile, but not competitive for grapes export prices of Turkey.

In Saudian market, Table 3 show that the export price of Egyptian grapes is competitive for export prices of Chile and Italy, but not competitive for grapes export prices of Iran, Syria, Turkey and Lebanon.

1-Results of the direct model: The results represented in Table 4 show that Netherlands market is the most sensitive market to the imports price of the grapes as the price elasticity was -3.08 implying that 10 percent increase of the import price may lead to about 30 percent decrease in quantity imports of grapes. Similarly, the price elasticity of British market was elastic by -2.49 and Saudian market was -1.16. On the other hand, the price elasticity of Italian market was inelastic by -0.66. All mentioned price elasticities were significant at 0.01.

According to the production, the lagged production is absent in Saudian market due to the fact that there is no grapes production. In addition, there was significant impact of lagged production variable on the imports in the British, Netherlands and Italian markets. The effect of the time variable not proved in all studied markets.

Table 4: Direct Model of Demand for Grapes in the selected Markets

Market	constant	Price	Lagged production	time	R^2	D.W
United Kingdom	10.78	-2.49	0.968	0.033	0.72	1.81
	(8.29**)	(-4.55**)	(2.82*)	(1.06)		
Netherlands	6.13	-3.08	0.67	0.092	0.84	1.35
	(7.58**)	(9.11**)	(1.98*)	(0.151)		
Italy	1.17	-0.66	-0.32	0.08	0.67	1.58
	(3.26**)	(-5.12**)	(3.18**)	(0.467)		
Saudi Arabia	0.36	-1.16	-	0.04	0.58	2.22
	(2.48*)	(-3.54**)	-	(0.395)		

t statistics values in parentheses * = significant at level 0.05 ** = significant at level 0.01   Source: Computed from the direct model.

Table 5: Substitution Elasticity Model for Grapes in the selected Markets

Market	Competitors	Cconstant	Price Ratio	Time	R^2	D.W
United Kingdom						
	Turkey	-4.98	-2.76	2.55	0.88	1.52
		(-8.27**)	(-6.34**)	(2.67*)		
	Chile	-1.47	-1.50	1.31	0.75	1.94
		(-1.25)	(-3.14**)	(2.56*)		
	Greece	-6.70	-1.82	1.45	0.82	1.63
		(-2.99**)	(-4.05**)	(1.75)		
	Spain	-3.18	-1.79	3.73	0.57	1.48
		(-9.25**)	(-5.14**)	(2.06)		
	Italy	-2.62	-0.65	0.87	0.64	1.31
		(-2.47*)	(-2.68*)	(3.29**)		
Netherlands						
	Italy	2.56	-1.09	3.72	0.46	1.67
		(3.86**)	(-2.98*)	(5.16**)		
	Turkey	-3.19	-3.41	4.38	0.78	1.38
		(-8.27**)	(-548**)	(2.76*)		
	Chile	1.69	-2.26	1.96	0.71	2.07
		(2.11)	(-4.73**)	(3.55**)		
	Greece	7.85	-0.94	5.15	0.65	1.89
		(4.24**)	(-1.85)	(2.23*)		
Italy						
	Turkey	12.49	-2.01	6.84	0.62	1.95
		(7.34**)	(-5.12**)	(3.95**)		
	Spain	-6.36	-1.54	2.16	0.39	2.26
		(-2.90**)	(-3.63**)	0.69		
	Chile	1.75	-4.13	0.65	0.76	1.80
		(6.66**)	(-3.85**)	1.82		
	Netherlands	3.44	-0.98	1.37	0.51	2.33
		(5.18**)	(-1.72)	(2.97**)		
Sudia Arabia						
	Syria	1.36	-1.95	0.77	0.42	1.87
		(0.85)	(-4.88**)	(1.23)		
	Iran	7.44	-5.21	2.14	0.66	1.12
		(2.91**)	(-7.27**)	(1.56)		
	Italy	3.17	-0.91	0.29	0.75	1.63
		(1.34)	(-1.02)	(1.58)		
	Turkey	2.60	-1.46	0.68	0.46	2.22
		(0.38)	(-3.07**)	(2.49)		

t statistics values in parentheses * = significant at level 0.05 ** = significant at level 0.01   Source: Computed from Substitution model.

