Determinants of Turkey's citrus exports: a gravity model approach

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Jel classification: Q17, C21, C23

Abstract

In this paper, a gravity model approach was employed to analyse the primary factors that influence Turkey's citrus exports to its major trading partners for the period 2007-2012. In accordance with the panel data analysis of the quantile regression that is calculated with the Bootstrap Method, more consistent results were obtained. The results indicate that international agreements, such as the trading partnership between the European Union and Turkey and the Black Sea Economic Cooperation agreement, have been observed as important determinants of citrus exports. Transportation costs, proxied by distance, are observed to have a negative influence on citrus exports. In addition, an increase in the real exchange rate in Turkey is estimated to benefit countries that produce cheaper citrus.

Keywords: *citrus exportation, data panel, quantile regression, gravity.*

Résumé

Dans cet article, nous avons utilisé un modèle de gravité pour analyser les principaux facteurs qui ont influé sur les exportations d'agrumes de la Turquie vers ses principaux partenaires commerciaux dans la période 2007 à 2012. Conformément à l'analyse de données de panel de la régression quantile, calculée par la méthode Bootstrap, des résultats plus cohérents ont été obtenus. Les résultats indiquent que les accords internationaux tels le partenariat commercial entre l'Union européenne et la Turquie et l'accord de coopération économique de la mer Noire ont été des déterminants importants des exportations d'agrumes. Les coûts de transport, correspondant à la distance, semblent avoir une influence négative sur les exportations d'agrumes. En outre, on estime qu'une augmentation du taux de change réel en Turquie pourrait favoriser les pays qui produisent des agrumes moins chers.

Mots-clés: exportations d'agrumes, données de panel, régression quantile, gravité.

1. Introduction

The fresh fruit and vegetable sector is important for the Turkish economy in terms of production, consumption, and foreign trade. Fruits and vegetables are produced each season and subject to different climate structures in different regions of Turkey.

According to 2014 data, 16.90 % of the total agricultural product area in Turkey is used for fresh fruit and vegetable production. The fresh fruit and vegetable production differs each year; it achieved 41.795 million tons in 2011. Of the world production, Turkey's traditional products constitute the following: 57.88 % of the nut production; 23.86 % of the fig production; 17.63 % of the apricot production; and 2.8 % of the citrus production. Turkey has been exporting 23.17 % of the citrus produced globally (FAO, 2015; Turkstat, 2015). From this perspective, citrus exportation is important for Turkey.

In Turkey, citrus production varies across regions according to climate conditions. The highest production occurs in the Mediterranean and Aegean regions, which are ideally suited to citrus production. The citrus fruits yield high economic value and consist of a variety of fruit trees, such as bitter oranges, traditional oranges, mandarins, grapefruits, bergamots, and lemons. In addition to the beneficial foods produced by those plants, the plants produce essential oils that are obtained from the outer coverings, leaves, and flowers of the fruits; these oils are used as perfumery scents.

In 2013, 15.469.220 tons of citrus fruit entered the market for transport, and approximately 35 % of this trade was with Europe (FAO, calculated from 2015 data). In Europe, the largest citrus importers are the UK, Germany, France and the Netherlands. Spain is the largest exporter of citrus in the world. In particular, Spain exports oranges, tangerines, lemons and grapefruit; this represents nearly 50% of the trade that occurred in the Mediterranean. Therefore, Spain is considered the citrus' industry's most important market. Spain sold more citrus to Western Europe and Eastern Europe. Turkey, which is a significant country among the world's citrus exporters, represents 94 % of the total citrus exports to East Europe markets (particularly, Russia, Ukraine, Romania, Poland, and Bulgaria) and certain Middle Eastern countries (Iraq, Saudi Arabia, and Iran).

