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The Ability of Iranian Exporters to Price Discriminate in Agricultural Sector Trade: Case Comparison of Fig and Grape

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ABSTRACT

Fig and grape have a high position in job creation and foreign exchange earnings for Iran. Moreover, these two products also have the same international position in terms of production and exports. This study has examined and compared price discrimination in the two markets of fig and grape exports using Exchange Rate Pass-Through and Pricing To Market (PTM) behavior approaches. The econometric analysis using the Panel-Corrected Standard Errors (PCSE) model showed that fig exporters had the ability to discriminate prices in the Singapore, Malaysia, Australia, Sweden, and Russia. Furthermore, fig and grape have an equal position in terms of production and exports, but the power of exporters are more in the fig export market and have better conditions for applying price discrimination. Therefore, it is recommended that the principled export of agricultural products be adopted according to global consumer demand by identifying target markets. The results of the analysis of the asymmetric effects of exchange rates on fig's exports illustrate that these effects are symmetrical in the market of all countries; however, it is asymmetrical in exporting grapes to Singapore, Sweden, and Saudi Arabia.

Keywords: Exchange Rate Pass-Through, Panel-corrected standard errors, Pricing–to-Market.

INTRODUCTION

Currently, development of non-oil exports has received much attention from researchers in the field of economic development and is considered as one of the most important economic development strategies in Iran. In this regard, increasing exports of non-oil products play an important role. For this purpose, firstly, export items with significant advantages must be identified and potential export markets for each particular product should be determined. Given that the share of agricultural products is more than a quarter of non-oil exports, in line with increasing exports, paying due attention to this sector, especially garden products, is very important. Fig and grape are considered as garden products that have significant importance in both job creation and foreign exchange earnings (Mehrabi Bashrabadi and Pourmoghadam, 2012, Mosavi *et al*., 2012 and 2014). A look at the statistics provided by FAO (2016) shows that these two garden products have high importance in world-class production and exports (Table 1).

As seen in Table 1, figs and grapes are two garden products that have the same position at the international level in terms of production and exports. Therefore, this study investigated the ability to price discriminate by Iranian exporters of the two products.

Price discrimination is considered as the strategy of different prices over time between consumers or in different circumstances (Krugman and Obstfeld, 2003). In the international trade literature, price discrimination and market power are considered as the effective factors on the Exchange Rate Pass-Through (Taylor, 2000). If the percentage change in the price of exported goods in terms of foreign currency is in proportion to the percentage change of exchange rate, the Law of One Price (LOP) will be established and the Exchange Rate Pass-Through is complete. And if this ratio is lower,

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Table 1. Iran's situation in the production and export of Fig and Grape. [a]

Product	Average annual production (Tons)	Position in production (World ranking)	Average annual export (Tons)	Position in exports (World ranking)	Export value (1000 $)
Fig	74887.86	5	5743.81	2	7657.76
Grape	2294004.36	5	5850.47	5	4617.47

[a] Source: Food and Agriculture Organization (FAO, 2016).

exporters will absorb a part of the exchange rate changes and the Exchange Rate Pass-Through is incomplete, due to the displacement of the marginal cost curve and Pricing To Market (PTM) (Athukorala and Menon, 1994).

The structure of non-competitive pricing behavior, known as Pricing To Market (PTM) behavior, was explained by Krugman (1987). The PTM behavior implies a currency exchange rate that derives from price discrimination. In non-competitive terms, exporting companies play an important role in determining the price, and the export price changes relative to foreign currency.

In fact, the exchange-rate pass-through is therefore defined as the elasticity of export prices to exchange rate changes (Mallick and Marques, 2012; Varma and Issar, 2016). Therefore, this study examined the ability of Iranian exporters to price discriminate in the agricultural sector trade (fig and grape comparisons) using literature of the PTM. Further, related studies will be addressed.

Knetter (1989) examines price discrimination imposed by the United States and German exporters using the fixed effect model. The results of the study conducted by Knetter (1989) show that PTM phenomenon is observed in the behavior of exporters in Germany and the United States. Gafarova *et al*. (2015) examined price discrimination and PTM behavior for wheat exports by the countries bordering the Black Sea. Results showed that these countries were able to discriminate prices in some importing countries.

