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Research Article

EVALUATING THE RELATIONSHIP BETWEEN MARKET STRUCTURE AND TAXES PERFORMANCE OF ACCEPTED COMPANIES IN TEHRAN STOCK EXCHANGE

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ABSTRACT
The purpose of this study, is examining the relationship between market concentration and taxes performance of accepted companies in Tehran Stock Exchange. For this purpose, the combined data of companies accepted in Tehran Stock Exchange, was collected according to the International Standard Classification of Activities (ISIC) and panel data with fixed effects model, the relationship between market concentration and tax performance in various industrial activities during the years 2002-2007 have been evaluated. Generally, the results suggest that the level of concentration is inversely related to taxes the performance of accepted companies in Tehran Stock Exchange. Also state ownership has a significant positive correlation with taxes performance of industrial activities. Estimation of parameters related to the taxes performance of industrial activity field shows a lack of influence of balance of the capital on the tax performance. The results of the sale equation estimation also show that there is a significant positive correlation between the sales and taxes performance.

Keywords: *Market Structure, Market Elements, Behavior, Taxes Performance, Concentration, Panel Data*

INTRODUCTION
By the 1930s the firm was the main subject of study and research of economists that, studied about the market and its form, but after this decade beside the firm and its share of the market, industry and its different conditions (e.g. entrance conditions) and also market concentration, were investigated with more emphasis. One of the most controversial issues in the industrial economy is the topic of market structure. The structure of the every market is measured according to the degree of concentration, barriers of entry and exit to the market and economies of scale of measurement. In order to improve the economic structure and stability, every country requires steady and persistent income that can increase the success of government in the long-term planning and policy. The tax collector in various industries plays an important role in both financing of government and in Society of Economic Affairs. The more precise predictions of taxing are made, based on statistics and modification of taxing policy, the more help can be offered to policy makers more in order to achieve the goals of economic growth and development. In our country stock exchange is one of the leading industries in the field of privatization, and for this reason, we feel an urgent need to control and regulate this industry to prevent a monopoly in this section.
Considering the importance of privatization and efforts made in this field, if this issue is not dealt using legal provisions and economic measures, public monopoly becomes private and increase the country's problems.
One of the views and suggested strategies to create an atmosphere of competition and monopolistic behavior modification is taking advantage of the tax. In this view taxes are used as a means to regulate the entry of firms into the industry that can be guide for economic policymakers in both controlling the market power and capturing tax revenue. Considering the importance of research in developing countries at this field, this study examines the relationship between market concentration and taxes performance of the accepted companies in Tehran Exchange Stock.
In this context, this paper is organized in five sections. The second part, deals with the literature, including theoretical basics and empirical record of the research. In the third chapter, the methodology of the study is presented in which the model used in this research and analysis methods are investigated. The

fourth part discusses the results of this study and the final sections of the paper is devoted to conclusions and offering suggestions.

Literature

Theoretical Principles of Study

The introduction of industrialization theory as a means to achieve economic development and at the same time the different attitudes toward industrialization process, dedicate Particular importance to study of "taxes", particularly in the industrial sector, in which there is a controversy Among the various schools about the relationship between market concentration and tax practice. Schumpeter believes, heavy taxes leads to intense focus of the industries and creation of deviation in their evolution process And as a result, in the long run social welfare decreases. Because the higher the startup costs are, the tougher the entry to industry gets, and thus focus and industry-exclusive power gets more. In case of heavy taxation the possibility of entering to the industry will be harder and market focus increases (Colombo and Walsh, 2000).

In contrast, Galbraith believed that highly concentrated industries should pay heavy taxes so that their exclusive power would reduce, however, according to the results of his policies in his article by the name of useful power and economics. He stated that such an approach not only failed to reduce the monopoly power. But also contributed to interests of the holders of power And made concentrated industries to remain heavily (Galbraith, 1973).

Structural indicators are used to identify the structure of the market. One of the most important indicators is the concentration. This indicator identifies the rate of firms and industries' share and domination in the market. To form Herfindahl- Hirshman indicator, the information related to all firms in the industry are considered. This indicator is calculated in the form of sum of squares of the market shares of all firms in the industry. In calculating this indicator a weight equal to firm's market share was given to each firm's market share.

$$H = \sum_{i=1}^{N} S_i^2 \qquad (1)$$

In other words the analysis of this indicator in addition to defining the competition or monopoly in the market provides a good ground to better understand the connection of structural and functional elements of a market. These comments are mainly influenced by the teachings and beliefs of school of structure - conduct - performance (SCP). Mason (1939) was the first to examine the relationship between the market elements in the form of a descriptive model. Among the three elements of market He stressed the importance of market structure.

