Econder

International Academic Journal
[Econder], 2018, 2 (2): 128/150

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Does Exogenous Barriers to Entry Make Firms Less Competitive? A Field Study in Inebolu

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Makale Bilgisi / Article Information
Makale Türü / Article Types : Araştırma Makalesi / Research Article
Geliş Tarihi / Received :28.10.2018
Kabul Tarihi / Accepted :30.12.2018
Yayın Tarihi / Published :30.12.2018
Yayın Sezonu : Aralık
Pub Date Season : December
Cilt / Volume: 2 **Sayı – Issue:** 2 **Sayfa / Pages:** 128-150
Atıf/Cite as: Dilek, S , Konak, A , Kesgingöz, H , Özdemir, H . (2018). Does Exogenous Barriers to Entry Make Firms Less Competitive? A Field Study in Inebolu. Econder Uluslararası Akademik Dergi, 2 (2), 128-150. Retrieved from http://dergipark.gov.tr/econder/issue/40036/475577
İntihal /Plagiarism: Bu makale, en az iki hakem tarafından incelenmiş ve intihal içermediği teyit edilmiştir. / This article has been reviewed by at least two referees and scanned via a plagiarism software. http://www.itobiad.com/

Dışsal Giriş Engelleri Firmaları Daha Az Rekabetçi mi Yapıyor? İnebolu'da Bir Alan Çalışması

Öz

Yapı-Davranış-Performans paradigması piyasa yapısının firma davranışı ve performansını etkilediğini ileri sürmektedir. Yüksek dışsal giriş engellerinin bulunduğu piyasalarda yerleşik firmalar rakiplerinin piyasaya giriş yapmasından çekinmezler. Bu nedenle rekabetçi davranmak için daha düşük motivasyona sahip olurlar ve bu da firma davranış ve performansını etkileyebilir. Kısaca dışsal giriş engelleri piyasalardaki etkinsiz sonuçların bir nedeni olabilir. Bu çalışmanın amacı giriş engelleri ve firma davranışı arasındaki ilişkiyi incelemektir. Bu amaçla İnebolu'da faaliyet gösteren firmalar üzerine anket gerçekleştirilmiştir. Böylece giriş engelleri ve firma davranışı arasındaki ilişkiye dair firma yöneticilerinin düşünce ve algıları hakkında fikir elde edilmiştir. Bu çalışmanın sonucunda yapılmış diğer akademik çalışmalarla uyumlu olarak yüksek dışsal giriş engellerinin bulunduğu piyasalarda yerleşik firmaların daha az rekabetçi davrandığı neticesi elde edilmiştir. Bu davranışlar ayrıca firma ve piyasa performansını da olumsuz etkilemektedir.

Anahtar Kelimeler: Dışsal Giriş Engelleri, Rekabetçi Davranış, Yapı-Davranış-Performans Analizi

Does Exogenous Barriers To Entry Make Firms Less Competitive? A Field Study in Inebolu[1]

Abstract

Structure-Conduct-Performance paradigm argues that market structure affects firm behavior and performance. In markets with high exogenous barriers to entry, incumbent firms are not afraid of competitor's entering the market. Because of this reason they can have less motivation to behave competitive and this can affect both performance of firm and behavior. Shortly, exogenous barriers to entry can be reason of inefficient results in markets. The aim of this study is to investigate the relationship between barriers to entry and firm's behavior. To this aim, a survey is conducted to Inebolu firms. By this way, we

[1] This research was enlarged and revised version of the research which was presented in 4th SCF International Conference On Social and Economic Impacts of Globalization and Future Of Turkey- EU Relations.

obtained the ideas and perceptions of firms about the relationship between barriers to entry and firm's behavior. As a result of this research it is reached that in markets with high exogenous barriers to entry, incumbent firms behave less competitive consistent with the results of previous studies. This behavior also effects market and firm performance negatively.
Keywords: Exogenous Barriers to Entry, Competitive Behavior, SCP Analysis

