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Araştırma Makalesi/Research Article

THE MARKET POWER OF TURKEY'S IMPORTED TOBACCO MARKET

TÜRKİYE İTHAL TÜTÜN PİYASASININ PAZAR GÜCÜ

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Öz

Toplanan vergiler içindeki yüksek payına ve dış ticaretteki üstünlüğüne rağmen tütünün diğer tarım ürünleri aleyhine artan üretimi ve sahip olduğu büyük miktardaki üretici sayısı nedenleri ile yıllarca üretimi özel kanunlar ile düzenlenmiştir. Son dönemlerde yapılan mevzuat değişiklikleri ile tütün piyasasında büyük değişiklikler yaşanmış olsa da kamunun denetim, düzenleme ve gözetimi devam etmektedir. Tütün üretimi, teknolojik yetersizlik ve yeterince geliştirilemeyen araştırma faaliyetleri nedenleri ile üretimi artırılamamakla birlikte Dünya rekabet ortamı içerisinde yerli tütüne göre görece daha ucuz olan ithal tütün talebi artmaktadır. Bu durum Türkiye'yi tütün ihraç eden ülke konumundan en büyük ithalatçı ülke konumuna taşımaktadır. Bu çalışmanın amacı Türkiye'nin tütün ithalat pazarındaki pazar gücünü Yeni Endüstriyel Organizasyon yöntemi ile ekonometrik olarak hesaplamaktır. 1994-2016 dönemine ait yıllık verilerin kullanıldığı bu çalışmada pazar gücü katsayısı 0,37 bulunmuştur. Bu sonuç Türkiye tütün ithalatının tam rekabet koşullarıda gerçekleşmediğini ve firmaların davranışlarının oligopolist bir yapı sergilediğini ifade etmektedir.

Anahtar kelimeler: Pazar gücü, ithal talep, tütün ürünleri

Abstract

Despite its high share in the taxes collected and the superiority in foreign trade, tobacco production has been regulated by special laws for many years due to the increased production of tobacco to the detriment of other agricultural products and the large number of producers. Public supervision, regulation and surveillance are still in progress despite the major changes experienced in the tobacco market due to the recent changes in legislation. Tobacco production cannot be increased because of technological insufficiency and inadequate development of research activities. As well as this, there is an increase in the demand for imported tobacco, which is relatively cheaper than domestic tobacco in the global competitive environment. This is what transforms Turkey's market position into the largest tobacco importer which was a tobacco exporting country before. The aim of this study is to calculate Turkey's market power in the tobacco import market econometrically by using New Industrial Organization method. Market power coefficient was found to be 0.37 in this study in which annual data for the period 1994-2016 were used. This result reveals that Turkey's tobacco import is not realized under perfect competition conditions and the firms display behaviors in oligopolistic structure.

Keywords: Import demand, market power, tobacco products

GENİŞLETİLMİŞ ÖZET

Çalışmanın Amacı: Bu çalışmanın amacı Türkiye'nin tütün ithalat pazarındaki pazar gücünü Yeni Endüstriyel Organisazyon yöntemi ile ekonometrik olarak hesaplamaktır.

Araştırma Soruları: Tütünün Türkiye ekonomisindeki yeri ve önemi nedir?

Tütün piyasası ulusal ve uluslararası literature nasıl konu edilmiştir?

Pazar gücü nedir ve tütün piyasasının pazar gücü yapısı nasıldır?

