

# The Examination of the Effect of Ownership Structure on Firm Performance in Listed Firms of Tehran Stock Exchange Based on the Type of the Industry

Alireza Fazlzadeh

Assistant Professor of Economy & Management Faculty

Tabriz University, Iran

Tel: 98-914-404-2925 E-mail: fazlzadeh\_acc@yahoo.com

Ali Tahbaz Hendi (Corresponding author)

Postgraduate Student of Business Management, Financial Management

Alghadir Tabriz University, Iran

Tel: 98-411-381-4817 E-mail: a\_tahbaz\_hendi@yahoo.com

Kazem Mahboubi

Assistant Professor of Accounting Faculty

Urmia University, Iran

Tel: 98-912-134-2505

## Abstract

This study is aimed to determine the role of ownership structure on firm performance. Using panel data regression analysis method, the role of variables of ownership structure which includes: ownership concentration, institutional ownership and institutional ownership concentration have been examined for 137 listed firms of Tehran stock exchange within the period 2001 to 2006. It is concluded that ownership concentration doesn't have any significant effect on firm performance but the effect of two other variables are significant: institutional ownership has positive significant effect on firm performance but the effect of concentrated institutional ownership is negative. In the next part of this research the effect of ownership structure on firm performance based on type of the industry has been studied and it is concluded that the industry factor moderates this effectiveness relationship. The findings of this research shed light on the role of ownership structure plays in corporate performance and thus offer insights to policy makers interested in improving corporate governance system.

**Keywords:** Ownership structure, Ownership concentration, Institutional ownership, Corporate governance, Firm performance

## 1. Introduction

The concept of Ownership structure is an important subject within the broad concept of corporate governance. In fact, Ownership structure is a mechanism of corporate governance. Corporate governance system is considered as one of the essential factors of growth and development. According to Hasan and Butt (2009), corporate governance is a philosophy and mechanism that entails processes and structure which facilitate the creation of shareholder value through management of the corporate affairs in such a way that ensures the protection of individual and collective interest of all the stakeholders. Sound corporate governance principles are the foundation upon which the trust of investors and lenders is built. Corporate governance is generally associated with the existence of agency problem and its root can be traced back to separation of ownership and control of the firm. Agency problems arise as a result of the relationship between shareholders and managers and are based on conflicts of interests within the firm. Similarly conflict of interests between controlling shareholders and minority shareholders is also at the heart of the corporate governance literature. There are great varieties of different corporate governance system in the world wide. Researches show that there are plenty of factors such

as regulations, ownership structure, cultural and economical environment which are influential to establish specific kind of corporate governance system in disparate countries. It is proved that the enhancement of corporate governance system leads to development of capital markets.

What ultimately matters for companies, policy makers and economists alike is whether ownership structure affects corporate performance, and if so, how. The fundamental insight into the issues dates back to Berle and Means (1932), who argue that the separation of ownership and control of modern companies naturally reduces management incentives to maximize corporate efficiency (Hu & Izumida, 2008).

Although the ownership-performance relation has been a hot topic for decades, scholars have not reached an agreement with it. Generally speaking, theoretical and empirical researches supplement each other. Since the ownership-performance relation is subject to controversy in theory (as will be studied in theoretical background part), empirical researches become more important to examine which of the logically possible explanations is the most probable.

The study of the outcomes of the privatization, demonstrate that dispersed ownership structure leads in inefficiency of privatized companies in some Asian countries. So it can be concluded that, based on the environmental conditions, different types of ownership structure may have disparate effect on firm performance.

Since the privatization policies are followed in Iran, the stock exchange market of Tehran provides us with good opportunity to examine if the mentioned policies have been successful or not. Accompanying with these policies, many public enterprises have been privatized to a private enterprise which is subject to the influence of the frame and the management and administration system of the public enterprises. Following these objectives, the government of Iran has issued *Equity Stock*. Through this policy the ownership of public enterprises will be transferred to people. In other word the ownership of firms will be changed from concentrated ownership to dispersed ownership. As it will be discussed in theoretical background part of this research, considering negative impacts of dispersed ownership, this policy may have undesired effects on firm performance. Beside the main object of research, the results of this paper can reveal the accuracy or inaccuracy of this policy.

In this research we will explore the role of ownership structure as an important mechanism of corporate governance on listed firms of Tehran stock exchange performance.

The remainder of this paper is organized as follows.

- Section 2 provides literature review which includes theoretical background and previous empirical findings about the subject.
- Section 3 explains the hypotheses.
- Section 4 describes the data, variables and methodology employed during empirical work.
- Section 5 presents and discusses the results of the study
- Section 6 briefly concludes the whole discussion.

## 2. Literature Review

### 2.1 Theoretical background

Since the nature of relationship between ownership structure and firm performance is laid on the issue of corporate governance, the concept of corporate governance is discussed briefly in this part.

The review of literature of issue shows that there is no agreed definition for corporate governance. Generally the existing definitions of corporate governance are laid on a spectrum which limited and extensive standpoints could be derived from it (Hassas yeganeh, 2005).

In limited views, corporate governance is considered as relationship between firms and its shareholders. This is an old pattern which is known as *Agency theory* (Ibid).