1. INTRODUCTION

Market structure is an important factor for decisions and behavior of firms. Because of globalization and technological revolution, competition becomes more important (Yayar and Baykara, 2012; Terzi, 2011; Gümüş, 2016) and also market structure. Generally firms make decisions by considering market structure which consists of items such as barriers to entry, number of firms, concentration, product differentiation etc. Entry Barrier is one of the most important items of market structure and also key characteristics which affects firm performance (Robinson and Mcdougall, 2001). In the theory of classical industrial organization entry is accepted as a function that determines structure and conduct (Günalp and Cilasun, 2012). In the long run number of firms competing in a market is affected by entry and exit conditions (Bresnahan et.al. 1987). Barriers to entry generally effects number of size and concentration in markets and by doing so cause monopolies and imperfect markets. Barriers to entry are so important that in the absence of them, market can have the same long run results with perfect competition market according to contestable market theory (Çam, 2017; Dilek, 2017; Günalp and Özel, 2005). In other words, the important thing is not the number of firms competing in market but presence of barriers to entry (Günalp and Özel, 2005:64). In contestable market theories competitive results are reached because the threat of entry curbs market power of incumbents (Bresnahan and Reiss, 1991). In monopolies which have strong exogenous barriers to entry, incumbent firm can acquire monopolistic profit without fear of new entries and rivals.

According to Structure Conduct Performance Paradigm, as barriers to entry increase price cost margin of incumbent firm or firms increase, too (Weiss, 1979; Wu, 2009). Therefore monopolistic firms do not have enough

motivation to lower their average costs to increase quality of their products to behave competitive. On the other hand if exogenous barriers are not strong enough in monopolies, incumbent firms can differentiate their products, invest on Research and Development to deter potential firms (competitive behavior) or set up prices below the level which maximizes their long run profits (Günalp and Cilasun, 2012). Because firms do not compete only with competitors present in the market but also potential entrant firms (Günalp and Cilasun, 2012:44). This competitive behavior of incumbent firms also causes endogenous barriers to entry for potential firms. It means that strategy of firm changes according to presence of exogenous barriers.

Most microeconomic and industrial organization books interested in the relationship between barriers to entry and firm's performance however a few interested in differentiating exogenous and endogenous barriers to entry. Performance is about the effectivity and/or efficiency of past actions of firms (Ercan et.al, 2013; Tekin and Nas, 2017). Generally most economists accept that barriers to entry distort resource allocation in markets (Caves and Porter, 1977). Exogenous barriers to entry are not under the control of incumbent firms however they gain profits from them. However endogenous barriers to entry are entirely due to firm's behaviors.

The aim of this study is to obtain thoughts of firm managers and owners about the relationship between firm behavior and exogenous barriers to entry. To reach this aim a questionnaire is conducted on firm's managers and owners in Inebolu. Firstly, literature about barriers to entry and competitive behavior of firms are investigated. Also we tried to explain how incumbent firms react in the presence of exogenous and endogenous barriers to entry while barriers to entry are taken as costs. Then results of questionnaire will be examined and interpreted.

2. BARRIERS TO ENTRY

Barriers to entry are one of the most important issues in the analysis of markets. So, especially scholars who are interested in industrial organizations, strategic management and entrepreneurship have examined barriers to entry (Robinson and McDougal, 2001:659). In literature there exist many definitions about barriers to entry, but two definitions are leading (Kepler, 2009). The

most popular definition is done by Bain as "the extent to which, in the long run, established firms can elevate their selling prices above the minimal average costs of production and distribution ... without inducing potential entrants to enter the industry" (Demsetz, 1982). Caves and Porter (1977) pointed out that barrier to entry concept is turning point for industrial organization. According to Stigler approach, barrier to entry is about production costs (Weiss, 1979). We can define barriers as "the production costs which prevents firm from starting the activity in market" or "the production costs paid by a firm for the start of the activity in the market" according to this approach (Stigler, 1968; Dilek, 2017). Entry decisions of firms are affected by future expectations (Dunne et.al, 2013). According to Carlton (2005), Bain could not articulate a consistent theory which cannot define why barriers to entry lead to an elevated price. According to Gable et.al (1995:211) barriers to entry are deterrents which prevent potential firms from starting business.