When examining world citrus exports (Table 1), an increase of 8.35 % was observed in 2011 compared with the previous year. From this perspective, citrus is a product that contributes to world agricultural product trade. The countries that rank in the first 10 provide more than 80% of the total world exports. Spain ranks first in global citrus exports and represents 34 % of the total citrus exports with 3 billion US dollars in export volume. The other countries that follow are the USA with an 8.3 % share and 725 million US dollars, South Africa with a 7.68% share and 694 million

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Table 1 - *The World Citrus Export (1000 $).*

Country	2007	2008	2009	2010	2011	Variation (2010/2011) (%)	Ratio (2011) (%)
Spain	2804022	3003146	2983923	2925475	3071027	4.98	34.00
USA	301140	485460	456167	595438	725039	21.77	8.03
S. Africa	450597	505044	476357	689099	694036	0.72	7.68
China	205346	362139	506334	520973	636862	22.24	7.05
Turkey	178723	291765	422407	447315	600926	34.34	6.65
Egypt	101570	242333	502629	402502	549510	36.52	6.08
Morocco	263755	405053	307952	372861	476709	27.85	5.28
Netherlands	369850	325326	319913	365174	289381	-20.76	3.20
Greece	162442	165287	207341	244836	247580	1.12	2.74
Italy	140768	159007	159763	211393	202312	-4.30	2.24
World	6061871	7151977	7630161	8335202	9031182	8.35	100.00

Source: http://www.fao.org

US dollars, China with a 7.05 % share and 636 million US dollars, and Turkey with a 6.65 % share and 600 million US dollars.

Turkey has been in the Customs Union with the European Union since December 31, 1995. In December 1997, the Luxemburg European Council confirmed Turkey's eligibility for accession into the European Union; that accession decision was judged on the basis of the same criteria as the other applicant states. The accession procedure required Turkey's preparation and commitment to more closely fit the European Union in every aspect (Fidan, 2009). During the preparation for the accession process, a particularly important economic issue was the free movement of goods, particularly products of agricultural origin. Decision No. 1/95 of the EC–Turkey Association Council on implementing the final phase of the Customs Union excluded agricultural products from customs duties, quantitative restrictions, and measures with equivalent effects. The Association Council allowed special provisions for agricultural products and noted that an additional period was required to implement the conditions necessary for the free movement of agricultural products (Akgungor *et al*., 2002).

The EU definition of agricultural products consists of primary agricultural products and slightly processed agricultural products such as flour, olive oil, and fruit juices. Preferences granted to Turkey consist of a reduced MFN tariff rate and a zero tariff rate with no entry price application for products to which the EU applies an MFN tariff and/or entry price. More than 60 % of Turkey's agricultural exports to the EU encountered no trade barrier; another 36 % was subject to a reduced tariff rate in 2001. The main products are fruits and nuts, vegetable and fruit preps, vegetables and tobacco (Grethe, 2003). A high percentage of Turkish preferential exports may be misleading for future developments because the EU's overall protection of the agricultural sector remains high; in addition, for certain major export products of Turkey (fruits, vegetables and processed products), seasonal ad valorem tariffs and TRQ's are applied (Cakmak, 2004).

In general, multiple analysis methods are used to analyse foreign trade currents. Among the first examples of those methods is the method created by Tinbergen (1962) and Poyhonen (1963); models of commercial economic source transfers to a third country or another association were developed. In certain studies (Bergstrand, 1985; Oguledo and MacPhee, 1994; Porojan, 2001; Fidan, 2009), the shape analysis of international trade currents were conducted using time series data. Conversely, the most common studies (Otsuki *et al*., 2001; Sanz and Gil, 2001; Atici and Guloglu, 2008) examined the agricultural trade flow utilizing panel data. In addition, there are multiple studies that examined the effect of trade currents in the country and in the regional integration using Computable General Equilibrium models (De Santis, 2000; Ozer and Ozcelik, 2009).

In this study, the factors that affect Turkey's export of citrus products have been analysed by forming a gravity model in the quantile regression model using panel data analysis. The gravity models have been demonstrated to be useful tools to explain trade, and they are currently intensely utilized on panel data in various trade studies (Atici and Guloglu, 2008; Oguledo and MacPhee, 1994; Ozer, 2014). In the results of this study, the factors that determine Turkey's citrus exportation are expected to help us understand by exhibiting it in the panel data analysis and with the quantile regression analysis, which ignores certain problems experienced with panel data analysis. In this strategy, knowing the determinants of export markets will certainly help citrus exports. Thus, this study will evaluate the three hypotheses below:

Hypothesis 1: Transportation costs, proxied by distance, will decrease Turkey's citrus exports.

Hypothesis 2: Exchange rate uncertainty will decrease Turkey's citrus exports.

Hypothesis 3: A country that is a member of the European Union has a positive influence on Turkey's citrus exports.