Extensive views describe corporate governance as a vast network of relations not only between firm and its owners but also the large number of stakeholders like employees, customers, sellers and so on. This standpoint is known as *Stakeholders theory* (Ibid).

The OECD provides the most authoritative functional definition of corporate governance:

"Procedures and processes according to which an organization is directed and controlled".

Since the pioneer studies of Berle and Means (1932), the "black box" theory of the firm which considers firm as a box that transforms inputs to out puts, has come under scrutiny by a growing literature on corporate governance. Some recent trends in microeconomic theory such as new institutional economics, namely

transaction costs economics, property rights theory, agency theory and so on, have been concerned with the organizational and financial structure of the firm. Corporate governance has been a much debate topic of academic research since then (lee, 2008).

The theoretical literature on corporate governance process six main different mechanisms to control the agency costs:

1. Ownership structure: Jensen and Meckling (1976) and Shleifer and Vishny (1986).
2. Capital structure: Jensen (1986).
3. Board structure: Jensen (1986).
4. Managerial remuneration: Jensen and Mourphy (1990).
5. Product market competition: Hart (1983).
6. Takeover market: Fama and Jensen (1983), Jensen and Warner (1988).

While theoretical analyses of corporate governance deliver counteracting mechanisms of control, the empirical literature shed light on the role of these counteracting mechanisms, suggesting firm value is an outcome of these mechanisms (Kumar, 2003).

In the literature, along with agency cost approach, some other mechanisms are also proposed to explain the relationship between ownership structure and firm performance. In general, agency theory is used to analyze the relationship between principals and agents but there is an increasing need to understand the conflict between the different classes of principals as some owners might have different incentives/strategies to monitor (Ibid).

As it is derivable from the literature, there are two main dimensions which are related to the issue of ownership structure: ownership concentration (i.e. the distribution of shares owned by majority shareholders) and identity of owners.

Since the contrasts between managers and owners cause agency costs, the agency problem has been the basis of debates in ownership structure literature.

Dispersed ownership causes an agency problem in corporations because shareholders' incentives and abilities to monitor management will be weakened. Legally, shareholders own a corporation but they do not feel any sense of ownership or control over the firm because their stake is small. Moreover, shareholders usually invest in many firms in order to diversify risk. They invest for a future dividend stream rather than investment in the future of the firm. In addition, dispersed shareholders do not have enough knowledge and information to make qualified decisions (lee, 2008).

On the other hand, concentrated ownership is widely acknowledged to provide incentives for large shareholders to monitor management. As the ownership stake of large block holders increases, the block holders might have the greater incentives to increase firm performance and to monitor management than do dispersed shareholders (Ibid).

There are obvious benefits form concentrated ownership but also some counter arguments. First large shareholders are typically risk-averse. Widely dispersed ownership offers enhanced liquidity of stock and better risk diversification for investors. Second, enhanced monitoring by concentrated ownership discourage inside shareholders (i.e. managers or workers) from making costly firm-specific investments. Third, concentrated ownership could lead to another sort of agency problem: conflict between large shareholders and small shareholders. Large share holders have incentives to use their controlling position to extract private benefits at the expenses of minority shareholders (Ibid).

As discussed, beside ownership concentration, ownership identity is also related to the context of the agency problem. Monitoring is more effective when controlling shareholders have sufficient knowledge and experience of financial and business matters. Generally, institutional investors are known to have the resource and ability to properly monitor management decisions. In theory institutional investors can monitor management more efficiently than dispersed shareholders because of their expertise (Ibid).

## 2.2 Previous empirical studies

Akimova and Schwodiauer (2004), examined the effect of ownership structure on corporate governance and performance of privatized enterprises of Ukraine. The data were taken from a survey conducted in 2001 on 202 medium and large firms for the period 1998-2000. In this research ownership structure was measured by the percentage of shares held by each type of owner and performance was measured by sales per employee. Regression analysis was used to test the hypothesis that concentrated outside ownership influences performance

positively. The result showed significant ownership effect on performance. Insider ownership was found to have a significant non-linear effect on performance, positive within a lower range but negative from a threshold close to majority ownership onwards. In general, Ukrainian outside owners didn't have a significant effect on performance.

Jiang (2004), explored the relationship between ownership structure and firm performance in listed companies of Heilongjiang province. Ownership structure has two implications in this study: structure of ownership and ownership concentration. Empirical evidence showed that the performance of legal or person enterprises are not good enough. So it is suggested that ownership diversification of state share should be taken in long run but not immediately.

Kapopoulos and Lazaretou (2006), tried to investigate whether there is strong evidence to support the notion that variations across firms in observed ownership structure result in systematic variations in observed firm performance. They tested this hypothesis by assessing the impact of the structure of ownership on corporate performance measured by profitability, using data for 175 Greek firms. Empirical findings suggested that a more concentrated ownership structure positively relates to higher firm profitability.

Sanchez and Garcia (2007), using meta-analysis technique based on 33 studies, found no substantive relationship between ownership structure and firm performance. The findings showed that governance system, measurement of performance, and control for endogeneity moderate the effect of ownership on firm performance.