Due to the absence of barriers to entry in perfect competition markets, firms only can get normal profits in the long run. Prices will be equal to marginal costs and total welfare will be maximized in perfect competition markets (Dilek, 2017; Günalp and Özel, 2005). Bain (1956) claims that if there exists relatively low barriers to entry, incumbent firms will price above entry-impeding level. Entry costs faced by potential firms are one of the most important determinant determined long run firm values (Dunne et.al, 2013). However, in imperfect markets that have important barriers to entry, firms can determine prices above marginal costs so that they can get excess profits in long run. As barriers to entry increase, incumbent firms can get higher profits (Sayılgan, 2009) according to Structure- Conduct- Performance paradigm (Weiss, 1979). Contestable market models, which are used barriers as production costs as Stigler, show that competitive results can be reached even in the presence of barriers to entry (Günalp and Özel, 2005). In reality these models show that barriers to entry have an ultimate importance in determining market prices and equilibrium (Dilek, 2017).

In literature there are both models include entry barriers and models without barriers to entry (Bresnahan and Reiss, 1991). Models, which include

barriers to entry usually argues limited role of potential entrant firms. At the same time, some detailed econometric models concern with competitive effects of potential entrants (Toivanen and Waterson, 2005). Finally, barriers to entry are important characteristic of market and cause significant results in long run (Dilek, 2017). Strategic management theories and entrepreneurship researches confirm that barriers to entry are key characteristics which affect firm performances (Robinson and McDougal, 2001). Broadman (2000) states that high entry barriers in Russia's industrial sector cause high prices, reduced output, diminished product and service quality, reduced business investment from foreign sources, stifled innovation and technological advance. To get success in market firms should determine efficient strategies (Öncü et.al, 2010).

In economic literature the most known barriers to entry can be listed as cost advantage of incumbents, product differentiation, capital requirements, customer switching costs, access to distribution channels, government policy, advertising, number of competitors, Research and development, price, technology and technological change, market concentration, seller concentration, divisionalisation, brand name and trademark, sunk costs, selling expenses, expected reaction of incumbents to market entry, possession of strategic raw materials (Dilek and Top, 2012; Niu et.al, 2011).

Generally, barriers to entry are investigated in two groups which are exogenous (technical) and endogenous (strategic) (Türkkan 2001, Greer, 1992; Dilek and Top, 2012). In fact, Bain sees the whole of barriers as exogenous from decisions of managers while Kepler (2009) finds it wrong because incumbent firms can create some of barriers to entry. Shortly, barriers to entry which are sourced from structure of market and independent from activities of incumbents are exogenous barriers to entry (Dilek and Top, 2012). Exogenous barriers to entry are classified as two groups that are economic in nature and institutionally determined (Broadman, 2000). Exogenous barriers to entry are sourced from structure of market and established explanation why some strategies are more profitable (Caves, 1984). Economies of Scale, Switching costs, brand loyalty, capital costs, absolute cost advantages, informational advantages, organizational advantages, asset specificity are elements of exogenous barriers to entry. On the other hand some of barriers

are due to movements of incumbent firms. These kinds of barriers to entry are called as endogenous barriers to entry (Kepler, 2009).

Incumbent firms want to maintain high profit, however as new firms come into market this becomes harder. Entry by potential firms eventually causes a decline in the profits of incumbent firms. Lower barriers to entry will tend to increase both entry and exit rates in market (Dunne et.al, 2013). Only a small number of incumbent firms should actively compete in the market in order to continue high profits. Bresnahan and Reiss (1991) showed that as the number of firms in market increases competitive conduct changes quickly. For instance; incumbent firms can deter potential firms from entering the market by advertising, differentiating products, setting low prices (Caves, 1984; Eaton and Lipsey, 1980) or some regulatory constraints can prevent potential firms from enter the market (Broadman, 2000). In some European countries such as Danmark, Finland, Norway, Sweeden taxes are using to save environment (Bayar and Şaşmaz, 2016) and because of this reason it is hard to enter some markets. Addition to this, if market is oligopoly, limited numbers of incumbent firms can form cartels easily (Spiller and Favaro, 1984). By this way, potential firms believe that they can't earn high profits and therefore they hesitate to enter the market. Firms generally care on their future profits and in some instances new competitors can increase these profits. Because of this reason they can prefer not to deter potentials (Dilek and Çolakoğlu, 2013; Dilek and Top, 2012).

Exogenous barriers to entry do not arise from the competitive behavior of firms so they are exogenous factors for firms. Exogenous barriers to entry cause just from the conditions of supply and demand. However, endogenous barriers to entry are under the control of incumbent firms and arise from the competitive behavior of firms. Some part of profitability and performance of firms are determined by exogenous factors while some are determined by vigorous competitive behavior of firms (Carlton, 2005). Also Sutton (1998) confirms that industries in which firms compete vigorously will be more highly concentrated. Generally, Micro economists and industrial organization searchers agree the close relationship between barriers to entry and firm's

profitability. However, there exist a few searches which try to explain the difference between the results of exogenous and endogenous barriers to entry.