Brun-Aguerre *et al*. (2017) analyzed the Exchange Rate Pass-Through at the import price of 33 developing and developed countries. Depreciations are typically passed through more strongly than appreciations, in the long run, suggesting that exporters may exert a degree of long-run pricing power. Dawson *et al*. (2017) analyzed the PTM behavior for the EU wheat. Results show a significant long-run relationship between export value and exchange rate, but there is little evidence of differential mark-ups between EU export markets. Chizari *et al*. (2018) investigated dairy processors market power in Iran. The result suggests that dairy industries processors exercise marketing power in the downstream and upstream market in the dairy products supply chain. Haghighat and Hosseinpoor (2010) studied the effect of exchange rate changes on the export price of raisin in Iran. Results show that exchange rate changes were the most important effective factor in the export price of raisins. Taqavi and Turkmani (2013) examined the Exchange Rate Pass-Through on the price of fig in Fars province. Results illustrate that exchange rate changes have a positive and negative impact on the export price of fig in the long-term and short-term, respectively. Moreover, Najafi *et al.* (2019), Mortazavi *et al.* (2019), and Raeisi *et al.* (2018) are recent studies in the field.

This study aimed to examine and compare price discrimination in the two markets of fig and grape exports using Exchange Rate Pass-Through and Pricing To Market (PTM) behavior approaches.

MATERIALS AND METHODS

The two factors of marginal cost and the specific product market in the destination increase the price by the exporter in the target

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markets, which is known as Mark-up Model (Carew, 2000).

Price on the non-competitive market (Mark-up Model) is determined using the Lerner Index as follows:

$$L = \frac{P-MC}{P} = \frac{1}{\varepsilon_i}, \qquad 0 < L < 1 \quad (1.a)$$

$$\varepsilon_i P - \varepsilon_i MC = P \rightarrow \varepsilon_i MC = \varepsilon_i P - P \rightarrow \frac{P(\varepsilon_i - 1)}{\varepsilon_i - 1} = \frac{\varepsilon_i MC}{\varepsilon_i - 1} \quad (1.b)$$

Where, L is the Lerner Index and P is the export price. It should be noted that the Lerner Index values vary between 0-1. The larger values close to the value of 1 indicate a more monopoly situation (less competition) and greater market power, and the inverse of the above situation is true for the values of zero and close to zero (Lerner, 1934). *MC* indicates the marginal cost of the exporter and ε_i indicates the price elasticity of the demand that the exporter faces with regard to the local currencies of the target market *i*.

After doing the math, the price on the non-competitive market or the Mark-up Model is as follows:

$$p_i = MC\left\{\frac{\varepsilon_i}{\varepsilon_i - 1}\right\}, \qquad \forall_i = 1 \dots N, \qquad (2)$$

According to Equation (2), the export price is higher than the marginal cost of goods production, which indicates that the export price is determined by the price elasticity of the export market demand.

In the present study, according to Equation (2) and Knetter (1989), the following regression model was used to examine and compare price discrimination for two markets for fig and grape exports using the Exchange Rate Pass-Through and the PTM approaches.

$$ln\, p_{it} = \theta_t + \lambda_i + \beta_i (ln\, ER_{it}) + u_{it}, \quad (3)$$
$$\forall_t = 1, \dots, T, \forall_i = 1 \dots N$$

Where, $ln\, p_{it}$, indicates the logarithm of the export price in the market *i* in the *t* period, which is measured in Iranian Rials per kilogram, and θ_t represents the time effects of the t period. In fact, the time effects (θ_t) are the unobservable factors that are constant among countries and vary over time. Therefore, the time effects (θ_t) variable can be considered instead of the marginal cost of production. It is assumed that the marginal cost of production has the same effect on the price of exports of fig and grape in all target markets, and its amount varies over time. λ_i is the time-invariant destination specific effects. In fact, factors affecting the demand for fig and grape in Iran are different in the destination markets. Therefore, measuring the effect of these factors on the export price of the selected export products is possible by the country's effects variable (λ_i) (Goldberg and Knetter, 1997; Hoque and Razzaque, 2004). The coefficient β_i measures the Exchange Rate Pass-Through for the unique country *I*, and $ln\, ER_{it}$ indicates logarithm of the specific exchange rate of the destination country (the importing country) in terms of the domestic currency of Iran. Also, u_{it} is considered as the regression error term distributed and accounts for unobservable factors that could not be accounted for and any measurement error in the dependent variable (Varma and Issar, 2016).