Kaserer and Moldenhauer (2008), examined the effect of insider ownership on firm performance in their research. Using pooled data set of 648 German firms observation for the years 2003 and 1998, they found evidence for positive and significant relationship between corporate performance - as measured by stock price performance, market to book ratio and return on assets - and insider ownership. In addition, their research showed that outside block ownership as well as more concentrated insider ownership has a positive impact on corporate performance. Overall, the results indicated that ownership structure might be an important variable explaining the long term value creation in the corporate sector.

Using panel data for South Korea in 2000 – 2006, Lee (2008), found that firm financial performance measured by the accounting rate of return on assets generally improves as ownership concentration increases, but the effect of foreign ownership and institutional ownership are insignificant. He also found a hump-shaped relationship between ownership concentration and firm performance, in which firm performance peaks at intermediate levels of ownership concentration.

Jelinek and Stuerke (2009), examined the nonlinear relation between agency costs and managerial equity ownership. They used return on assets as a measure of profitability and two financial statement-based agency cost measures, i.e. asset utilization and an expense ratio, which proxy for management's efficiency in use of assets and perquisite consumption, respectively. They found that managerial equity ownership is nonlinearly and positively associated with return on asset and asset utilization, and nonlinearly and negatively associated with the expense ratio.

Hasan and Butt (2009), discussed the impact of ownership structure and corporate governance on capital structure of Pakistani listed companies. The study covers the period 2002 to 2005 for 58 non-financial listed companies from Karachi stock exchange. Results revealed that board size and managerial shareholding is significantly negatively correlated with debt to equity ratio. Also the results showed that corporate financing behavior is not found significantly influenced by CEO/chair duality and the presence of non-executive directors on the board. Finally the findings suggested that corporate governance variables like size and ownership structure and managerial shareholding play an important role in determination of financial mix of the firms.

Daraghma and Alsinawi (2010), examined the effect of board of directors, management ownership and capital structure on the financial performance of the corporations listed in Palestine securities exchange. 28 Palestinian corporations were selected within four years 2005-2008. The results of their study indicated that the chief executive officer CEO-chairman separation does not have any significant impact while the CEO-chairman duality has a significant impact on the financial performance. The results also showed that management ownership has positive effect on the financial performance. It was also concluded that the debt financing has no influence on the profitability of Palestinian corporations.

Uadiale (2010), explored the impact of board structure on corporate financial performance in Nigeria. This study employs four board characteristics include board composition, board size, board ownership and CEO duality. Findings from the study showed that there is a strong positive association between board size and corporate

financial performance. Also it was concluded that there is a positive association between outside directors sitting on the board and corporate financial performance. However a negative association was observed between directors' stockholding and firm financial performance. In addition, the study revealed a negative association between ROE and CEO duality.

Lin and Wu (2010), investigated the relevance of family ownership in risk taking. Using a sample selected from listed companies among the financial institutions in Taiwan during 1996-2007, they found that the family ownership has a significant negative effect on risk taking in the financial industry. Moreover this influence was non-linear by the range of family ownership. In contrast when securities and the insurance industry were the major family-controlled shareholders, the increase of its shareholding percentage was unexpected to positively affect risk taking. These results were consistent with the "convergence-of-interest hypothesis".

Ibrahim and Abdul Samad (2001), examined the relationship between corporate governance mechanisms and performance between family and non-family ownership of public-listed firms in Malaysia from 1999 to 2005. The findings demonstrated that on average, family ownership experiences a higher value than non-family ownership based on ROE. On the other hand, based on Tobin's Q and ROA, the study showed that firm value is lower in family than non-family ownership. In addition, the corporate governance mechanisms such as the board size, independent directors and duality for family and non-family ownership has a strong significant influence on firm performance.

### 3. Hypotheses

This study is aimed to determine the role of the variables of ownership structure on firm performance, similar to Lee's (2008) work; we have used two aspects of ownership structure which include ownership concentration and ownership identity.

According to agency theory, ownership structure should affect the efficiency of monitoring mechanisms. Traditionally, the theory holds that concentrated ownership should mitigate the agency problem (Lee, 2008). Based on the traditional agency theory, the study predicts that ownership concentration positively affects firm performance. The hypotheses are as follow:

H<sub>1</sub>: Concentrated ownership has significant positive effect on firm performance.

As discussed before, institutional investors also can be effective owners, because they have the resource and ability to properly monitor management's decisions. It is assumed that firm performance improves as the share of institutional ownership grows:

H<sub>2</sub>: Institutional ownership has significant positive effect on firm performance.

However, although institutional owners may improve the performance of the firm because of their expertise in investment and financial matters, it seems that when they own a large block of share of a company, or in other word when the concentration of institutional ownership in a firm is high, the managers of these firms are impressed by large institutional shareholder's power and consequently they would try to gratify their interests. This may finally have a negative impact on firm performance:

H<sub>3</sub>: Concentrated institutional ownership has significant negative impact on firm performance.

### 4. Data description and methodology

#### 4.1 Sample and Variables

The study uses ownership and financial data of the companies listed in Tehran Stock Exchange for six years (2001: 2006).