In summary, presence or absence of exogenous barriers to entry cause different results in market. In Structure- Conduct- Performance paradigm, it is claimed that barriers to entry and other variables of structure effects performance of market and firms by firm's conducts. Generally, economic performance of society is measured in terms of welfare maximization (Williams and Smart, 1993; Kandemir and Aktaş, 2011) and of firm is measured in profitability, productivity (Talaş et.al, 2013). Policy makers generally want to maximize welfare, provide consumer sovereignty and therefore they conduct antitrust policies, remove barriers to entry (Schmalensee, 2001; Dilek and Çolakoğlu, 2013). Barriers to entry distort efficient resource allocation (Caves and Porter, 1977; Lutz et.al, 2010). Barriers to entry can be evaluated as resource for incumbent firms because high barriers to entry can enhance profitability and performance of incumbents (Robinson and Mcdougall, 2001).

Naturally, incumbent firms do not want new competitors in market and because of this reason they want to deter potential firms (Caves and Porter, 1977; Caves, 1984). Because incumbent can't feel themselves in safe if they meet new competitors (Han et.al, 2001). New innovative entrant firms may change many things in market (Lutz et.al, 2010). For example; they bring competing offerings and shift buyers' preferences (Markman and Waldron, 2014). Many theoretical models have emphasized that strategic behavior of incumbents affect entry decisions of potential firms (Bresnahan et.al, 1987). Generally, for this discouragement policy incumbent firm can differentiate products, advertise, and invest on research and development (Eaton and Lipsey, 1980, Caves, 1980) and reduce their prices (Reiss and Spiller, 1989). These activities are competitive movement of incumbent firms

Shephard searched about exogenous and endogenous barriers to entry. Basic exogenous and endogenous barriers to entry can be listed as it is Table 1 (Türkkan, 2001:265-266).

Table 1. Exogenous and Endogenous Barriers To Entry

Exogenous Barriers To Entry	Endogenous Barriers To Entry
1-) High Capital Requirements	1-) Missiles and Deterrent measures
2-) High Scale Economies	2-) Excess Capacity
3-) High Absolute Cost Advantage	3-) Increase on Advertising and Marketing
4-) High Opportunity for Product Differentiation	4-) Market Segmentation by Price and Product Differentiation
5-) High Sunk Costs	5-) Patents
6-) Need for Research and Development	6-) Control On Strategic, Natural and Human Resources
7-) High Asset Values	7-) Methods To Increase Costs of New Entrants
8-) Need for Vertical Integration	8-) Excess Product Differentiation and Brands
9-) High level differentiation of incumbents activities	9-) Leave Entrants Uninformed
10-) High customer switching costs	
11-) Uncertainties and risks	
12-) Asymmetric Information for Potential firms	
13-) Legal, Managerial and Financial Barriers sourced from Government	

Source: Türkkan, 2001:265-266; Dilek and Top, 2012.

3. EXOGENOUS BARRIERS TO ENTRY AND MARKET PERFORMANCE

First we assume that in the market there exist exogenous barriers to entry which is independent from firm's behavior. For example; it can be capital requirements or scale economies. In this situation if potential firm decides to enter a market he should pay for capital requirement or construct plant which can realize high scales. This is enough deterrent for potential firms. Also some regulatory constraints can prevent potential firms from enter the market (Broadman, 2000). Let there be N firms each producing X_i amount

so that$\sum_{i=1}^{N} X_i = X$. N incumbent firms are competing by producing homogeneous product in market. Just for simplicity, we assume that these firms are using the same production technology so their cost functions are the same.

$$TC_i(x) = ax^2 - bx + c$$

$$AC_i(x) = ax \quad - b + c/a$$

$$MC_i(x) = 2ax - b$$

Products are homogeneous and firms are playing cooperative game and prices are above average costs so that all firms have excess profits. Their profit functions are as below.