Equation (3) can be tested in three ways:

1) $H_0: \beta_i = 0, \lambda_i = 0$: This indicates that the export market is competitive. Because the price level is equal to the marginal cost and the price is the same among all the target markets. In this case, changes in mutual exchange rates are fully reflected in the export prices of the product exchanged between the two parties, and the exchange rate will have no significant effect on the price.

2) $H_A: \beta_i = 0, \lambda_i \neq 0$: This indicates that the market has a non-competitive structure and that the demand elasticity relative to the currency of the importing countries in all markets is constant; however, the exporter's markup is different among the target markets and, therefore, price discrimination is possible.

3) $H_A: \beta_i \neq 0, \lambda_i \neq 0$: This indicates that the market is non-competitive, which, in addition to the possibility of price discrimination, has a monopoly power among the export-market destinations and is able to adjust the price of the product along with changes in the exchange rate. (Varma and Issar, 2016; Dawson *et al.*, 2017).

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Equation (3) was used for the asymmetry testing in the reaction of the export price to exchange rate changes. The interaction of dummy variables along with the exchange rate in the mentioned model shows the difference between the effect of the appreciation and depreciation (Knetter, 1993; Vergil, 2011; Varma and Issar, 2016). The interaction of the dummy variable with the exchange rate is specified as follows in Equations (4.a) and (4.b). Accordingly, Equation (3) can be expanded in Equation (5):

$$ER_{it}: (\beta_1 + \beta_2 D_t) ER_{it} \quad (4.a)$$

$$ln\, p_{it} = \theta_t + \lambda_i + \beta_1 (ln\, ER_{it}) + \beta_2 (ln\, ER_{it}) + u_{it} \quad (4.b)$$

$$ln\, p_{it} = \theta_t + \lambda_i + \beta_1 (ln\, ER_{it}) + \beta_2 (ln\, ER_{it} \times D_t) + u_{it} \quad (5)$$

$$\forall_t = 1, \dots, T, \forall_i = 1 \dots N$$

A dummy variable assumes a value of 1 for periods of appreciation ($\Delta ER > 0 \rightarrow D_t = 1$), and 0 for periods of depreciation ($\Delta ER < 0 \rightarrow D_t = 0$).

The effectiveness of the variables in Equation (5) indicates the duration of eliminating asymmetry in exchange rate fluctuations. If the coefficient of variables is statistically significant and positive, the effectiveness of appreciation of the exporter's currency on the export price is greater than its depreciation. Similarly, the significance of a negative coefficient indicates that the effect of the exchange rate depreciation on the export price is greater than its appreciation (Byrne *et al*., 2010; Varma and Issar, 2016).

Description of the Data

The experimental model of this study includes Iran's export market for fig and grape in major importing countries of the world. All of the data used in this study is in the form of the 23-year panel data from 1993 to 2015 and for major target countries. In this study, the export price was extracted from The Islamic Republic of Iran Customs Administration (IRICA). The exchange rate used in this study was also considered in nominal, real, and export-weighted exchange rates. Finally, each currency exchange model with better explanatory power was selected. Information was obtained from the World Bank, Central Bank of Iran, and the OANDA Currency Converter. The real exchange rate in this study was calculated using the following equation:

$$RER_t^i = \frac{NER_t^i . CPI^{Iran}}{CPI^i} \quad (6)$$

$$\forall_t = 1, \dots, T, \forall_i = 1 \dots N$$

Where, $\mathrm{RER_t^i}$ and $\mathrm{NER_t^i}$, are the real exchange rate and the nominal exchange rate between Iran and country *i*, respectively. CPI^{Iran} and CPI^i are the Consumer Price Index (CPI) of Iran and country *i*, respectively. According to Goldberg (2004), Miljkovic and Zhuang (2011), and Varma and Issar, (2016), the weighted exchange rate for export was calculated using the real exchange rate. First, the importing weight of each importer was obtained from the following formula:

$$w_t^{pi} = \frac{x_t^{pi}}{\sum_i x_t^{pi}} \quad (7)$$

$$\forall_t = 1, \dots, T, \forall_i = 1 \dots N$$

Finally, it was substituted in the Equation (8):

$$XER_t^p = \sum_i w_t^{pi} . RER_t^i, \quad (8)$$

$$\forall_t = 1, \dots, T, \forall_i = 1 \dots N$$

Where, XER_t^p indicates weighted average for the real Exchange Rate of export for a particular product *p* at time period *t*, w_t^{pi} is the average weight of exports to the importing country i, and RER_t^i is the Real Exchange Rate between Iran and country *i*.