Literatür Araştırması: Ulusal ve uluslararası literatür incelendiğinde, çeşitli sektörlerin pazar gücünü konu edinen yerli ve yabancı birçok çalışmanın olduğu görülmektedir. Söz konusu çalışmaların bir kısmının Yapı-Davranış-Performans (SCP) yöntemini kullandığı; diğer bir kısmının ise geleneksel SCP yöntemi yerine Bresnahan (1982) tarafından geliştirilen Yeni Endüstriyel Organisazyon (NEIO) yöntemini kullandığı görülmektedir. Araştırma kapsamında ulusal ve uluslararası yazın incelendiğinde; ulusal literatürde tütün ürünleri ithalat piyasasını ve tütün endüstrisinin pazar gücünü inceleyen çalışmanın bulunmadığı, uluslararası literatürde ise tütün piyasasının pazar gücünü inceleyen çalışmaların olduğu ancak çalışmaların sınırlı sayıda kaldığı görülmektedir. Bu çalışmaların önemlilerinden birisi Bhuyan ve Lopez (1997)'in çalışmasıdır. Bu çalışmada, Birleşik Devletler'in tütün ve yiyecek endüstrisinin oligopol gücünü, 1972-1987 dönem verilerini kullanarak üç aşamalı en küçük kareler yöntemi (3SLS) ile analiz ettiği görülmektedir. Yapılan analiz sonucunda, bu endüstrilerin önemli düzeyde oligopol gücüne sahip olduğu sonucuna ulaşılmıştır.

Yöntem: Çalışma eşanlı denklem sistemlerinden üç aşamalı en küçük kareler (3SLS) yöntemleri ile tahmin edilmiştir. Tütün piyasasındaki eksik rekabet derecesinin araştırıldığı çalışmada, ampirik modelin oluşturulabilmesi için sektöre ait talep ve toplam maliyet ilişkilerini gösterir fonksiyonların elde edilmesi gerekmektedir. İlk olarak sektöre ait talep fonksiyonu tanımlanmıştır. Talebin tanımlanmasını takiben modelin oluşturulması için çalışmada marjinal maliyet (MC) fonksiyonu oluşturulmuş ve bu fonksiyon kar maksimizasyonu koşulu altında marjinal maliyet denklemi bağımlı değişken fiyat olacak şekilde tekrar yazılmıştır. İthal tütün piyasasının pazar gücünün araştırıldığı bu çalışmada 1994-2016 dönemine ait yıllık veriler kullanılmıştır. Çalışmada kullanılan zaman serilerinden üretim miktarı Birleşmiş Milletler Tarım ve Gıda Örgütü (FAO)'nden yıllık kişi başı gelir ve perakende satış fiyatı Türkiye İstatistik Kurumu (TURKSTAT)'ndan toparlanmıştır. Nominal değişkenler tüketici fiyat indeksi ve GSMH deflatörü kullanılarak deflete edilmiştir.

Sonuç ve Değerlendirme:Tütünün perakende fiyatı için fiyat esnekliği 0,37'dir ve bu perakende fiyatında ortaya çıkan bir artışın tütün ithalatında 0,37'lik azalışa neden olacağını ima etmektedir. Tütün ithalatı talep fonksiyonunun diğer bir belirleyicisi ise kişi başına düşen gelir düzeyidir. Tütün ithalatının gelir esnekliği 0,56'dır. Bu esneklik düzeyi, Türkiye'ye tütün ithalatının gelir değişimlerine oranla daha düşük bir oranda arttığını göstermektedir. Kişi başına düşen tütün tüketiminde ortaya çıkan bir artışın tütün ithalatını 0,50 oranında artırdığını ifade etmektedir. Bu durum tütün üretiminin yasal düzenlemeler ve kota uygulamaları gibi nedenlerle azalan üretimin iç talebi karşılayamadığını ve tütün ithalatını pozitif yönde etkilediğini ifade etmektedir. Tütün ithalatını etkileyen diğer bir önemli değişken ise yerli tütün üretimi ve Türkiye'deki ithalat bağımlılığını yakalamak için talep denklemine dahil edilen tütün ithalatının gecikmeli değeridir. Bu iki değişkenin işaretleri iktisadi beklenti ile uyumlu olmasına rağmen istatistiki olarak anlamsızdır. Türkiye'nin tütün tüketiminin büyük bir oranı ithal edildiğinden, perakende fiyatı doğrudan ithal fiyatları değişkeni ile ilişkili olacaktır. Bu nedenle optimalite denkleminin önemli bir değişkeni ithal tütün fiyatı değişkenidir. Bu değişken iktisadi olarak pozitif işarete sahiptir ve esneklik değeri 1,10'dur. Bu sonuç, perakende fiyatındaki değişimin ithalat fiyatındaki değişimden daha büyük olduğunu göstermektedir. İthal edilen tütün miktarı arttıkça perakende fiyatı artmaktadır. Optimalite denklemindeki diğer bir değişkende zaman trendidir. Trend değişkeni negatif işarete sahiptir ve araştırma dönemi için tütün perakende fiyatının aşağı yönlü hareket ettiğini göstermektedir.Çalışmada yer alan piyasa için pazar gücü λ=0,37'dir. Rekabet düzeyine göre tam rekabetten monopol piyasa yapısına doğru uzanan bir süreçte çalışmada elde edilen pazar gücü değeri tütün ithalat pazarının oligopol bir yapıya sahip olduğunu ortaya koymaktadır. Dünyadaki tütün firmaları dikkate alındığında birkaç uluslararası firmanın piyasaya hakim olduğunu ve Türkiye'nin 1994 yılı itibari ile yabancı firmaların Türkiye'de fabrika kurmasına izin verilmesi gibi nedenlerle piyasanın monopol yapısının kırıldığı görülmektedir.