Considering the year 2001 as a groundwork year, 371 firms were identified in different industries of Tehran Stock Exchange. As a next step industries in which the number of firms were more than 5% of total firms in Tehran Stock Exchange, were chosen as statistical population. These industries include:

1. Chemical and Pharmaceutical, 61 firms, 16% of total firms.
2. Machinery and Equipment, 50 firms, 13% of total firms.
3. Motor vehicles and Auto parts, 48 firms, 13% of total firms.
4. Non-metallic mineral products, 30 firms, 8% of total firms.
5. Food products and Beverages, 26 firms, 7% of total firms.
6. Textile, 25 firms, 7% of total firms.



In order to analyze data, balanced panel data technique has been used in this research. Considering this, in statistical population, firms which meet mentioned requirement in below, were chosen as statistical sample:

1. They had been actively present during the years 2001 to 2006 in Tehran Stock Exchange.
2. Their financial year ended in 20<sup>th</sup> of March (which is the end of the year according to solar calendar).
3. They had no change in their main activities and their financial year.
4. Investment and holding firms were eliminated from the statistical sample.

As a result 137 firms were chosen finally as statistical sample of this research.

Three ownership variables have been used in this study: ownership concentration, institutional ownership, and institutional ownership concentration.

Ownership concentration (CR) presents the percentage of shares held by a controlling shareholder. The controlling shareholder refers to a group of shareholders who control the company, such as shareholders owning substantial equity stake in a company, their family members, and affiliated entities (Lee, 2008). In order to calculate ownership concentration, Herfindahl index has been used in this research. Herfindahl index is defined as the sum of the squares of the share of each owner. As such, it can range from 0 to 1. The greater number shows the greater degree of ownership concentration.

Institutional ownership (INS) is measured by the percentage of shares held by institutional investors, such as banks, insurance companies, pension funds, mutual funds and so on.

Institutional ownership concentration (INSH) introduces the degree of the concentration of shares which belongs to institutional owners in a firm. In order to calculate the institutional ownership concentration, Herfindahl index has been used again.

Two variables have been selected as a proxy for firm performance: net income to total assets ratio (NIA) and ordinary income to total assets ratio (OIA). The two measures of return on assets (ROA) indicate how profitable a firm is relative to its total assets.

Beside ownership structure, other factors can explain the variation in firm performance. Therefore several explanatory variables have been used in regression model of research which includes: firm size, leverage, liquidity, risk, and business cycle.

Natural logarithm of total asset (LNA) is included to control for the firm size. As for leverage, equity to asset ratio (EAR) is employed to control for capital structure effect. As a proxy for liquidity of the firm, current ratio (CUR) is employed which shows the firm's financial capacity to meet its short-term financial distress. For firm risk, the beta (BET) coefficient of capital asset pricing model (CAPM) is used for capturing systematic risk of a firm's equity. Each firm's inventory to total assets (IVA) ratio is introduced to control for the effect of business cycle.

Descriptive statistics for variables of total statistical sample and each of industries separately are presented in tables 1 to 7 in appendix part.

In table 8, the numeral amounts of main variables of research are presented.

Table 9 shows the ranking of the industries based on the average of the main variables of research.

#### 4.2 Empirical Analysis

Data analyzing has been held in two stages in this research. Using panel data technique, first we analyzed data of total 137 firms. In the next stage we analyzed these data separately for each of 6 industries. "Eviews 6" software has been used in order for data analyzing.

Multivariable regression analysis on panel data which are employed to test the hypothesis for total 137 firms are as follow:

$$(1) NIA = \beta_0 + \beta_1 CR + \beta_2 INS + \beta_3 INSH + \beta_4 LNA + \beta_5 EAR + \beta_6 CUR + \beta_7 BET + \beta_8 IVA + \varepsilon$$

$$(2) OIA = \alpha_0 + \alpha_1 CR + \alpha_2 INS + \alpha_3 INSH + \alpha_4 LNA + \alpha_5 EAR + \alpha_6 CUR + \alpha_7 BET + \alpha_8 IVA + u$$

Two other regression equations which are employed to test the hypothesis based on the type of the industry, are as follow:

$$(3) NIA = \beta_0 + \beta_1 CR + \beta_2 INS + \beta_3 INSH + \varepsilon$$

$$(4) OIA = \alpha_0 + \alpha_1 CR + \alpha_2 INS + \alpha_3 INSH + u$$

#### 4.2.1 Estimating model (1)

Using the accurate method of estimating is the first step in analyzing panel data. Table 10 shows the result of "F" statistic test for model (1). According to this test, fixed effect method is used in order to analyze data. Table 11 shows the result of the analyses for this model. As it is seen in this table, all of the coefficients except for ownership concentration are significant at 5% level of significance.  $R^2$  coefficient is 75% which shows the proper fitting of model. The amount of Durbin-Watson-d-test is near to 2 which indicates the nonexistence of autocorrelation in residuals (error terms). Also Prob (F-statistic) shows the signification of regression model at 1% level of significance.

Results show that ownership concentration variable (CR) has positive but not significant effect on NIA within the period of observation. Institutional ownership (INS) has positive significant effect on firm performance and the effect of institutional ownership concentration (INSH) is significantly negative. The effect of other variables is statistically significant.