The determination coefficient R^2 is ranged between 0.58 and 0.84 indicating that the import prices, lagged production and time factor explain about 58% to 84% of the total variance of the total quantity of imported grapes in the selected markets.

2- Results of elasticity of substitution model: Results from this model are represented in Table 5. The model was applied four times in the four selected markets. The elasticity of substitution model introduces a measurable relation between the price ratio (export price of Egyptian grapes divided by the price of each rival in a specific market) and the quantity ratio.

Regarding the British market, there are five rivals that compete with Egypt in this market; Turkey, Chile, Greece, Spain and Italy. The signs of price ratio elasticities are negative in all models as expected. The results also implied that Turkey is the most sensitive competitor to the Egyptian price as 10 percent decrease in the price ratio may lead to 27.6 increases in ratio imported quantities (Egypt divided by Turkey).Furthermore, the substitution price elasticity of Greece is also elastic by -1.82 which is significant at level 0.01. The variable that represents the time factor was significant at 0.05. The determination coefficient indicated that price ratio and time factor explain 74 percent of the total variance of total imported quantity of grapes in the British market.

In Netherlands market, Italy Turkey, Chile and Greece are the rivals countries in such market. Turkey showed high sensitive price elasticity of substitution by -3.41 indicating that 10 percent in price ratio decrease may lead to 34 percent increase in the substitution quantity ratio (Egypt/ Turkey). Such elasticity was significant at 0.01. Furthermore, the price ratio and time factor explain about 78 percent of the total variance of the imported quantity ratio. On the other hand, the significance of the substitution elasticity model regarding Greece was not proved.

There are four countries compete with Egypt in Italian market; Turkey, Spain, Chile and Netherlands. The results confirmed that Chile is the most sensitive competitor to the price ratio as the elasticity was -4.13 which is significant at level 0.01. The price ratio and time explain about 76 percent of the total variance of the ratio of imported quantities. By the contrary, the impact of the time factor was not proved. The result also implied that the significance of the substitution model of Turkey and Spain. Moreover, Durbin-Watson test for autocorrelation fortunately indicated that there were no autocorrelations in all markets' models.

Table 6: Market share of Egyptian Grapes in the Selected markets

Market	Constant	Price Ratio	Lagged share	Time	R²	Durbin's h
United Kingdom	-6.32	-3.74	0.75	1.97	0.88	3.61
	(-2.38*)	(-2.96**)	(5.43**)	(2.45*)		
Netherlands	-1.96	-3.08	0.56	1.83	0.81	4.28
	(-2.76*)	(-4.12**)	(3.35**)	(3.62**)		
Italy	-4.61	-2.19	0.29	1.24	0.73	9.59
	(-3.55**)	(-6.11**)	(2.62*)	(2.92**)		
Saudi Arabia	-0.83	-3.25	0.46	1.01	0.65	5.45
	(-1.36)	(-3.85**)	(0.91)	(1.95)		

t statistics values in parentheses * = significant at level 0.05 ** = significant at level 0.01   Source: Computed from market share model.

Regarding the Saudian market, there are four rivals that compete with Egypt in this market; Syria, Iran, Italy and Turkey. The signs of price ratio elasticities are negative in all models as expected. The results also implied that Iran is the most sensitive competitor to the Egyptian price as 10 percent decrease in the price ratio may lead to 52.1 percent increases in ratio imported quantities (Egypt divided by Iran).Furthermore, the substitution price elasticity of Syria is also elastic by -1.95 which is significant at level 0.01. The substitution price elasticity of Turkey is also elastic by -1.46 and significant at level 0.01. The substitution price elasticity of Italy is inelastic by -0.91. By the contrary, the significance of the price ratio for Italy was not proved. The variable that represents the time factor was not significant. The determination coefficient indicated that price ratio and time factor explain 62 percent of the total variance of total imported quantity of grapes in the Saudian market.