INTRODUCTION

Tobacco, which has been known for over five hundred years in the world history and grown in the Anatolian lands for over four hundred years, is of great importance for the Turkish economy. Tobacco, which is of concern to large number of people in terms of its production, consumption and trade, is an industrial plant that virtually sums up the socio-economic and political life. Tobacco, which has a significant place in the economy of Turkey and the world, is cultivated on approximately 4 million hectares of land by more than 120 countries around the world and about 7-8 million tons of leaf tobacco are produced each year. The countries that are foremost in the tobacco production are China, India, Brazil, USA, Turkey, Zimbabwe, Indonesia and Malaysia. These countries produce more than 80% of the world's total tobacco production. 12 million farmers are occupied with the production of tobacco worldwide. Almost two-thirds of this figure is composed of the Chinese farmers. When tobacco consumption is examined, it is observed that the most common form is cigarette smoking. Approximately 80% of world tobacco consumption is made up of cigarette smoking. China is both the largest cigarette consumer as well as its producer (Silkroad Development Agency, 2013: 3; FAO, 2017).

Tobacco, grown in the form of family farming in Turkey, is produced around 74 thousand tons on approximately 925,048 hectares of land in the year 2016 (TURKSTAT, 2017). Although the amount of tobacco production in Turkey varies considerably depending on many variables over the years, an increase in tobacco production was experienced as a result of high price policies until the year 1994 (Republic of Turkey Ministry of Development, 2007). As a result, tobacco production areas had expanded against other crops and caused the deterioration of plant patterns in the production regions (Silkroad Development Agency, 2013: 1). Hence, in 1994, (for the first time) the period directed for production in quota[1] was initiated and a balanced production was targeted (Republic of Turkey Mınıstry of Development, 2007: 112). With the Law No. 4733 issued in 2002 on Organization and Duties of the Tobacco and Alcohol Market Regulation Institution, Tekel gradually (progressively) withdrew from the purchase of tobacco and the determination of the production quota and the practice of supporting the purchase price was terminated. The period has started in which rational production has been targeted and the process of tobacco production has been largely determined in line with the current needs of the market. With the enforcement of the legislation, there has been a remarkable decrease in the output of tobacco and number of tobacco producers in Turkey. Thus, in 2016, the number of producers decreased to 64 thousand tons, the output to 74 thousand tons and the production area to 925,048 (TAPDK, 2017). With regard to the decrease in the tobacco output, it is seen that Turkey has moved from the ranks of the leading country in the export of oriental leaf tobacco worldwide to importing it. 9,294 tons of tobacco export in 1994 rose to 20,967 tons in 2016 while tobacco import increased by about six times from 4,913 tons to 28,316 tons. The main reason for this is that firms operating in Turkey under the conditions of worldwide competition prefer imported tobacco, which is relatively low in terms of quality and price compared to domestic tobacco price, in order to meet both domestic demand and product oriented exports.