#### 4.2.2 Estimating model (2)

Similar to estimating model (1), for the purpose of choosing proper method of estimating, "F" statistic test is held for model (2). Table 12 presents the result of "F" test for this model. According to this table fixed effect method at 10% level of significance is accurate method for analyzing data. Table 13 shows the result of estimation for model (2). Since the amount of Durbin-Watson-d-test statistic was low and the existence of correlation for residuals was possible, AR (1) variable is added in estimation progress.

Table 13 presents the coefficients of variables for model (2). The results that could be obtained from this table are similar to previous model. As it is seen the sign, variable's coefficients signification and even quantity of coefficients are very similar to model (1).  $R^2$  and Prob (F-statistic) test show the accurate fitting of model. The coefficient of AR (1) variable is statistically significant which has been able to resolve auto correlation problem in the model (Durbin-Watson statistic is near to 2 which indicates the nonexistence of auto correlation in error terms).

#### 4.2.3 Estimating models (3) & (4)

The same approach is used for analyzing data considering industry separation. As before, for choosing proper method of estimation, "F" statistic test is held initially. The results of this test show that fixed effect method should be used for estimating model in "Non-metallic mineral products" industry. For the rest of 5 industries, considering "F" statistic test, pooled data is suitable method of estimating. Table 14 presents the coefficients of independent variables of (3) & (4) regression models.

### 5. Results

Test of hypothesis have been held in 1%, 5% or 10% level of significance. As discussed before, the hypotheses of this research are:

1. Concentrated ownership has significant positive effect on firm performance.
2. Institutional ownership has significant positive effect on firm performance.
3. Concentrated institutional ownership has significant negative impact on firm performance.

In table 15, the results related to test of hypotheses have been summarized. In this table each hypothesis is identified by its number.

Also findings related to explanatory variables of research, variables of ownership structure and their effects on firm performance have been summarized in table 16 and 17 respectively.

### 6. Conclusion

In this part we discuss the findings of the research through the main question of the research:

"Does ownership structure have effect on firm performance?"

In total analyzing of 137 firms data, it is concluded that ownership concentration doesn't have any significant effect on firm performance.

As explained before, there are both advantages and disadvantages on ownership concentration. It seems that the integration of both positive and negative effects of ownership concentration is the reason for the obtained result.

The examination of the effect of institutional ownership on firm performance showed that institutional owners have positive effect on firm performance. This result is according to our expectations. Institutional investors are effective owners, because they have the resource and ability to properly monitor management's decisions and

lead to better performance of the firm.

Results also showed that institutional ownership concentration has negative impact on firm performance. This result was also according to our expectations. As described in third hypothesis, when an institutional investor owns a large block of share of a company, the management would be impressed by its power and instead of pursuing the benefits of all shareholders, management would only try to gratify specific institutional shareholder which owns the majority of share of company and this procedure will finally leads to failure in firm performance.

In the second part of research we examined the effect of ownership structure on firm performance based on the type of the industry. As it is shown in table 17, when we analyze data for each industry separately, the results will be different.

The review of empirical studies on the span of the research's subject shows that researchers have acquired different results about the effect of ownership structure on firm performance. Therefore they have suggested that the circumstances of disparate countries and also endogeneity of ownership structure (which considers the ownership structure as a consequence of firm performance) would be some reasons for variation in acquired results. The findings of this research indicates that in addition to interpretations of researchers mentioned above, *industry factor* could be another reason which can moderate results and could be considered as a factor which describes the different results for the effect of ownership structure on firm performance. Of course it is noticeable that other variables like explanatory variables applied in this research would have significant effect on firm performance.

Findings of this research showed that variables of ownership structure can play an important role on firm performance. Perceiving the concept of ownership structure, it is essential for both government (for its privatization programs) and also firms to have enough attention to the issue of ownership structure.

As it is found in this research, institutional ownership can improve firm performance but in case of concentration of institutional ownership, its effect would be negative. So it seems that in order to improve firm performance, institutional owners shouldn't own a large block of share of company. In other word according to the findings of this research firm performance will be improved if several distinct institutional shareholders own the company because their control mechanisms would avoid collision between managers and dominant shareholders. As a result expropriation problem could be prevented.

One of the criticisms opposing *Equity Stock* is that execution of this plan causes dispersion on firms' ownership structure and considering the negative aspects of ownership dispersion, it will have a bad effect on firm performance. The findings of this research show that ownership concentration doesn't have any significant effect on firm performance. So it seems that giving effect to this plan will not necessarily lead to failure in firm performance but according to benefits of dispersed institutional ownership it would be better to transfer the ownership of public enterprises to people through these institutional owners who would be able to control management and firm's performance more efficiently.