Moreover, the results of this study will provide valuable input for policy makers. In this strategy, knowing the determinants of export markets will certainly help citrus exports.

2. Materials and Methods

In this study, an export model is presented using Turkey's total citrus exports (oranges, tangerines, mandarins, grapefruits, lemons and limes) utilizing the data provided by the countries in 2007-2012. The data regarding citrus exports were obtained from the Turkstat foreign trade (ISIC Rev.4) database in US$ (Turkstat, 2014). The export data (value) is from the Foreign Trade Index with the reference year of 2005.

The variables of Gross Domestic Product (GDP) per capita and the population data (Worldbank, 2014), Turkey's Real Exchange Parity (TCMB, 2014), and the distance between the importer country and Turkey (distance between the capitals-km) that covered the period of 2007 to 2012 in 60 countries where Turkey had intensive citrus exportation were used (CEPII, 2014).

In this analysis of the effect on Turkey's citrus products, an export model was developed based on the model used in the studies by Usman et al. (2005) such that

$$\text{Ln } E_{it} = \alpha + \beta_1 Y_{it} + \beta_2 \text{LnP}_{it} + \beta_3 \text{LnDIS}_i + \beta_4 \text{LnRD}_T + D_{EU} + D_{bs} + D_{PC} + \varepsilon_{it} \quad (1)$$

The E_{it} variable expresses the real citrus product from Turkey to the i country; Y_{it} expresses the GNP per capita of the i importers country in the year t; P expresses the population of the i importer countries in the year; DIS_i expresses the geographical distance from Turkey to the i country; and RD_T expresses Turkey's (T) real exchange rate parity ($).

The dummy variables used in the analysis are, respectively: D_{EU}, the dummy variable of the citrus products exported to a country that is a member of the European Union is 1; not a member is 0; D_{BS}, dummy variable that the citrus exported country is a member of the Black Sea Economic Cooperation is 1, not a member is 0; and D_{PC}, dummy variable that the citrus exporting country making the citrus production is 1, not making is 0.

In the literature, the distance variable that affects foreign trade and shows transport costs has been defined by the DIS_i Gravity models. The gravity model allows for including the spatial elements to the analysis of bilateral trade flows. The gravity model was developed on a solid theoretical basis; it was then used in the analysis of international trade currents by adding other explicative variables by Linnemann (1966). In addition, the model was first econometrically implemented by Tinbergen (1962) and Poyhonen (1963) and by Anderson (1979) and Bergstrand (1985) thereafter. The gravity model is an adapted shape of Newton's General Gravity Law to the bilateral trade relevance. This model has proposed that countries that are geographically close to each other will reduce transportation and other expenses more than with distant countries and that there is an opposite directional relation between exportation and distance. Therefore, the DIS_i variable is expected to have negative values as a result of estimation.

The relation between export and the exchange rate is important in foreign trade models. Exchange rate is calculated between Turkish Lira and USD parity. The changes that have occurred in citrus export and the real exchange rate were examined using the RD_T variable. The uncertainties caused by exchange rate fluctuations have been affecting countries' foreign trade levels in different ways. Although the results of certain studies show exchange rate uncertainty, affecting foreign trade negatively (Hudson and Keith, 1999; Ozer, 2014), the results of others show that the effects are positive (Albeni *et al.*, 2007). In addition, results with no effects or mixed effects have been observed (Aristotelous, 2001).

Usually, horizontal section data have been used in gravity models. However, on the horizontal section estimation, there is a risk of choosing a non-representative year, and it is not possible to follow the individual effects that are unique to a particular country. Therefore, the panel data usage in studies of recent years is a frequently used method (Egger, 2002).

The panel data makes it possible to follow the individual effects that cannot be observed among the commercial partners and avoids the risk of choosing a non-representative year. There are two methods for estimating the individual effects that cannot be observed on the panel data: the fixed effects model (FEM) and the random effects model (REM). In the panel data study, the Hausman specification test is consulted with the purpose of deciding which one will be used among the fixed effects or random effects models. In the Hausman test, whether there is a meaningful correlation between non-observed personal random effects and explanatory variables has been questioned. If there is a correlation of this kind, the random effects model will not be suitable for the estimation; thus, the fixed effects model may be chosen (Yaffee, 2003).