When the national and international literature is examined, it is seen that there are many local and foreign works on the market power with a focus on the various sectors. It is observed that a part of the studies have used the method of Structure-Conduct-Performance (SCP) while some others have used the method of The Number of New Empirical Industrial Organization (NEIO), developed by Bresnahan (1982). When the national and international literature within the scope of the research is examined, it is seen that there is no study undertaken on the import market of tobacco products and market power of the tobacco industry in the national literature whereas there is a limited number of studies that have examined the market power of the tobacco market in the international literature. When the studies that examine the

[1] With the decision of the Tobacco Board established by the Law No. 1177 on Tobacco and Tobacco Monopoly, the tobacco quota has started to be determined considering the country's tobacco needs.

market power are studied, it is seen that Bhuyan and Lopez (1997) analyzed the oligopoly power of the tobacco and food industry in the United States by using the three-stage least squares method (3SLS) to evaluate the data collected between 1972-1987 period. As a result of the conducted analysis, it is concluded that these industries have considerable oligopoly power. Bihari and Seldon (2006), who studied the market power of cigarette manufacturers' in the United States, used the data collected from the 1952-1984 period when the uniform pricing system was applied. This study, which used the Bresnahan approach, has concluded that the government policies on cigarettes have been influential on the demand and the market power of the smoking industry. Summer (1981), on the other hand, investigated whether the price differentials of 47 states of the United States that applied different consumption taxes gave monopoly power to cigarette producers by using data from the period between 1964-1978. In the study conducted, it has been concluded that the inter-state arbitrage reduces the monopoly power. In his study on US rubber, textile, electrical machinery and tobacco industries, Appelbaum (1982) emphasized that tobacco industry has an oligopolistic structure and the underlying reasons of oligopolistic power of firms was taken into consideration in detail.

Sullivan (1985) explored the system of simultaneous equations and the market power of the cigarette market in his study by using tax rates and price data for the period 1955-1982. As a result of the empirical findings he obtained, he suggested that the higher the competition level increases, the lower the cartel formation in the cigarette market is. Millan (1999), on the other hand, examined the market power and cost structure of 18 Spanish food industry. He used the data from the period 1978-1992. In the study, in which Lerner index was used, the long-run equilibrium was rejected for all industries. Structural analysis has achieved similar results as in non-structural approaches. It has been suggested that scale economies and market forces cannot be defined together. Raper and Love (2007) argued, in their study where they extrapolated the market power of the United States' cigarette manufacturing industry, that the market power of the cigarette manufacturing industry is driven by sectoral government policies.

The aim of this study is to examine the market power of the tobacco import market of Turkey, which has not been studied before, with the help of economic model. The study is made up of three parts and first the place of the tobacco market in the World and Turkish economy will be mentioned without arriving at any conclusions. In the second part, variables influencing the tobacco imports and their data set will be mentioned. In the following section, this study will provide information about the new empirical industrial organization (NEIO) methodology used in market power studies. In the final section, the empirical study will be evaluated using the results obtained.

1. MATERIAL AND METHOD

The demand function of an industrial company where a homogenous product is produced is as follows: $(q_i = q_1, q_2, \dots, q_n)$,

$$Q = \sum_{i=1}^{n} q_i \qquad (1)$$

The closed form market demand function of this industry is $Q_t = Q(P_t, Z_t)$. Q_t that takes place in the market demand fucntion expresses the demand quantity, while P_t expresses the prices of the goods, Z_t expresses other external variables influencing the demand outside the price and t subindex expresses time. The above Hicksian demand function can also be written as the Marshallian inverse demand function $[P_t = P(Q_t, Z_t)]$. the income of the sector is $(R_t = P_t * Q_t)$'. Therefore, the marginal revenue of the industry can be expressed as follows:

$$MR_t(\lambda) = P_t + \lambda Q_t[dP_t/dQ_t] \qquad (2)$$

The industry is faced with a certain cost to meet the demand. Costs incurred by the firm can be expressed as such: $MC_t = MC(Q_t, W_t)$. In the cost function W_t is the vector of external factors such as factor prices.