RESULTS AND DISCUSSION

The empirical pattern considered in this study was in the form of panel. The first step in panel data is to identify the cross-sectional independence of data. For this purpose, the Pesaran (2004) Cross-sectional Dependence (CD) test was used in this study. The results are as follows:

In Table 2, Null hypothesis of the *CD* test is the degree of dependence of the cross-section. Since the computational statistics for all variables were significant at 1% level, so, the Null hypothesis was rejected. Therefore, all

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variables had a cross-sectional dependence on both products. Since all variables have a cross-sectional dependency, the panel unit-root test allows for cross-section dependence test on the variables. This test was presented by Pesaran (2007). The results are as follows:

According to Table 3, Null hypothesis is the existence of the unit root (non-stationary) I(1). As can be seen, logarithm of the export price for the export of the two products, the logarithm of the real exchange rate for grape and logarithm of the nominal exchange rate for fig are stationary (I(0)). Since the logarithm of the export price (dependent variable) is stationary, the PTM model was estimated without regard to co-integration (Varma and Issar, 2016).

The PTM model (Equation 5) was estimated using linear regression and Panel-Corrected Standard Errors (PCSE) methods under three models of nominal exchange rate, real exchange rate, and export-weighted exchange rate. Also, errors contemporaneously correlated across panels was studied. The results are as follows:

Autocorrelation was investigated by Wooldridge test (2002). In this test, the null hypothesis is no autocorrelation in the model. As it can be seen, for the export of grape, the relevant hypothesis was rejected. Therefore, AR (1) must be used in the estimation of its PTM model.

As shown in the Tables 4 and 5, the country effects of Kuwait on the export of figs and grapes were eliminated from the PTM model. This is due to the effect of cross-sectional specification in the PTM model, and to avoid the dummy variables trap. In this regard, the differences between the country effects of these countries and the effects of the other countries in Tables are interpreted as the value of the dummy coefficients of countries (Miljkovic *et al*., 2003; Varma and Issar, 2016).

PTM's behavior is applied in the figs market of Bahrain, Taiwan, South Korea, Japan, Singapore, Switzerland, Canada, Lebanon, Malaysia, Hong Kong, as well as the grape markets of Turkey, Singapore, France, and Malaysia. Therefore, it can be concluded that the exporters have stabilized the local currency price (Rials) in these markets. ($H_1: \forall \beta_i \neq 0$).

The negative coefficients of the exchange rate effects ($\beta < 0$) indicate that Iran's figs and grape exporters have stabilized their currencies. The stabilization of the domestic currency occurs when exporters are trying to mark-ups the price over the costs of production. In fact, the negative coefficients indicate that the export price will decrease by reducing the value of the domestic currency (Rials) (Varma and Issar, 2016). This can indicate that there is elasticity of residual demand and the behavior of exporters is competitive.

Table 2. Cross-section dependence test of variables.

Variables	Fig	Grape
Export unit Price logarithms (lnP_{it})	44.437^{***}	79.156^{***}
Nominal Exchange Rate logarithms (lnNER)	40.561^{***}	42.732^{***}
Real Exchange Rate logarithms (lnRER)	38.325^{***}	36.992^{***}
Export-weighted Exchange Rate logarithms (lnXER)	66.106^{***}	79.674^{***}

*** Indicate statistical significance at 1% level of significance.

Table 3. Panel unit root test of variables.

Test statistic	Variables	Fig	Grape
Z_t-bar	Export unit Price logarithms (lnP_{it})	-6.624^{**}	-8.567^{**}
	Nominal exchange rate logarithms (lnNER)	-1.738^{*}	-0.597
	Real Exchange Rate logarithms (lnRER)	0.391	-2.14^{*}
	Export-Weighted Exchange Rate logarithms (lnXER)	20.102	21.795

* and ** indicate statistical significance at levels of 10% and 5%, respectively.