Ben (1959) by introducing entry barriers and its impact on economic behavior and performance based on the firm's neoclassical model endorsed the importance of market structure. Fans of structure believe that the direction of causality, is from structure to the behavior and then to the function. In fact, the behavior of firms and their decision is based on cooperation and alliances or competing with each other and affected by structure of the market. The structure and behavior of firms in the market, generally forms the performance of firms in the market and the ultimate performance of market and industry.

These Economists believe that a high concentration in a market and limiting a significant portion of the market to a number of suppliers, Provides conditions for cooperation and Active firms in the industry and leading firms in particular are prone to cooperation and integration. In contrast to the structuralism school, there is the Chicago -U.S. L.A school that have theories opposite to structuralism school, which was formed in the "1950s" and became famous in "1970s" by people like Stigler, Dumstez, McGee and Posner. The fans of this considered the direction of causality between the elements of the market from the performance to structure and behavior. In terms of economics Chicago school is a reflecting monopoly of superior performance and leading firms make rival firms exit the market and increase market entry barriers with lower costs and falling prices. On the other hand school of behaviorism considers the behavioral pattern of firms as an effective factor in shaping the market performance. Accordingly, structure of the market is not very effective on market performance, but the behavior of the firms is the essential and decisive factor in performance. In this school mere existence of centralized structure doesn't

lead to a monopoly, but its incidence is dependent on firms' behavior toward each other. Meaning that coalition of businesses leads to a monopoly and lack of cooperation between-firms create competitive performance. Firms' decisions to improve the quality of the product, the firm's decisions to promote research and development of sale policies, as well as advertising are parts of various aspects of the behavior of firms in the market (Khodadad, 2010).

Study Background

In recent years, industrial economic theories have provided various applications in industry, market and economic sectors. In this case, Fan and Kranberg (2002), in their study examined the effects of the abolition of taxes on printing on the production of newspapers in the Netherlands, using semi-empirical method to infer unobservable interest of newspapers, based on data in 1869. The results of this study indicate that the abolition of taxes on printing, the variable costs of firms reduced and new newspapers entered the market, and these taxes in such a significant way reduced the needed number to support a particular market structure. Colombo *et al.,* (2006), in their study examined the relationship between the concentration indicator and optimal corporate tax rate in the industry, Using econometricians panel data, considering three cases: tax rate as a decision variable to the entry, positive relationship between concentration and startup expenses, negative correlation between tax rates and the cost of setting up, in the industries of France, Italy and England, during three intervals from 1998 to 1996. The results of the Estimation of model indicate that the higher tax's effective rate on corporate, the lower the number of companies within the industry, therefore industries become highly concentrated and Deviation occurs in the dynamic evolution of industries and social welfare in the long-term declines. Jahromi *et al.,* (2009), in another study, examined the association between the degree of concentration and effective corporate tax rate during 1995-2005, with the view of Schumpeter, Satin and Galbraith in rubber and plastics industry. Generally, the results suggest that Schumpeter's vision-based solution for the industries with high startup expenses as a symbol of industries with exclusive power is a good practice. On the other hand, with the increase in capital stock, entry of firms to the industry becomes more difficult and As a result, the degree of market concentration and monopoly power of industries increases. Yousefi *et al.,* (2012), in their study examined the effects of market structure on innovation and research and development in Iranian manufacturing industries in the years 1996-2007, Using simultaneous equations model and Error Component two- Stage Least Squares. The results of this study indicate, concentration level has a significant impact on level of innovation and research and development in manufacturing industries of Iran and there us a U inverse relationship between the level of concentration and innovation and research and development, also with the increase in the profitability, the research and development of this industries has been reduced. Due to the positive effects of the efficiency level. It appears that the profitability of the industries is simply due to their better performance and Industry performance structure Along with greater productive capacity and capital employed to per unit of sales. Simultaneously influences the increase in the profitability and performance of industries.

MATERIALS AND METHODS

The goal of this study is to investigate the relationship between market concentration and taxes performance of the listed companies in Tehran Exchange Stock, using econometric panel data model and methods and Housman test with fixed effects model, examines market concentration and tax performance of field of industrial activities. Concentration indicator (C), ownership index (N), Sale (S), and capital stock (K) variables as explanatory and independent variables and Tax Performance Index (T) as the dependent variable, defined the general model as follows.

$$TAX_{it} = \beta_0 + \beta_1 CON_{it} + \beta_2 SALE_{it} + \beta_3 NIO_{it} + \beta_4 K_{it} + \varepsilon_{it} \quad (2)$$

In the above equation, $TAX_{it}$is the Level of taxes paid by the industry i in year t, $\beta_o$is the Constant parameter that reflects the effects of other absent variables in the model, β_1 is the Estimation of market concentration to paid taxes of industry, $CON_{it}$is Level of concentration of industry i in year t based on

Herfindahl- Hirshman,$SALE_{it}$ is the Level of sales or revenue from sales of industry i in year t, NIO_{it} is The share of firms with public ownership of industry i,$K_{it}$is the level of capital stock As an indicator of setup expenditure in industry i in year t ,$\varepsilon_{it}$is The error sentence of regression model.