Companies operating in the sector have no impact on the market price. In other words, they are in a position to accept the prices. Therefore, the equilibrium price and the amount of equilibrium is $P_t = P(Q_t, Z_t) = MC_t = MC(Q_t, W_t)$. Assuming that MR is equal to MC, the MC equation can be defined as follows.

$$MR_t(\lambda) = P_t + \lambda Q_t \left[\frac{dP_t}{dQ_t}\right] = MC(Q_t, W_t) \quad (3)$$

The coefficient λ in the corresponding equation is an index showing the sector's market power and the difference between the marginal cost and the price. According to Bresnahan (1982) and Perloff (1991), this index is between 0 and 1. If λ index value is 0, it means that the market is in full competition, if it is 1, it is a monopoly, if it is between 0 to 1, and it means that the market has oligopoly structure. In the Cournot equilibrium, the λ index takes the value of 1/n. λ, which indicates the market power, is also a measure of how far the total output level deviates proportionally from the full competition equilibrium (Shaffer, 1993: 51; Shaffer, 2001: 84; More and Nagy, 2004: 18).

Assuming that there are n firms offering homogenous goods and services in the market, the profit function of the business $i.$ is as follows:

$$\pi_i = P(Q)q_i - G_i(q_i)\ i = 1,2,\dots,n \quad (4)$$

In the corresponding equation, π is the profit, $P(Q)$ is the output price (inverse demand function), q is the output quantity, and $G_i(q_i)$ is the total cost function. The total cost function is equal to $G_i(q_i) = w_i(q_i, EX_{Si}) - F_i$. In this equation, w is the variable cost, EX_S is the external variable that affects the marginal cost but not the sectoral demand function, and F is the fixed cost. When the first derivative of the profit equation is taken:

$$\frac{d\pi_i}{dq_i} = P + f'(Q)\frac{dQ}{dq_i}q_i - w_i'(q_i, EX_{Si}) = 0 \quad (5)$$

is obtained. When the above equation is made for the relevant simplifications and n is rewritten for the firm, the following equation

$$MC = P(Q) + \frac{dP}{dQ}\left[\frac{1 + (n-1)v}{n}\right] \quad (6)$$

is obtained. In the related equation, v is the estimated variance of the firm about each of its competitors and thus, Equation 3 can be revised as follows:

$$MC = P_t + Q_t\left[\frac{dP_t}{dQ_t}\right]\lambda \quad (7)$$

Using the equations number 4 and 6, the market power index is reached. λ index value $\lambda = \left[\frac{1+(n-1)v}{n}\right]$ is equal to.

2. REGRESSION ANALYSIS AND DATA SET

In the study, in which the degree of under-competition in the tobacco market is examined, in order to form the empirical model, it is necessary to obtain functions that show sector-related demand and total cost relations. Therefore, the demand function for the sector is defined from the Equation 1:

$$MQ_t = \alpha_0 + \alpha_1 P_{rt} + \alpha_2 Y_t + \alpha_3 G_t + \alpha_4 \mathrm{Q}_t + \alpha_5 MQ_{t-1} + \varepsilon_{1t} \quad (8)$$

In the equation, MQ_t is the quantity of imported goods (ton), P_{rt} is the retail sale price (\$), Y is the income level per capita (\$), C is the tobacco consumption per person (kg), Q_t tobacco production amount (ton), MQ_{t-1} represents the delayed value of the imported tobacco amount, and the average and variance ε_{1t} represents $N(\mu, \sigma^2)$ error term that displays normal distribution.