## References

- Akimova, I., & Schwodiauer, G. (2004). Ownership Structure, Corporate Governance, and Enterprise Performance: Empirical Results for Ukraine. *International Advances in Economic Research*, Vol. 10 No. 1, 28-42.
- Daraghma, Z.M.A., & Alsinawi, A.A. (2010). Board of Directors, Management Ownership, and Capital Structure and Its Effect on Performance: The Case of Palestine Securities Exchange. *International Journal of Business and Management*, Vol.5, No.11, 118-125
- Hasan, A., & Butt, S.A. (2009). Impact of Ownership Structure and Corporate Governance on Capital Structure of Pakistani Listed Companies. *International Journal of Business and Management*, Vol.4, No.2, 50-57
- Hassas Yegane, Y. (2005). The Concepts of Corporate Governance. *Hesabdar* (In Persian), No. 167, 30-33.
- Hu, Y., & Izumida, SH. (2008). The Relationship between Ownership and Performance: A Review of Theory and Evidence. *International Business Research*, Vol.1, No.4, 72-78
- Ibrahim, H., & Abdul Samad, F. (2011). Corporate Governance Mechanisms and Performance of Public-Listed Family-Ownership in Malaysia. *International Journal of Economics and Finance*, Vol.3, No.1, 105-111
- Jelinek, K., & Stuerke, P. (2009). The Nonlinear Relation between Agency Costs and Managerial Equity Ownership: Evidence of Decreasing Benefits of Increasing Ownership. *International Journal of Managerial Finance*, Vol. 5 No. 2, 156-178.



- Jiang, P. (2004). The Relationship between Ownership Structure and Firm Performance: an Empirical Analysis over Heilongjiang Listed companies. *Nature and Science*, Vol.2, No.4, 87-91
- Kapopoulos, P., & Lazaretou, S. (2006). Corporate Ownership Structure and Firm Performance: Evidence from Greek Firms. Bank of Greece, Economic Research Department-Special Studies Division, Working Paper No.37
- Kaserer, C., & Moldenhauer, B. (2008). Insider Ownership and Corporate Performance: Evidence from Germany. *Review of Managerial Science*, Vol. 2, No. 1, 1-35.
- Kumar, J. (2003). *Does Ownership Structure Influence Firm Value? Evidence from India*. EFMA 2004 Basel Meeting Paper, [Online] Available: <http://ssrn.com/abstract=464521> (December 8, 2009)
- Lee, S. (2008). Ownership Structure and Financial Performance: Evidence from Panel Data of South Korea. University of Utah, Department of Economics, Working Paper No.17
- Lin, SH. L., & Wu, M. F. (2010). Family Ownership and Risk-Taking: Exploring nonlinear Effects in Financial Industry. *African Journal of Business Management*, Vol.4, No.17, 3738-3751
- Organization for Economic Co-operation and Development. (n.d.). *Glossary of Statistical terms*. [Online] Available: <http://stats.oecd.org/glossary/detail.asp?ID=6778> (December 8, 2009)
- Sanchez-Ballesta, J., & Garcia-Meca, E. (2007). A Meta analytic Vision of the Effect of Ownership Structure on Firm Performance. *Corporate Governance*, Vol. 15, 879-893
- Uadiale, O. M. (2010). The Impact of Board Structure on Corporate Financial Performance in Nigeria. *International Journal of Business and Management*, Vol.5, No.10, 155-161

Table 1. Descriptive Statistic for Chemical and Pharmaceutical Industry

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.3167 2002	0.3510 2005	0.3328	0.0002
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	51.88 2004	60.06 2002	56.11	8.80
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	0.1914 2004	0.2461 2002	0.2270	0.0003
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	25.68 2001	26.62 2006	26.18	0.13
Leverage	<b>EAR</b>	Equity to Asset Ratio	0.28 2004	0.38 2006	0.31	0.001
Liquidity	<b>CUR</b>	Current Ratio	1.12 2004	1.60 2006	1.23	0.034
Risk	<b>BET</b>	$\beta$ Coefficient	0.0737 2003	2.0506 2006	0.7711	0.4566
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.22 2006	0.29 2001	0.24	0.0006
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	0.16 2005	0.21 2001	0.18	0.004
	<b>OIA</b>	Ordinary Income to Asset Ratio	0.18 2004	0.26 2001	0.22	0.0007

Table 2. Descriptive Statistic for Non-metallic mineral products Industry

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.2843 2003	0.3466 2001	0.3151	0.0004
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	51.98 2003	55.81 2001	54.63	2.09
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	.01657 2003	0.2235 2001	0.2023	0.0004
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	25.72 2001	26.90 2006	26.35	0.214
Leverage	<b>EAR</b>	Equity to Asset Ratio	0.30 2004,2005	0.39 2006	0.34	0.001
Liquidity	<b>CUR</b>	Current Ratio	0.88 2005	1.16 2001	1.00	0.012
Risk	<b>BET</b>	$\beta$ Coefficient	-0.07 2006	1.48 2002	0.43	0.31
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.18 2006	0.22 2001	0.20	0.0003
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	0.12 2006	0.23 2002,2003	0.19	0.002
	<b>OIA</b>	Ordinary Income to Asset Ratio	0.13 2006	0.25 2001	0.20	0.003