$$\pi_i(x) = px_i - TC_i(x)$$

The first order condition for each firm is given by

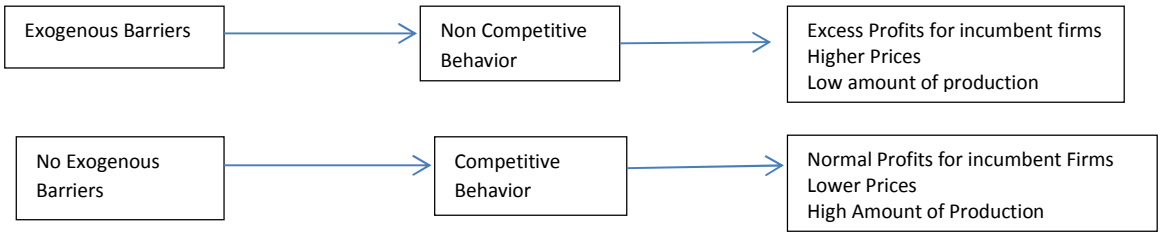
$$P + X_i \frac{\partial P}{\partial X}\left(1 + \sum_{i \neq J} \frac{\partial X_j}{\partial X_i}\right) - MC_i = 0$$

If there is not exogenous barriers the same profit functions will be valid for also new entrants so that production will be shared equally. Two results will be revealed after new firm participate competition. First prices will be decreased and secondly production will be shared equally so that production per each firm will be decreased. As a result of these two effects profits of each firm will reduced until it will be equal to normal profits. Incumbent firms which act rationally want to continue having excess profits. So they have tendency to deter potential firms and to react competitively. This competitive behavior also toughened the competition between firms in the market. We can say that competitive behaviors provide efficient results in markets, wealth is maximized. While prices are equal to average costs firms can have only normal profits by higher amount of production.

Second let us all assumptions are the same except presence of exogenous barriers to entry. Thanks to exogenous barriers to entry, average costs of potential firms are higher than incumbents. Let us assume that there exist m number of potential firms in market (J=1…….m). For number of i and j, mathematical equation $AC_i(x) < AC_j(x)$ is valid. Because of this difference in cost functions incumbent firms feel quite safe. There is no need for incumbents to advertise, differentiate products, set up endogenous barriers etc. Shortly,

existence of exogenous barriers to entry encourages incumbent firms to act uncompetitive. As a result of uncompetitive behavior; markets can't reach their targets, market efficiency can't be obtained, and wealth is not maximized. Incumbent firms can go on having excess profits by producing low amount of production.

Graph 1. Exogenous Barriers to Entry.



4. METHOD

We conduct questionnaire to reveal the relationship between the presence of exogenous barriers to entry and competitive behavior. In the first part of questionnaire demographic questions are asked to participants. In the second part we have 4 scales including exogenous barriers, endogenous barriers, competitive behavior and firm's performance. In this questions five Likert is used (1: I am stringly disagree, 2: I am disagree, 3: I am neither agree nor disagree; 4: I am agree; 5: I am strongly agree). There are 51 firms that are actively reacting in market and registered in Inebolu Chambers of Commerce and Industry in between October 2017 and December 2017. Our space consists of these 51 firms. We reached all of these firms and send questionnaire to top managers or owners. 49 firms answered these questions. Response rate is approximately 96%. According to Küçük (2016:95) while population is consists of 100 participants working with a sample of 96 is reliable enough.

5. FINDINGS

Demographic results of our questionnaire are presented in Table 1. According to results, most of participants are male (81.6%), owner of firm (79.6%) and older than 36 years old (89.8%). Interesting result is about age of firms. Though Inebolu is not a developed region of Turkey, firms are generally older than 16 years old. This can be a signal that shows importance of experience in being successful in market. Addition to this, most of firms is family firms (63.3%). We observed that family firms in Inebolu have not succeeded in being professional though they have been actively reacting in market. Most of participants are reacting in services sector which includes retailing and wholesaling (26.6%), mechanic and electronic repair etc. (8.1%), textile and clothing (14.4%) and other services (33.3%).