In order to construct the model following the definition of the demand, the function of marginal cost (MC) must also be estimated.

$$MC = \beta_0 + \beta_1 MP_t + \beta_2 T \quad (9)$$

in the related MC equation, MP represents the tobacco import sales price and T defines time, in other words, means the trend that is described in terms of transport and the stocking, etc., which arise due to technological developments over time, and cost is variable and the trend is described as variant $1,2,3,\dots,n$. When Equation 9 is rewritten under the condition of profit maximization;

$$P_{rt} = \beta_0 + \beta_1 MP_t + \beta_2 T + \beta_3 MQ_t + \varepsilon_{2t} \quad (10)$$

The equation is obtained. In the corresponding equation β_3 is equal to $\beta_3 = -\lambda[dP_{rt}/dMQ_t]$. ε_{2t}, $N(\mu, \sigma^2)$ display distribution. According to Equation 9, instead of $[dP_{rt}/dMQ_t]$, the coefficient $(1/\alpha_1)$ can be used. In this case, when the equation $\beta_3 = -\lambda(1/\alpha_1)$ is rearranged, the market power $(\lambda = -\beta_3 * \alpha_1)$ is obtained.

In this study, which investigates the market power of the import tobacco market, annual data for the period between 1994-2016 have been used. The annual production per capita income of the time series used in this study has been taken the United Nations Agriculture and Food Organization (FAO) while the retail sale price have been obtained from the Turkish Statistical Institute (TURKSTAT). The nominal variables have been deflated using the customer price index and a gross national product deflator. The analyzes have been made using the E-views 9.0 package program.

3. EMPIRICAL FINDINGS

The market power of the Turkish tobacco import market has been analyzed by using equations 9 and 10 and the annual data for the period between 1994-2016 The amount of imported tobacco (MQ_t) and (P_{rt}) retail tobacco sales price equations have been simultaneously created. Before moving to the estimation, the exteriority test has been carried out by using the Hausman test and the probability value for the two variables been over-determined. Hence, the study is estimated from simultaneous equation systems with the methods of two-step least squares (2SLS) and three-step least squares (3SLS). The 3SLS method has produced better results than the 2SLS method in terms of the general significance level of the model and the signs of the coefficients. For this reason, the results obtained with the 3SLS method have been considered in the study. The parameter, t-statistics and other statistical values obtained as a result of the estimation are presented in Table 1. have been determined. Then, the determination of each equation in the system of simultaneous equation has been analyzed and it has been decided that the system of the two equations involved in the study (according to length and rank condition) has both.

Table 1. Three-Step Least Squares Method Estimation Results

Demand equation	Coefficient	t-Ratio	Elasticity
Intercept	24480	3.96*	
Retail price of tobacco (P_{rt})	-250.64	-2.04**	-0.37
Per-capita income (Y)	18.47	2.32**	0.56
Per-capita tobacco consumption (C)	6079.10	1.96***	0.50
Tobacco production (Q)	-0.02	-1.17	-0.14
Lag quantity of tobacco imports (MQ_{t-1})	0.21	1.06	0.19
R-square	0.74		
Durbin-Watson stat	2.19		
Optimality equation			
Intercept	23.56	3.39*	
Import price (MP)	1.16	40.46*	1.10
Import quantity (MQ)	0.0015	3.05*	0.99
Time trend (T)	-0.56	-1.76***	-0.25
R-square	0.99		
Durbin-Watson stat	2.30		

Note: *Indicates significance at 1% level, **Indicates significance at 5% level, ***Indicates significance at 10% level
Source: own processing.