Table 3. Descriptive Statistic for Food products and Beverages Industry

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.3862 2005	0.4949 2001	0.4359	0.002
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	52.29 2006	64.20 2001	56.91	28.29
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	0.2410 2004	0.3642 2001	0.2971	0.0023
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	25.10 2001	26.01 2006	25.58	0.112
Leverage	<b>EAR</b>	Equity to Asset Ratio	-0.03 2006	0.21 2001	0.055	0.013
Liquidity	<b>CUR</b>	Current Ratio	0.91 2006	1.16 2001	1.09	0.008
Risk	<b>BET</b>	$\beta$ Coefficient	0.076 2004	0.538 2001	0.388	0.039
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.20 2006	0.29 2001	0.24	0.001
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	0.00 2006	0.08 2001	0.03	0.0009
	<b>OIA</b>	Ordinary Income to Asset Ratio	0.05 2003	0.11 2001	0.08	0.0004

Table 4. Descriptive Statistic for Machinery and Equipment Industry

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.4265 2004	0.4939 2001	0.4536	0.0007
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	49.43 2004	71.42 2001	60.23	64.68
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	0.2662 2004	0.4529 2001	0.3563	0.004
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	25.50 2001	26.29 2006	25.93	0.09
Leverage	<b>EAR</b>	Equity to Asset Ratio	-0.03 2006	0.20 2001	0.06	0.007
Liquidity	<b>CUR</b>	Current Ratio	0.99 2004	1.27 2001	1.08	0.011
Risk	<b>BET</b>	$\beta$ Coefficient	-0.18 2004	0.29 2002,2006	0.14	0.03
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.41 2006	0.50 2001	0.45	0.001
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	-0.07 2003	0.04 2001	-0.006	0.001
	<b>OIA</b>	Ordinary Income to Asset Ratio	0.04 2004	0.09 2001	0.06	0.0003

Table 5. Descriptive Statistic for Motor vehicles and Auto parts Industry

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.3354 2006	0.4428 2001	0.3952	0.0023
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	33.89 2003	39.98 2001	36.23	5.07
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	0.0967 2004	0.1455 2001	0.1184	0.0005
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	26.66 2001	27.72 2006	27.27	0.18
Leverage	<b>EAR</b>	Equity to Asset Ratio	0.25 2003,2005	0.29 2002,2006	0.27	0.0003
Liquidity	<b>CUR</b>	Current Ratio	1.01 2005	1.24 2001	1.12	0.007
Risk	<b>BET</b>	$\beta$ Coefficient	0.069 2006	2.868 2003	0.642	0.469
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.28 2006	0.33 2001	0.305	0.0003
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	0.08 2006	0.12 2003	0.105	0.0002
	<b>OIA</b>	Ordinary Income to Asset Ratio	0.13 2006	0.16 2003	0.145	0.0001



Table 6. Descriptive Statistic for Textile Industry

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.4388 2002	0.5163 2006	0.4778	0.0009
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	63.54 2002	67.11 2003	65.40	1.61
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	0.3366 2002	0.4008 2006	0.3699	0.0007
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	25.00 2001	25.28 2005	25.16	0.011
Leverage	<b>EAR</b>	Equity to Asset Ratio	-3.37 2006	-0.48 2001	-1.21	0.70
Liquidity	<b>CUR</b>	Current Ratio	0.56 2005	0.89 2001	0.68	0.36
Risk	<b>BET</b>	$\beta$ Coefficient	-0.125 2001	0.27 2004	0.015	0.018
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.30 2006	0.43 2001	0.36	0.003
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	-0.69 2006	-0.26 2003	-0.41	0.027
	<b>OIA</b>	Ordinary Income to Asset Ratio	-0.50 2006	-0.21 2003	-0.31	0.011

Table 7. Descriptive Statistic for Total Sample 137 firms

Variable	Symbol	Description	Min	Max	Average	Variance of Averages
Ownership Concentration	<b>CR</b>	Ownership Concentration Calculated by Herfindahl Index	0.3717 2006	0.4082 2001	0.3829	0.0002
Institutional Ownership	<b>INS</b>	Total Percent Owned by Institutional Owners	50.28 2004	57.26 2001	53.59	6.77
Institutional Ownership Concentration	<b>INSH</b>	Institutional Ownership Concentration Calculated by Herfindahl Index	0.2091 2004	0.2713 2001	0.2404	0.0004
Size of the Firm	<b>LNA</b>	Natural logarithm of total Asset	25.70 2001	26.62 2006	26.21	0.13
Leverage	<b>EAR</b>	Equity to Asset Ratio	-0.07 2006	0.22 2001	0.09	0.01
Liquidity	<b>CUR</b>	Current Ratio	0.98 2005	1.17 2001	1.07	0.01
Risk	<b>BET</b>	$\beta$ Coefficient	0.17 2004	0.66 2002	0.47	0.03
Business Cycle	<b>IVA</b>	Inventory to Asset Ratio	0.25 2006	0.32 2001	0.28	0.00
Firm Performance	<b>NIA</b>	Net Income to Asset Ratio	0.03 2006	0.11 2001	0.07	0.00
	<b>OIA</b>	Ordinary Income to Asset Ratio	0.08 2006	0.15 2001	0.11	0.00

Table 8. Average Amounts of the Main Variables of Research (2001: 2006)