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Table 4. The analysis of price discrimination for the fig export market. [a]

Country	Exchange rate effect (β_1)	Country specific effect (λ)	Exchange rate asymmetric effect (β_2)
Australia	-0.65 [0.48]	1.29* [0.7]	-0.064 [0.12]
Bahrain	-0.92* [0.53]	-0.08 [0.3]	-0.105 [0.16]
Canada	-0.96* [0.49]	0.082 [0.9]	0.006 [0.2]
France	-0.49 [0.3]	1.87 [1.2]	-0.05 [0.12]
Germany	-0.67 [0.43]	1.2 [0.7]	-0.16 [0.11]
Hong Kong	-0.95* [0.54]	1.007 [0.9]	-0.058 [0.11]
Japan	-0.87* [0.51]	2.22 [1.5]	-0.038 [0.09]
South Korea	-0.93* [0.56]	3.04 [1.9]	-0.065 [0.1]
Kuwait	-0.87 [0.55]	- -	-0.15 [0.15]
Lebanon	-1.79* [0.92]	2.92 [2.1]	-1.25 [0.78]
Malaysia	1.5** [0.57]	8.16* [4]	0.25 [0.28]
Qatar	-0.82 [0.54]	0.97 [0.6]	-0.007 [0.15]
Russia	0.25 [0.3]	3.71* [2.2]	-0.78 [0.73]
Saudi Arabia	-0.16 [1.02]	1.94 [2.8]	0.21 [1.38]
Singapore	1.82** [0.61]	9.91* [4.2]	-0.33 [0.5]
Sweden	0.52 [0.67]	4.87* [2.1]	-0.29 [0.6]
Switzerland	-0.81* [0.47]	0.4 [0.9]	0.32 [0.21]
Taiwan	-0.96* [0.54]	1.57 [1.1]	-0.108 [0.08]
UAE	-0.86 [0.55]	0.95 [0.6]	-0.11 [0.17]
UK	-0.89 [0.54]	0.13 [0.3]	-0.04 [0.12]
Observations		460	
Wooldridge Test		0.335 (0.0000)	
R^2		0.6338	
Wald chi-sq		539.18 (0.0000)	

[a] The numbers inside the square bracket indicate a standard error. The symbols * and ** indicate statistical significance at levels of 10 and 5%, respectively. The numbers in curve brackets indicate the probability values.

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Table 5. The analysis of price discrimination for the grape export market. [a]

Country	Exchange rate effect (β_1)	Country specific effect (λ)	Exchange rate asymmetric effect (β_2)
Australia	0.002 [0.04]	-0.46 [0.5]	-0.013 [0.01]
Bahrain	0.16 [0.16]	0.33 [0.7]	0.059 [0.05]
Canada	-0.05 [0.04]	-0.68 [0.4]	-0.003 [0.01]
Egypt	-0.03 [0.12]	-0.45 [0.4]	-0.004 [0.02]
France	-0.05* [0.03]	-0.61 [0.4]	0.025 [0.02]
Germany	-0.03 [0.04]	-0.61 [0.5]	-0.01 [0.01]
Greece	0.03 [0.02]	-0.4 [0.4]	0.04 [0.04]
Indonesia	-0.01 [0.05]	-0.44 [0.4]	-0.04 [0.02]
Italy	0.009 [0.01]	-0.44 [0.4]	0.01 [0.02]
Kuwait	0.07 [0.08]	- -	0.02 [0.01]
Lebanon	-0.01 [0.11]	-0.32 [0.4]	0.005 [0.02]
Malaysia	-0.02* [0.01]	-0.53 [0.4]	-0.02 [0.03]
Netherlands	0.07 [0.05]	-0.15 [0.5]	-0.002 [0.01]
Pakistan	0.12 [0.29]	-0.13 [0.8]	-0.04 [0.1]
Qatar	-0.03 [0.09]	-0.48 [0.4]	0.023 [0.03]
Russia	0.009 [0.01]	-0.45 [0.4]	-0.009 [0.02]
Saudi Arabia	0.03 [0.13]	-0.22 [0.4]	-0.06* [0.03]
Singapore	0.02* [0.01]	-0.34 [0.4]	-0.1** [0.04]
Slovakia	0.01 [0.03]	-0.4 [0.4]	-0.0004 [0.01]
Spain	-0.01 [0.009]	-0.5 [0.4]	0.02 [0.01]
Sweden	-0.04 [0.07]	-0.5 [0.5]	0.05* [0.02]
Turkey	0.17* [0.1]	0.24 [0.6]	0.06 [0.04]
UAE	0.03 [0.06]	-0.22 [0.3]	0.003 [0.01]
UK	-0.01 [0.05]	-0.5 [0.4]	-0.005 [0.01]
Observations		552	
Wooldridge Test		6.398 (0.0187)	
R^2		0.9971	
Wald chi-sq		851448.2 (0.0000)	