Values of demand and optimality equations in respect of R^2 are found to be 0.99 and 0.74 respectively. These values indicate that the explanatory variables represent the model well. High R^2 value observed in the study raised doubts on the existence of spurious regression among the variables. As a result of the unit root test, it was decided that the series taken into account are not stationary, however they are co-integrated series and therefore there is no problem of spurious regression. When the Durbin-Watson statistical value (dw) is examined, it is seen that for both models (2.19) and (2.30), respectively, and that autocorrelation is not a problem for the model. When the parameter values of the variables are examined, it is observed that all the signs of parameters are in compliance with the economic expectation and all the other variables, except for the delayed value of tobacco production and tobacco import, are statistically significant. Elasticity calculation method proposed by Gujarati (2004: 190) for linear equations which takes into consideration the averages of the variables was used in the calculation of the elasticity. The price elasticity of tobacco retail price is 0.37, which implies that any increase in the retail price will cause a decrease of 0.37 in tobacco imports. Another determinant of the tobacco import demand function is per capita income level. The income elasticity of tobacco imports is 0.56. This level of flexibility indicates that tobacco imports in Turkey increase at a lower rate than income changes. An increase in per capita consumption of tobacco expresses an increase in the tobacco import by 0.50 percent. This situation expresses that the decreased production of tobacco cannot meet the domestic demand due to reasons, such as legal regulations and quota applications, and it affects tobacco imports

positively. Another important variable affecting tobacco imports is the lagged value of tobacco imports, included in the demand equation to capture domestic tobacco production and import dependence in Turkey. The signs of these two variables are statistically meaningless although they are in line with the economic expectation. Since a large proportion of Turkey's tobacco consumption is imported, the retail price is directly related to the variable of import price. For this reason, an important variant of the optimality equation is the variable of imported tobacco price. This variable has a positive sign in terms of economic theory and its elasticity value is 1.10. This results shows that the change in retail price is greater than the change in import price. As the amount of imported tobacco increases, the retail price increases. Another variation in the equation of optimality is the time trend. Trend variability has a negative sign and shows that tobacco retail prices move downward within the research period.

The parameter of market power tobacco import $(\lambda = -\alpha_1 * \beta_3)$ has been calculated by using the coefficients $(\alpha_1 = -250.64)$ and $(\beta_3 = 0.0015)$ in Table 1. The market power for the market in the study is λ=-(-250.64)*(0.0015)=0.37. In terms of the level of competition, the market power, which is obtained from a spectrum of full competition to the monopoly market structure, displays that the tobacco import market has an oligopolistic structure. When the worldwide tobaccofirms are considered, it is seen that several internationalfirms dominate the market in Turkey since 1994, when the foreignfirms were allowed to establish factories, and the monopoly structure of the market is, thus, broken in Turkey. This result has been in reached following Turkey's termination of the quota production period, which had started for the first time in 1994, with Law No. 4733 in 2001 and withdrawal of Tekel from the purchase of tobacco along with this law and the establishment of Tobacco and Alcohol Market Regulatory Authority (TAPDK) in 2006.

RESULT AND DISCUSSION

There has been a continuous increase in the tobacco consumption trend in Turkey, despite many legislative arrangements, such as the Law on the Prevention of Hazards to Tobacco Products No. 4207, and the "Smoke-free Space", put into effect in 2006, and the Law on the Prevention and Control of Hazards of Tobacco Products No. 5727. Despite the increase in the domestic demand, the decrease in the number of producers, as a result of the quota application on domestic tobacco production, and the alternative product project, which has been put into practice in recent years, have reduced the tobacco production. Despite the lower quality of the imported tobacco against domestic tobacco, the preference of cheaper imported tobacco has greatly increased the dependence on import. As a result, imports of tobacco have grown significantly over the last 22 years. The tobacco market is controlled by several multinationalfirms. In this study, the NEIO paradigm has been applied to the Turkish tobacco market to investigate the effect of this high concentration on tobacco prices. Empirical results have been obtained from the 1994-2016 period and the results show that there is no fully competitive pricing behavior and it has oligopolistic structure. In addition, the findings of this study show that there are several variables that have a significant effect on import demand. These variables include the retail price of tobacco, tobacco production, per capita income, per capita tobacco consumption, and imported tobacco price. The impact

of these findings on the domestic tobacco market is that the price of tobacco imports is higher than the tobacco volume to be produced if the market operates under perfect conditions. To summarize, tobacco exporting firms use some of the market power, but they are not proportional to controls on the market resources.

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