It should be noted that the FEM contains large-sized parameters and causes a loss in the degree of independence frequently and causes a multicollinearity problem. Another disadvantage is that variables that do not change over time cannot be identified and discarded from the equation (Aguilar, 2006). The random effects model does not have those problems. Due to the change through the panels, the model has the advantage of allowing the variables that do not change over time to be included among the descriptive variables (Grene, 2012).

To estimate the random effects model, three estimators are used that originate from the Swamy-Arora (1972), the Wallace-Hussain (1969), and the Wansbeek-Kapteyn models (1982). Swamy-Arora uses the residual gained from the internal and gap regressions. Wansbeek-Kapteyn and Wallace-Hussain benefit from the residuals of internal (fixed effects) and least squares regressions. Because the estimators of Swamy-Arora and Wansbeek-Kapteyn are based on the internal regression, they are incapable of estimating the variables that do not change over time (Atici and Guloglu, 2008). In this study, to estimate the model, the estimator taken from Wallace-Hussain (WAHU) was beneficial, because in the basic gravity model used in the panel data analysis, there are variables that do not change over time, such as distance, real exchange rate, and membership in the European Union.

The estimator of WAHU enables the transformation of variables using the residuals of the least squares method (LSM), as shown below (Atici and Guloglu, 2008).

$$Y^* = \sigma_\varepsilon \Omega^{-1/2} Y \quad and \quad X^* = \sigma_\varepsilon \Omega^{-1/2} X$$

$$\sigma_\varepsilon \Omega^{-1/2} = W + \left(\frac{\sigma_\varepsilon}{\sigma_1}\right) B, \qquad \sigma_1^2 = \frac{u' Bu}{trace(B)}, \qquad \sigma_\varepsilon^2 = \frac{u' Wu}{trace(W)},$$

$$B = I_N \otimes \bar{J}_T, \qquad W = I_{NT} - B, \qquad \bar{J}_T = J_t / T$$

The residual of the least squares method is shown as the term u. N indicates the number of countries, and T indicates the time. The W matrix contains personal deviation, and the B matrix shows the averages for each section unit.

In this study, the analysis of factors that affect Turkey's c-itrus export is performed using quantile regression. Currently, in regression analysis, the Least Squares Method (LSM) is commonly used. In the LSM method, the sum of the error squares is minimized. The minimization of different values is also discussed instead of the squares of the errors. In this situation, different regression models are used; these are alternative regression models. One of those methods is quantile regression (Ozel and Sezgin, 2009).

Quantile regression is the generalized state of the Median Regression for the determined quantiles. These regression models are less sensitive to the extreme values and inclinations than the LSM. The quantile regression had first generated robust regression technique that ignores the hypothesis of normal distribution of the mistake terms (Koenker, 2005). Although the traditional regression model struggles to explain the changes of conditional average of the variable, the quantile regression explains the changes in the quantiles. Quantile regression is more flexible according to traditional regression, and different quantiles can be used according to the research qualification. Because the distribution of dependent variable provides important information regarding how it was affected by the independent variables, quantile regression is widely used in the social sciences (Hao and Naiman, 2007).

The quantile regression model is actually a placement model. When the simple placing model is expressed as

$$Y_i = Xi\beta_\theta + \varepsilon_{\theta i} \tag{2}$$

Yi that occurs here is an independently and identically distributed, random variable with the β median. This situation can be expressed as

$$\theta\left(Y_i \middle| X_i\right) = X_i\beta_\theta \tag{3}$$

The θ.th simple quantile in this model

$$min_{\beta\in R}k\left\{\sum_{i:Y_i>X_{i\beta}}\theta\,\left|Yi - Xi\beta_\theta\right| + \sum_{i:Y_i<X_{i\beta}}(1-\theta)\,\left|Yi - Xi\beta_\theta\right|\right\} \tag{4}$$

has been gained by minimising the expression (Judge *et al*., 1985).

The quantile regression covariances are in a structure that shows distribution with different forms of an asymptotic covariance matrix that depends on asymptotic normal model assumptions (Koenker, 2005). Calculating the coefficient covariance matrix occupies an important role in quantile regression analysis.