Research population, includes all active industries classified according to the four-digit ISIC code in Tehran Stock Exchange is the years 2002-2007. For a closer look after removing the investment industries, financial intermediaries and banks have been removed due to their specific nature of activities. In other words, only 40 Types of activities that have been active since 2002, and the type of their activity was producing, and their data was available, were selected as samples.

RESULTS AND DISCUSSION

Results

To choose which one of the Pool or panel models are more appropriate for hypothesis testing and estimation, Lymer F test is used. The hypothesis of this test can be found as following equation.

$$H_0 : 1^{=}2^{=} \ldots^{=} n^{=} \quad (3)$$

$$H_1 : 1^{\neq}2^{\neq} \ldots^{\neq} n^{\neq}$$

$$F_{Pooledeffect} = \frac{(R^2_{Panel} - R^2_{Pooled}).n - 1}{(1 - R^2_{Panel}).(nT - n - K)}$$

Table 1: Lymer test for combined or consolidated data pattern recognition

Result	Significant level	Calculated value of the F	Lymer F test
Rejection of H_0	0.002	1.92	Model

Source: research findings

According to Table (1), P- value is related to less than five percent F.It means to reject the null hypothesis based on compilation data and the other hypothesis based on combined data will be accepted.

Given the fact that In Lymer test, Using OLS Data Integration has been rejected, Housman test method is used to determine the used methods among the fixed effects and random effects methods. The test result is as follows:

Table 2: Results of the Housman test for the research model

Result	Significant level	Calculated value of the F	Housman test
Rejection of H_0	0.0005	19.92	Model

Source: research findings

Table 3: The estimation results of the model

Variable	Coefficient	Statistic	Prob
C	16.19759	5.91	0.000
SALE	0.028	2.15	0.0032
CON	-22263.74	-3.25	0.001
NIO	816.1970	2.87	0.004
K	-3.12e-10	-1.20	0.023
$R^2$0.77			
Prob(F- Statistic)0.000			
DW1.99			

Source: research findings

According to Housman test results In Table (2), and Housman test statistic, the null hypothesis is rejected in five percent level of error, which imply endorsement of fixed effects versus random effects, because

the null hypothesis implies the random effects which are rejected. Therefore the appropriate approach for estimating is a model with fixed effects.

After Lymer F and Housman test and choosing fixed effects model to estimate the model. The results of the estimation are presented in Table (3).

As indicated in Table (3), the results of significance of the regression equation test, Indicates that due to the size and significance level of F statistics obtained. The null hypothesis which means the whole model is insignificant (all coefficients are zero) is rejected, and it can be concluded that the entire model is significant.

Watson camera statistic is1.99 that reveals no correlation between sentences of disturbance. Coefficient of determination is a measure that indicates the percentage of changes in the fit by the regression equation. In this regression model, we can say that 77 percent of variations in dependent variable is explained by the independent variables.

As indicated in the Table (3), the estimated coefficient for the concentration was -22263.74.Since the t-statistic equals -3.25and the significant level is equal to 0.001, we can conclude that there is a negative and significant relationship between concentration and tax performance in 5% error level.

According to the results of the table (3), the estimated coefficient for the type of ownership is 816.1970. Since t-statistic is 2.87and significant level is 0.004, we can conclude that there is a positive and significant relationship between ownership structure and function of the tax is at 5% level.

Due to the positive coefficient of the sales variable that equal 0.028 and since t-statistic equals 0.0032, it can be implied that there is a positive and significant relationship between sales and the function of tax at the 5% level.

Also according to the t-statistic for the capital stock (k) equals1.20, and the significance level is equal to 0.023, we can conclude that there is a positive and significant relationship between capital stock and tax performance in 5% level.

Conclusion

In short the results of the relationship between market structure and taxes performance of listed companies in Tehran Stock Exchange suggest that there is a Negative and significant relationship between market concentration and taxes performance; so the further from the monopoly and closer to competition the markets gets, the taxes performance of industrial activities increases. In addition, the state ownership has a positive and significant relationship with taxes performance of industrial activities. On the other hand, the estimation of related parameters to tax performance of industrial activities implies the lack of capital stock influence on taxes performance. The results of sale equation estimation indicate a positive and significant relationship between sales and taxes performance. According to research's findings, some suggestions are provided along with competitiveness improvement in active firms in Tehran stock exchange:

1) Due to the negative effects of monopoly on taxes performance, some efforts should be taken in order to facilitate the competitiveness level in industries of interest;

2) Implementing appropriate policies in receiving tax from private section, given the fact that state shares in firms has a positive effect on taxes performance, implies that private firms are not very willing to pay taxes, so efforts should take place to receive the tax from private sections.

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