[a] The numbers inside the square bracket indicate a standard error. The symbols * and ** indicate statistical significance at levels of 10 and 5%, respectively. The numbers in curve brackets indicate the probability values.

Export coefficients of figs to Singapore and Malaysia and grapes to Turkey and Singapore were positive ($\beta > 0$). This indicates that exporters will strengthen the exchange rate fluctuations by raising export prices in these destination markets. Therefore, the residual demand for the products is fairly inelastic and indicates the power of the market for exporting Iranian figs and grapes.

In fact, it can be concluded that when β_1 coefficient is negative, exporters have stabilized the effects of the exchange rate (incomplete Exchange Rate Pass-Through) and, when the β_1-factor is positive, they have strengthened the effects of the exchange rate (more complete Exchange Rate Pass-Through) (Varma and Issar, 2016).

Singapore and Malaysia have country effects in addition to exchange rate effects. This suggests a monopoly power among the export-market destinations, along with varying elasticity of demand (a change in the degree of price discrimination with respect to demand elasticity). The positive sign of the coefficients also indicates a more complete Exchange Rate Pass-Through. It indicates the appreciation of the exchange rate effects of Singapore and Malaysia.

The results of Table 4 show that the country effects have a significant impact on the export of figs to Australia, Sweden, and Russia. This suggests that there is imperfect competition market, with constant elasticity of demand. Also, the exporting country can determine the price.

The coefficients of fig export estimated for exchange rate asymmetry effect showed that the impact of exchange rate changes was symmetric. But, the coefficients of grape export to Singapore, Sweden, and Saudi Arabia were significant. Therefore, the exchange rate effect in these countries is asymmetric. In addition, the sign of grape coefficients in Singapore and Saudi Arabia was negative. This indicates that the impact of exchange rate changes was asymmetric and the depreciation had a greater impact than appreciation. But the reversal of this result was proven in Sweden.

CONCLUSIONS

This study aimed to investigate and compare the price discrimination in the two markets of fig and grape exports, with the approach of the Pricing To Market (PTM) behavior and the Exchange Rate Pass-Through. The Pricing To Market (PTM) behavior was better predicted using the standard error correction panel for the export of figs under the nominal exchange rate model and for grapes under the real exchange rate model. According to the results, the exchange rate effects and the country effects, or both of them simultaneously, had a significant impact on determining the pricing behavior of Iranian fig producers in the target markets. In the export of grapes, only the impact of exchange rate effects was observed on the target markets and the impact of country effects on the behavior of grape exporters was not evident. Therefore, Iran is not able to apply price discrimination on grape exports to the countries studied. Only in the export of figs to Singapore and Malaysia, both impacts of the exchange rate and the country effects were observed on the pricing behavior of Iranian exporters. This indicates that Iranian exporters, in addition to the possibility of price discrimination, have monopoly power over the markets of Singapore and Malaysia. Also, exporters are able to adjust the price of the product along with the exchange rate changes (Figure 1).

On the other hand, there were country effects alone on the export of figs to Australia, Sweden, and Russia. This reflects the imperfect competition market structure and the demand elasticity for figs in the markets of these countries. However, the exporter's markup is different among the target markets. Therefore, price discrimination is possible, especially in Australia (Figure 2).

According to the results of the analysis of the asymmetric effects of exchange rates on fig's exports, these effects are symmetrical in the market of all countries. However, it is asymmetrical in the export of grapes to

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Singapore, Sweden, and Saudi Arabia. In addition, the sign of grape export coefficients to Singapore and Saudi Arabia was negative. This suggests a greater impact of the depreciation of the domestic currency than its appreciations. However, this is not true about Sweden.