Table 1. Demographic Results

Gender	**Frequency**	**%**	**Participant**	**Frequency**	**%**
Male	40	81.6	**Owner**	39	79.6
Female	9	18.4	**Top Manager**	10	20.4
Total	49	100	**Total**	49	100
Firm's Age	**Frequency**	**%**	**Firm**	**Frequency**	**%**
0-5 years	3	6.1	**Personal firm**	14	28.6
6-10 years	10	20.4	**Family firm**	31	63.3
11-15 years	12	24.5	**Multi Partner**	4	8.1
16+ years	24	49	**Other**	0	0
Total	49	100	**Total**	49	100
Participant Age	**Frequency**	**%**	**Products or Services**	**Frequency**	**%**
18-25 years	0	0	**Construction**	3	6.1

26-35 years	5	10.2	**Retail, Wholesale**	13	26.6
36-45 years	24	49	**Mechanic, electronic repair**	4	8.1
46-55 years	13	20.4	**Other Services**	16	33.3
56+ years	7	14.4	**production**	7	14.4
Total	49	100	**Services about Textile, clothing**	7	14.4
			Total	49	100

We also asked questions to reveal presence of exogenous barriers to entry in participant's markets. These questions are prepared by the help of previous studies Türkkan (2001), Dilek and Top (2012). Descriptive statistics, skewness and kurtosis values are given in Table 2.

Table 2. Exogenous Barriers To Entry

	Mean	**Skewness**	**Kurtosis**
Firms should meet high capital requirements to enter the market	2.88	0.171	-0.895
Firms should produce high amount of product to enter the market	2.69	0.322	-0.768
Incumbent firms have absolute cost advantage	3.82	-0.617	-0.298
There exists high opportunity for product differentiation in market	3.67	-0.370	-0.439
There Exists high sunk costs in market	3.02	-0.113	-0.999
Firms should invest heavily on Research and Development to enter the market	2.27	0.563	-0.477
Firms should integrate vertically to enter and compete in market	2.67	0.592	-0.466

There is high customer switching costs in market	3.29	-0.318	-0.027
Firms include high level of uncertainties and risks in it.	3.88	-0.690	-0.088
The market include asymmetric information problem for new entrants	3.78	-0.888	0.515
Potential firms should cares about legal, managerial and financial barriers sourced by government to enter the market	3.25	-0.394	-0.111

The highest scores are about uncertainties and risks in market (3.88), absolute cost advantage of incumbent firms (3.82), and asymmetric information problem (3.78). This result shows that potential firms care about information problem while they are making decision about entering. The average of questions about exogenous barriers to entry is 3.20. According to Küçük (2016), scores between 2.34 and 3.66 are evaluated as medium. The lowest score are due to questions about Research and Development investments (2.27) and vertical integration (2.67). Inebolu is a small town in Black sea region of Turkey so markets have not enough demand for bigger firms. Most firms are small and medium size in Inebolu. It is known that investing on research and development is easier for bigger firms (Dilek, 2017), so it is not surprising for us to see that firms are not giving enough importance on research and development. It is seen that all skewness and kurtosis values are between -1 and 1 so that results are distributed normally according to Morgan et.al (2004:49). Thus we tested reliability and found Cronbach Alfa coefficient as 0.83. According to Küçük (2016:232) results between 0.80 and 1 are reliable in high level.

Endogenous barriers to entry are also asked in questionnaire. The questions are prepared by considering the studies of Türkkan (2001), Dilek and Top (2012). Descriptive statistics, skewness and kurtosis values of endogenous barriers are given in Table 3. Reliability of questions is tested by Cronbach Alfa test and coefficient is found as 0.882. According to Küçük (2016:232) results between 0.80 and 1 are reliable in high level. The highest score is due to aggressive reaction (3.88), brand name and fame (3.33) while lowest score is due to patents (2.45) and excess capacity of incumbents (2.90). It is not surprising that incumbent firms act aggressively against new entrants due to the small size of the Inebolu market. Because of limited numbers of sellers and consumers, firms are known by most of buyers in Inebolu market and this is the reason why brand name and fame has highest score. It is

revealed that the weak side of Inebolu firms is insufficient interest on technology, patents, Research and development etc. The average of questions about endogenous barriers to entry is 3.14 and the results are evaluated as medium according to Küçük (2016). All skewness and kurtosis values are between -1 and +1 and because of this reason they can be accepted as normally distributed.