In quantile regression, to avoid ungraceful estimations of the calculation of the covariance matrix, sampling techniques were used. Among those methods, the Bootstrap method has been used very frequently. In cases when the error terms and assumptions made regarding the independent variables do not hold, the Bootstrap method is used as a correction operation. The Bootstrap method was developed with the purpose of obtaining smaller estimation mistakes, to decrease the standard deviations and therefore obtain more trustable parameter estimators and create confidence intervals (Efron and Tibshirani, 1993). The Bootstrap method calculated the asymptotic matrix of by three different methods. Those methods are the residual bootstrap, the design bootstrap method (XY pair), and the Markov Chain Marginal Bootstrap (MCMB or MSMB-A).

In this study, the quantile regression model was calculated using the Bootstrap MCMB method. The most important disadvantage of the residual and design bootstrap (XY pair) methods are that each bootstrap reproducing operation for a relatively multidimensional linear programming problem estimation needs an intense calculation (Kocherginsky *et al*., 2005). In addition, these methods increase the calculation load and consistency of the Bootstrap MCMB method used in the multidimensional solutions (Xuming and Hu, 2002).

The natural logarithm of each variable, except the dummy variables, has been taken. The values used for certain years in certain countries in the exportation series were shown as "0" in the databank. Therefore, to determine the estimation and to resolve the problem created from the missing values, the formulation of the exportation values logarithm ln(X+1) had been used. According to this formulation, if X = 0, that is, when we do not have the exportation value, ln(0+1) = 0 had been considered. Thus, both the observations that belong to the exportation as zero had been considered, and the estimation results were not seriously affected.

The dummy variable must be corrected with a semi-elasticity calculation (Halvorsen and Palmquist, 1980): [exp(β Dummy)-1]*100. The interpretation is a percentage interpretation, as with the other (non-dummy) variables. The analysis evaluated Turkey's citrus exportation. The entire analysis was performed using the Eviews 7.1 packaged software.

3. Results and Discussion

When the quantile regression was examined according to the Bootstrap method to calculate the factors that affect Turkey's c-itrus exportation, the model analysis was performed with 500 iterations and 20 % repetition. Using the algorithm of Knuth (1969), the random generator was obtained. Before the model estimation, the Wald tests that measure whether there is symmetry had been used.

When the quantile regression results regarding Turkey's citrus exportation were examined (Table 2), the H_1 hypothesis of the Wald test that indicates whether the model is symmetrical was accepted. In this situation, quantile regression provides more robust estimations in accordance with the LSM estimations that are accepted by multiple researchers (Ozel and Sezgin, 2009).

The test results of the Quasi LR goodness of fit scale of the Q_2 Median Model were calculated as 322.04 (Table 3). Because this value is $p<0.01$, the model is considered to be meaningful. In the model's result, when the Pseudo R^2 value is ex-

Table 2 - *The results of Wald Test for the symmetry.*				
Test Summary	Chi-Sq. Statistic		Chi-Sq. d.f.	Prob.
Wald Test	1390.883		8	0.0000
Restriction Detail: b(tau) + b(1-tau) - 2*b(.5) = 0				
Quantiles	Variable	Restr. Value	Std. Error	Prob.
0.25, 0.75	C	-18.30328	0.65444	0.0000

amined, the statement level of the independent variables of Turkey's citrus exportation is 28.79%. This value also shows the distinctness of Q_2 quantiles among other quantiles.

The coefficient of GNP per capita is statistically significant at the α= 0.10 level of significance. This level indicates that if GNP per capita is increased by 1%, Turkish exports will increase by 0.357 %. In addition, the GNP variable indicates that Turkey tends to trade more with larger economies. A 1% increase in the population of citrus importing countries (P_{it}) had been calculated to increase Turkey's citrus export by 1.075% at a rate of 1.215% according to the WAHU model. The distance variable DIS_i that shows the transportation expense has a negative value (Q2 Median and WAHU), as expressed by multiple researchers (Hypothesis 1 is accepted). An inverse relation had been observed between the geographical distances and Turkey's citrus exportation. When the effect of the real exchange rate to the citrus export is examined, a real rate increase with 1% is calculated to cause a decrease in exports by 3.43% (Hypothesis 2 is accepted). The fluctuations that will occur in the real rate have a negative input on exports. Considering prior studies' conclusions (Ozer, 2014; Kafle and Kennedy, 2015), the results from these studies are similar.