Industry	CR	INS	INSH	NIA	OIA
Chemical and	0.3328	56.11	0.2270	0.18	0.22
Non-metallic	0.3151	54.63	0.2023	0.19	0.20
Food products	0.4359	56.91	0.2971	0.03	0.08
Machinery and	0.4536	60.23	0.3563	-0.006	0.06
Motor vehicles	0.3952	36.23	0.1184	0.105	0.145
Textile	0.4778	65.40	0.3699	-0.41	-0.31

Table 9. Ranking of the Industries According to the Average Amount of regression model variables

Industry	CR	INS	INSH	NIA	OIA
Chemical and Pharmaceutical	5	4	4	2	1
Non-metallic mineral products	6	5	5	1	2
Food products and Beverages	3	3	3	4	4
Machinery and Equipment	2	2	2	5	5
Motor vehicles and Auto parts	4	6	6	3	3
Textile	1	1	1	6	6

Table 10. The Result of "F" Statistic Test for Model (1)

F-statistic	Prob (F-statistic)
2.40	0.03

Table 11. Estimating Model (1) Using Fixed Effects Method

Variable	Coefficient	t-statistic	Prob.
NIA	1	.....	.....
C	-0.285	-2.43	0.015
CR	0.016	0.52	0.602
INS	0.001	3.54	0.000
INSH	-0.208	-3.94	0.000
LNA	0.012	2.76	0.006
EAR	0.196	34.23	0.000
CUR	0.084	6.73	0.000
BET	0.017	4.08	0.000
IVA	-0.313	-8.17	0.000
$R^2 = 0.75$	$\check{R}^2 = 0.74$	DW = 1.81	Prob(F-statistic) = 0.000

Table 12. The Result of "F" Statistic Test for Model (2)

F-statistic	Prob (F-statistic)
1.91	0.08

Table 13. Estimating Model (2) Using Fixed Effects Method

Variable	Coefficient	t-statistic	Prob.
OIA	1	.....	.....
C	-0.236	-1.92	0.055
CR	0.014	0.45	0.649
INS	0.001	2.15	0.032
INSH	-0.135	-2.55	0.011
LNA	0.011	2.76	0.017
EAR	0.148	22.63	0.000
CUR	0.089	6.20	0.000
BET	0.017	3.87	0.000
IVA	-0.205	-4.88	0.000
AR (1)	0.181	5.08	0.000
R <sup>2</sup> = 0.61	Ř <sup>2</sup> = 0.60	DW= 2.01	Prob(F-statistic)= 0.000

Table 14. The Coefficients of Independent Variables of (3) & (4) Regression Models

Industry	Dependent Variable	CR	INS	INSH
Chemical and Pharmaceutical	NIA	-0.034 Insignificant	0.002 Significant	-0.331 Significant
	OIA	0.004 Insignificant	0.001 Significant	-0.270 Significant
Food products and Beverages	NIA	0.033 Insignificant	-0.004 Significant	0.552 Significant
	OIA	0.004 Insignificant	-0.003 Significant	0.390 Significant
Non-metallic mineral	NIA	0.109 Significant	0.003 Significant	-0.357 Significant
	OIA	0.164 Significant	0.003 Significant	-0.427 Significant
Motor vehicles and Auto parts	NIA	-0.046 Insignificant	-0.001 Insignificant	0.016 Insignificant
	OIA	-0.051 Insignificant	-0.001 Insignificant	0.484 Insignificant
Textile	NIA	-0.003 Insignificant	0.002 Insignificant	0.550 Insignificant
	OIA	-0.017 Insignificant	-0.004 Insignificant	-0.155 Insignificant
Machinery and Equipment	NIA	-0.506 Significant	-0.002 Significant	0.678 Significant
	OIA	-0.319 Significant	-0.001 Significant	0.414 Significant

Table 15. Test of Hypotheses

Hypothesis/Industry	Chemical and Pharmaceutical	Food products and Beverages	Non-metallic mineral	Motor vehicles and Auto parts	Textile	Machinery and Equipment	Total 137 sample firms
1	NO	NO	OK	NO	NO	OK	NO
2	OK	NO	OK	NO	NO	NO	OK
3	OK	OK	OK	NO	NO	OK	OK

Table 16. The Effect of Explanatory Variables of Regression Models on Firm Performance for Total 137 Sample Firms

Variable	Effect
Ownership Concentration (CR)	Insignificant
Institutional Ownership (INS)	Significant Positive
Institutional Ownership Concentration (INSH)	Significant Negative
Size (LNA)	Significant Positive
Leverage (EAR)	Significant Positive
Liquidity (CUR)	Significant Positive
Risk (BET)	Significant Positive
Business Cycle (IVA)	Significant Negative

Table 17. The Effect of Ownership Structure's Variables on Firm Performance Based on the Type of the Industry

Variable/Industry	Total 137 Firms	Chemical and Pharmaceutical	Non-metallic mineral	Motor vehicles and Auto parts	Textile	Food products and Beverages	Motor vehicles and Auto parts
CR	No Effect	No Effect	Positive Effect	No Effect	No Effect	No Effect	Negative Effect
INS	Positive Effect	Positive Effect	Positive Effect	No Effect	No Effect	Negative Effect	Negative Effect
INSH	Negative Effect	Negative Effect	Negative Effect	No Effect	No Effect	Positive Effect	Positive Effect