In conclusion, the policy makers have to pay an attention to the impact of the price in all imported markets. The results confirmed that Egypt can increase the grapes export by decreasing the prices in the mentioned markets. Nevertheless, Egypt can win additional market share in the studied markets.

3. Results of Market share model: Results from equation (5) are shown in Table 6. The coefficients of the price ratio are negative as expected and significant in all markets. British market showed a highest price elasticity as 10 percent decrease in price ratio (Egyptian price over the average price of the competitors) may lead to increase the Egyptian exports to the British market over the competitor by 37.4 percent. Saudian, Netherlands and Italian markets showed a high price elasticity as 10 percent decrease in price ratio (Egyptian price over the average price of the competitors) may lead to increase the Egyptian exports to the Saudian and Netherlands market

Table 7: Short-run and long-run elasticities of Egyptian Grapes share in selected markets

Market	Elasticity		Partial Adjustment coefficient.
	Short-Run	Long-Run	
United Kingdom	-4.48	-3.68	0.77
Netherlands	-5.76	-4.22	0.63
Italy	-1.91	-2.53	0.82
Saudi Arabia	-1.62	-2.17	0.49

Source: Computed from market share model

over the competitor by 32.5 and 30.8 percent and Italian market by 21.9 percent.

Lagged share signs are positive as expected in all models and it were significant in all markets except in Saudian market. Moreover, the coefficient of time factor was positive and significant in all markets except in Saudian market. The determination coefficient ranged from 0.65 to 0.88 implying that the price ratio, lagged share and time factors explain about 65 to 88 percent of the total variance of the Egyptian share in the selected markets.

The autocorrelation can not be tested by Durbin-Watson (D.W) test due to the violation of the assumption of a non-stochastic X matrix, which is violated by the presence of lagged values of the dependent variable impeded among the explanatory variables. So, we can test it by using Durbin's *h*. [12]. Results of the Durbin's *h* test indicated that there is no autocorrelation for all markets.

Table 7 showed that all elasticities in both short-run and long-run are elastic. Accordingly, a 1 percent decrease in the relative price ratio of Egyptian grapes in that of competitors will lead to more than a 1 percent increase in the Egyptian grapes share in each market. One can conclude that there are high competitions in grapes imported from Egypt in the mentioned markets.

In addition, the results of long-run elasticities showed in Table 7 confirmed that Egyptian grapes encounter a highest competition in terms of price sensitivity in the Netherlands and United Kingdom markets. As the long-run elasticity is -5.76 and -4.48, which implied that Egyptian grapes still have potentiality to increase the market share in this markets, i.e. 10 percent decrease in price ratio this will lead to 57.6 and 44.8 percent increase the Egyptian market share in Netherlands and United Kingdom markets.

CONCLUSION

It could be concluded that Egyptian grapes still have the potentialities to increase its exports in United Kingdom, Netherlands and Italian markets. The results

obtained from the direct model showed that Netherlands market is the most sensitive market to the imports price of the grapes as the price elasticity was elastic followed by United Kingdom and Saudian markets.

long-run elasticities indicated that Egyptian grapes encounter high competition in terms of price sensitivity in all the studied market. This result implied that the price play a key factor to compete in these markets. Consequently, The Egyptian policy makers have to take an attention to the impact of the price in all imported market.

The study recommended:

- Production of early maturing varieties, especially in new lands such as Toshka.
- The establishment of maritime routes and quick processing vessels for the shipment of grapes to foreign markets in a period not exceeding five days.
- Negotiating with the European Union to increase the exemption of customs grapes after July 15.

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