When the Dummy variables of the economic cooperation agreements are examined, being a member of the EU may increase Turkey's citrus exportation by 54.01 % (i.e., ($e^{0.43}$-1)x100=54.01) at a ratio of 118.15 %, according to the WAHU model (Hypothesis 3 is accepted). Erdem and Nazlioglu (2008) have similarly shown the significant positive impact of membership in the EU-Turkey Customs Union on the Turkish agricultural exports to EU. Emlinger et al. (2008) showed that EU tariffs applied to Turkey are very low, Turkish exports to the EU are not sensitive to tariff barriers. Turkey has minimum to gain from trade liberalisation negotiations in the fruit and vegetable sector. Concerning the other Mediterranean countries, the main result is that non-tariff obstacles would limit the benefits their exports would gain from a decrease in EU tariffs. Turkey has a large comparative advantage over the European Union (EU) countries in producing fruits such as citrus, figs, apricots, and grapes (Ozcelik and Ozer, 2008), also known as Turkey's traditional foreign trade products.

In addition, for countries that are members of the Black Sea economic cooperation, it is found to be significant with the value of 95.01 % (i.e., ($e^{0.66}$-1)x100=95.1) and with a value of 418.24 %, according to the WAHU model. The dummy variables (D_{EU}, D_{bs}) in the analysis result are calculated significant. However, Márquez-Ramos and Martinez-Gomez (2014) showed also that dummy-type variables do not reflect the various concessions in Trade preferences. It is significant in the analysis due to be by Turkey's strategic geographic location.

When Turkey's export to partner countries with citrus production is examined, the citrus export to those countries are less than other countries with the ratio of -747.96 % (i.e., ($e^{2.13}$-1) x100=747.96) and with the ratio of -1551.55 % according to the WAHU model. The results indicate that Turkey does not export citrus to the citrus producing countries.

Thus, it is obvious that Turkey can aspire to become a veritable logistical and thus economic hub. In this respect, Turkey's strategic geographic location, industrial and commercial drive, investments and forward-looking strategy are all key assets. Thus, at both regional and international levels, the expression of Turkish agri-food power will hinge on this logistical dimension. The Mediterranean area can play a key role if countries in the southeast, such as Turkey, develop initiatives in this field; these are major exporters in fruit, vegetables and vegetables preserves (CIHEAM, 2012).

Based on the finding of this study, a few implications can be made. First, the income of the partner country and economic partnership agreements are important for trade flow. Therefore, marketing research in high income countries will benefit trade flow. Further economic partnership arguments will help high trade flow in the region.

Variations in exchange rates have a negative impact on trade flow. Thus, policy makers should consider the impacts of macro policies accordingly. Because transportation costs have an impeding impact on trade, innovative transportation systems can be designed, or government policies can be more supportive in that sector. Further research is needed to examine the product-based trade flows.

This research is of academic value and of value to international trade policy makers and practitioners in the citrus trade. In this model's approach, the total main effects on Turkey's citrus exports were examined. The results of this study show the determining factors of Turkey's citrus exportation and offer certain problems that had been experienced in the panel data analysis through the quantile regression analysis.

Table 3 - *The estimation results regarding the citrus export gravity models.*

	Method			
	Bootstrap (Q_2 Median)		WAHU	
Variable	Coefficient	Std. Error	Coefficient	Std. Error
α	28.26858	(0.195164)*	43.61301	(22.62828)***
LnY_{it}	0.356829	(0.084702)*	0.709280	(0.221429)*
LnP_{it}	1.075234	(0.034552)*	1.214547	(0.143335)*
$LnDIS_i$	-1.946994	(0.058542)*	-1.686783	(0.310844)*
$LnRD_T$	-3.434737	(0.086573)*	-7.695704	(4.725772)
D_{EU}	0.431833	(0.149736)*	0.782650	(0.396583)**
D_{bs}	0.668901	0.169206)*	1.760747	(0.509230)*
D_{PC}	-2.13767	(0.357216)*	-2.804360	(0.480877)*
Pseudo R-squared	0.287983		R-squared	0.3303
Adjusted R-squared	0.273824		Adjusted R-squared	0.3252
S.E. of regression	3.374843		S.E. of regression	3.2374
F-statistic	20.33860*		F-statistic	25.7188*
Quasi-LR statistic	322.0434*			

Coefficients or statistics are significant at the *α = 0.01, ** α = 0.05,*** α = 0.10 level of significance. The other coefficients or statistics are insignificant.

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