Table 3. Endogenous Barriers

	Mean	**Skewness**	**Kurtosis**
If a new firm enters market, incumbent firms will answer aggressively.	3.88	-0.794	-0.315
Incumbent firms have excess capacity in market	2.90	-0.005	-0.495
Incumbent firms are investing heavily on advertising and marketing	3.06	-0.227	-0.383
There is market segmentation by price and product differentiation in market	3.24	-0.418	-0.267
Incumbent firms owns patents	2.45	0.240	-0.796
Incumbent firms have controls on strategic, natural and human resources	2.98	-0.141	-0.563
Incumbent firms know methods to increase costs of new entrants	3.27	-0.378	-0.341
Incumbent firms differentiate their products and their brands are known in market	3.33	0.592	0.176
Incumbent firms should leave entrants uninformed	3.10	-0.312	-0.317

Competitive behavior is tested by questions prepared by the research of Yiannis and sloukas (2001). Descriptive statistics, skewness and kurtosis values of competitive behavior of firms are given in Table 4. Reliability of questions is tested by Cronbach Alfa test and coefficient is found as 0.871. According to Küçük (2016:232) results between 0.80 and 1 are reliable in high level. The average of questions about competitive behavior is 3.91 and the results are evaluated as ultimately high because according to Küçük (2016)

scores between 3.67 and 5 are evaluated as ultimately high. In other words firms are acting competitively in marketing. The highest scores are due to questions about competition with rivals (4.20); following consumer needs and wants (4.27) and product differentiation (4.12). These results also show that though there is limited number of sellers in Inebolu market, they are not acting cooperatively. Firms are competing in market. The lowest scores are due to questions about firm's growth (3.63), decreasing prices (3.61), trying to sell new products (3.71). According to these low scores we can say that growth of firm is not the aim of owners and managers. Also managers and owners do not believe the utility of decrease on price for achieving their goals.

Table 4. Competitive Behavior

	Mean	**Skewness**	**Kurtosis**
I compete with my rivals as much as I can in terms of laws.	4.20	-0.672	0.312
I can decrease prices to compete	3.61	-0.335	-0.061
I can promote if it is necessary	3.90	-0.957	0.820
I usually differentiate my products or services and try to sell more qualified products.	4.12	-0.768	0.588
I try to sell and produce new products	3.71	-0.573	0.165
I continuously follow consumer needs and wants	4.27	-0.366	-0.734
I try to grow my firm	3.63	-0.398	0.005
I try new ways to reach customers, new marketing and distribution methods	3.76	-0.727	0.785

Firm's performance is also tested. Descriptive statistics, skewness and kurtosis values of competitive behavior of firms are given in Table 5. Reliability of questions is tested by Cronbach Alfa test and coefficient is found as 0.893. According to Küçük (2016:232) results between 0.80 and 1 are reliable in high level. The average of questions about competitive behavior is 3.16 and the results are evaluated as medium according to Küçük (2016). The highest scores are due to sales (3.35) and profits (3.30). This can be estimated while considering the growth rate or Turkish economy in 2017 (%11.1 in third

quarter of 2017) (http://www.tuik.gov.tr/HbGetirHTML.do?id=24569). While searching competitive behavior of firms we reached that lowest score of firms are due to firm's growth as you can see in Table 4. Also the lowest score of firm's performance is about growth of firms. By thinking these two results we can say that Inebolu firms are not aiming to grow their firms and consider the firms size as sufficient.

Table 5. Firm's Performance

	Mean	Skewness	Kurtosis
Our firm has reached profit target in 2017	3.30	-0.543	0.171
Our firm has reached sale target in 2017	3.35	-0.641	0.190
Our firm has reached growth target in 2017	2.77	0.091	-0.702
Our firm has reached general targets in 2017	3.24	-0.418	-0.267

We search relationship between variables ExoBar (Exogenous Barriers), EndoBar (Endogenous Barriers), Compbeh (Competitive Behavior) and Firmper (Firm Performance) by Correlation analysis. In Table 6 correlation matrix is given.