According to the results of comparison of the two products of figs and grapes in the agricultural sector, it can be concluded that Iran also has the ability to discriminate prices internationally. It is also considered as a great country in many products. In this regard, it is recommended that export of agricultural products be made considering global consumer demand by identifying the target markets. For example, in this study, it has been concluded that fig exporters are able to discriminate prices in the markets of Singapore, Malaysia, Australia, Sweden, and Russia. Although figs and grapes have equal status in production and exports, the exporters' power is higher in the fig import market and has better conditions for price discrimination.

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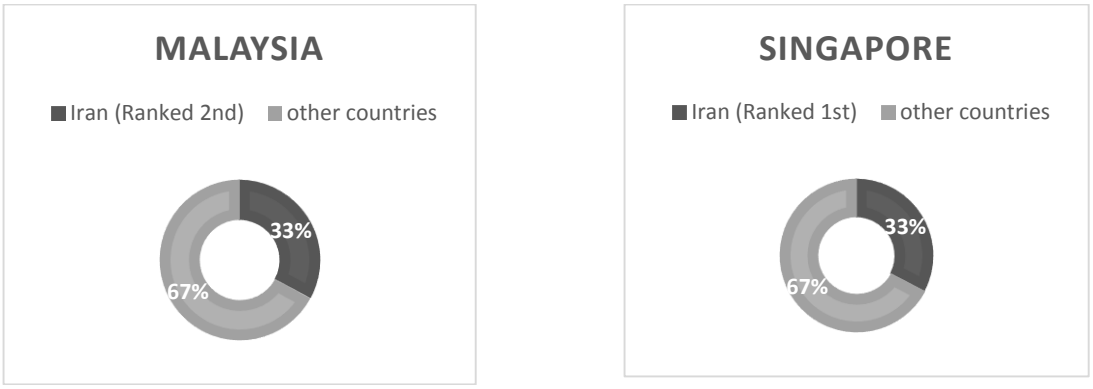

Figure 1. The import share of Iranian fig in Malaysia and Singapore. *Source.* www.Tridge.com, (2016).

Figure 2. The import share of Iranian fig in Australia, Russia and Sweden. Source. www.Tridge.com, (2016).

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توانایی صادرکنندگان ایرانی برای تبعیض قیمت در تجارت بخش کشاورزی (مقایسه موردی انجیر و انگور)

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چکیده

انجیر و انگور از جمله محصولات باغی به شمار می‌آید که از جایگاه بالایی در زمینه اشتغال‌زایی و ارزآوری برای ایران برخوردار هستند. همچنین این دو محصول دارای جایگاه مشابهی در سطح بین‌المللی از نظر تولید و صادرات می‌باشند. با توجه به این رویکرد در مطالعه‌ی حاضر به بررسی و مقایسه‌ی تبعیض قیمت در دو بازار صادرات انجیر و انگور با رهیافت رابطه انتقالی نرخ ارز و رفتار قیمت‌گذاری برای بازار (PTM) پرداخته شد. تجزیه و تحلیل اقتصاد سنجی با استفاده از مدل پانل تصحیح خطای استاندارد ($PCSE$) نشان داد که صادرکنندگان محصول انجیر از توانایی تبعیض قیمت در بازارهای سنگاپور، مالزی، استرالیا، سوئد و روسیه برخوردارند. با این‌که انجیر و انگور دارای جایگاه برابر در تولید و صادرات هستند. اما قدرت صادرکنندگان در بازار صادرات محصول انجیر بیشتر است و دارای شرایط بهتری برای اعمال تبعیض قیمت می‌باشد. در این راستا توصیه می‌شود با شناسایی بازارهای هدف به صادرات اصولی

محصولات کشاورزی با توجه به تقاضای مصرف‌کننده‌ی جهانی، پرداخته شود. تجزیه و تحلیل اثرات نامتقارن نرخ ارز در صادرات انجیر نشان داد که این اثرات در بازار تمام کشورها متقارن است. ولی در صادرات انگور به کشورهای سنگاپور، سوئد و عربستان سعودی این اثرات، نامتقارن است.

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