Table 6. Correlation Matrix

	ExoBar	EndoBar	Compbeh	Firmper
ExoBar	1	-0.577** 0.000	-0.480** 0.000	-0.586** 0.000
EndoBar	-0.577** 0.000	1	0.505** 0.000	0.532** 0.000
Compbeh.	-0.480** 0.000	0.505** 0.000	1	0.611** 0.000
Firmper.	-0.586**	0.532**	0.611**	1

	0.000	0.000	0.000	

**: Correlation is significant at the 1% Level (2-tailed).

Exobar and Endobar; Exobar and Compbeh; Exobar and Firmper are correlated negatively as it can be seen in Table 6. It means that as one of these variable increase the others decrease. These results confirm that in the absence of exogenous barriers firms act competitively in market. Thus, Compbeh and Firmper are correlated positively and this shows that the competitive behavior of firm increase the firm performance. Addition to this if there are not exogenous barriers to entry incumbent firms can want to deter potential firms. Conversely if there exist exogenous barriers to entry firms can't need to set up barriers for potential firms. This time there can be relationship between exogenous and endogenous barriers. Correlation results confirm that relationship between Exogenous barriers and Endogenous barriers.

We also set up simple linear regression models to search relationships between Exobar, Endobar, Compbeh and Firmper. The results of linear models are presented in Table 7.

Table 7. Simple Linear Regression Models

Model	R^2, (Adjusted R^2)	Durbin Watson	Anova (F), (Sig.)	β_0, (t), (sig)	B_1, (t), (sig)
Compbeh=$\beta_0+\beta_1$Exobar	0,563 (0,451)	2,016	(40,443) (0,000)	5,838 (18,537) (0,000)	-0,604 (-6,360) (0,000)
Firmper= $\beta_0+\beta_1$Compbeh	0,658 (0,651)	1,507	(90,521) (0,000)	-0,710 (-1,810) (0,044)	0,994 (9,514) (0,000)
Endobar= $\beta_0+\beta_1$Exobar	0,603 (0,595)	2,341	(71,427) (0,000)	5,712 (18,402)	-0,791 (-8,451)

				(0,000)	(0,000)

First we tested whether Exogenous barriers to entry affect competitive behavior of firms. Our first model (Compbeh=β_0+β_1Exobar) is significant at 1% level and model explains variance at 56% level. If we analyze model, it can be seen that exogenous barriers to entry discourage firms from behaving competitively. Every 1 unit increase in exogenous barriers causes 0,604 decreases in competitive behaviour. So it is accepted that exogenous barriers affect competitive behavior.

Secondly we tested whether competitive behavior affects firm performances. The second model (Firmper= β_0+β_1Compbeh) is significant at 1% level and model explains variance at 66% level. After we analyze model it is seen that competitive behavior or firm affect firm performances positively. Every 1 unit increase in competitive behavior of firm causes 0,994 increases in competitive behavior.

Thirdly we tested the relationship between exogenous barriers to entry and endogenous barriers. The third model (Endobar= β_0+β_1Exobar) is significant at 1% level and model explains variance at 60% level. Every 1 unit increase in exogenous barriers causes 0,791 decreases in competitive behaviour. We accepted that exogenous barriers to entry affect behaviour and intentions of incumbent firms.

CONCLUSİON

Competition is a dynamic process and it is not only between active firms but also between potential and active firms. Of course incumbent firms do not want new rivals in their market. In micro economic theory it is accepted that as market concentration decrease firm's profits increase. In perfect competition markets, firms only have normal profits. New researches accepted the importance of entry barriers in maximizing welfare and effectivity of firms.

This research is realized to reveal effects of exogenous barriers on market and firms. To this aim we conducted a questionnaire on managers or owners of Inebolu firms. It is revealed that generally don't care about growth of their firms. Future researches should focus on the reasons why they don't care about growing. Also we reached remarkable results. First, presence of exogenous barriers to entry has an impact on behavior of firms. If there is exogenous barriers to entry, incumbent firms do not need to deter potential firms. Because deterrence has costs and entry of potential firms is not easy

even they don't set up barriers to entry. However, if there are not exogenous barriers to entry incumbent firms feel obliged to set up endogenous barriers to entry. Because they know that each rival firm can decrease their profits. Shortly absence of exogenous barriers to entry makes firms more competitive. Secondly, competitive behavior of firms helps them in reaching their goals such as profitability, sales. When we integrate these two results, it can be said that exogenous barriers to entry discourages firms from behaving competitive and affects effectivity and productivity of firms negatively. So policy makers should try to remove exogenous barriers to entry to reach economic goals. Further studies can search the results of exogenous barriers to entry and its effects on market equilibrium. Our research is realized in a small town in Black Sea Region of Turkey which includes a few firms in it. So it would be better to realize similar research in bigger cities which includes higher number of firms.

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