THE RELATIONSHIP BETWEEN OWNERSHIP CONCENTRATION AND COMPANY PERFORMANCE, A CASE OF JORDANIAN NON-FINANCIAL LISTED COMPANIES

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Abstract
This study examines the relationship between ownership concentration and company performance using pooled data for Jordanian non-financial listed companies over the time period from 1994 to 2005. Results show that ownership concentration whether it is managerial or non-managerial has no significant effect on firm's performance when it is measured by accounting measures, but has a significant effect on the largest managerial blockholder when using market measure of firm's performance. These findings are consistent with Demsetz and Villalonga (2001) research results that document no significant relationship between managerial ownership concentration and firm performance when it is measured by accounting measures, and with Bolbol, Fatheldin, and Omran (2004) study in respect to non-managerial ownership concentration
Keywords: Ownership Concentration, Firm Performance, Amman Stock Exchange (ASE).

1. Introduction

Corporate governance has succeeded in attracting a good deal of public interest because of its apparent importance for the economic health of corporations and society in general. More recently, high profile scandals, financial crises, or institutional failures in East Asia, Russia, and the United States have brought corporate governance issues to the forefront in developing countries, emerging markets and transitional economies.

Corporate governance is about a set of mechanisms – both institutional and market- based that induce self interested managers (controllers of the firm) to make decisions that maximize shareholders' wealth (owners of the firm). The aim of these mechanisms, of course, is to reduce the agency costs that arise from the principle-agent problem; and they could be internal and/ or external in nature. External mechanisms rely on the takeover market in addition to the legal/

regulatory system, whereby the takeover market acts as a threat to the existing controllers in that it enables outsiders to seek control of the firm if bad corporate governance results in a significant gap between the potential and the actual value of the firm. Internal mechanisms, on the other hand, deal with the composition of the board of directors, such as the proportion of independent outsiders in its membership and the distinction between the chief executive officer (CEO) and the chairperson (Klapper and love, 2002).

Another important internal mechanism is ownership structure, or the degree at which ownership by managers obviates the trade-off between alignment and entrenchment effects. This reason and others have attracted a lot of research interest on the relationship between ownership structure and company performance. The relationship between ownership concentration and corporate performance is one that has received considerable attention in this area; researchers try to find the nature of this relationship if it exists and how to utilize it to improve firms' performance, however, a notable feature of this body of literature is its failure to reach a consensus regarding the nature of the relationship. Recently Jordan has put in place the pillars of corporate governance by sponsoring a series of legislative, economic and financial reforms that intended to promote transparency, accountability and the rule of law in the economic life of the country.

With the exception of Jordan, most of Arab countries' largest 20 or so companies are not listed on the stock exchange. Indeed, the Jordanian case is unique in that the Jordanian capital market has 17 listed companies which are amongst the largest 20 companies in the country. The remaining companies are held in the hands of private individual (families) or state-owned enterprises However, it must be pointed out here that the government owns about 24 percent of the shares of the “large” listed companies (Omet, 2006). There is a clear phenomenon in Jordan of ownership management where major owners prefer to manage their own companies in which they own a large stock. Family firms are also wide spread in Jordan. The intuition also suggests that Jordanian customs and social discipline have an effect in reducing separation between management and ownership. Relative to the above, ownership structure for Jordanian firms has its unique characteristics taking in consideration the importance of firms’ performance referring to its important role in economic growth especially in the last two years number of listed firms has increased rapidly; so it looks important to know if ownership concentration affects the performance of the listed Jordanians firms'. Considering this background, this study aims to empirically examine the relationship between ownership concentration and firm performance among non-financial listed firms on the Amman Stock Exchange (ASE),and find whether this relation influenced by blockholdrs interactions and interests differentiations.

2. Literature Review

Demsetz and Villalonga (2001) argue that previous studies did not treat ownership structure appropriately because they ignore interests' differentiation between shareholders; so they model the ownership structure as an endogenous variable and examine two dimensions of this structure likely to represent conflicting interests, the fraction of shares owned by management and the fraction of shares owned by the five largest shareholding interests. They use average accounting profit rate as measures of performance and control for annual advertising expenditures to annual sales, annual expenditures on plant and equipment to annual sales, and annual average debt to book value of total assets. They find no statistically significant relation between ownership structure and firm performance.

Bolbol, Fatheldin, and Omran (2004) study the effect of ownership structure on firms' performance. They express ownership structure in two dimensions ownership concentration and ownership identity for selected Arab countries (including Jordan). They also use percentage of shares owned by the largest three blockholders as a measure of ownership concentration and split the concentrated ownership into four separate groups of owners, individual investors, domestic institutional investors, government, and foreign investors. Return on assets (ROA), return on equity (ROE), and the firm relative market value (Q-ratio) were the variables to measure firm' performance. They find that ownership concentration is an endogenous response to poor legal protection of investors, but seems to have no significant effect on firms' performance and the identity of owners matters more than the concentration of ownership. While other studies find that there is a non-monotonic relation (quadratic form) between ownership concentration and firm's performance like:

Hermalin and Weisbach (1991) estimate the effect of managerial ownership and board composition on Tobin's Q. Managerial ownership is measured by the fraction of shares held by the present chief executive officer (CEO) and all former CEOs still on the board. Board composition is measured by the fraction of the firm's directors who are outsiders. They treat ownership and composition as endogenous using their lagged values as instruments; panel data for five years are used. They find no relation between board composition and performance but find a significant non-monotonic relation between managerial ownership and performance, a positive relation between 0% and 1%, a

decreasing relation between 1% and 5%, an increasing relation between 5% and 20%, and decreasing beyond 20%.

Morck, Shleifer and Vishny (1988) look at the relation between managerial ownership and performance in a 1980 cross-section of 371 Fortune 500 firms. They measure performance primarily by Tobin's Q (the firm's market value divided by its assets) and managerial ownership by classifying it in three categories board ownership from 0 to 5%, board ownership from 5% to 25%, and board ownership over 25%. They use set of control variables to deal with the possibility that -a variety of factors can jointly affect board ownership and Q- like research and development per dollar of assets, advertising expenses per dollar of assets, and long-term debt per dollar of assets. Then, they estimate a piecewise linear regression and find a significant non-monotonic relation (increasing between 0% and 5%, decreasing between 5% and 25%, and increasing beyond 25%).

Himmelberg, Hubbard and Palia (1999) extend the Demsetz and Lehn study by estimating the relation among managerial ownership, its determinants, and its effect on firm performance. Ownership structure is measured by shareholdings of insiders (officers plus directors) secured from proxy statements. Their performance measure is Tobin's Q although they claim that similar results are produced if return on assets is the measure of performance. They find that managerial ownership is negatively related to the capital-to sales and R&D-to-sales ratios but positively related to the advertising-to-sales and operating income to sales ratios so it can be explained by observable characteristics of the firm's contracting environment but on the other hand there is unobserved determinants of it. Controlling for these variables and fixed firm effects, they find that changes in ownership holdings have no significant impact on performance. When they control for endogeneity of ownership by using instrumental variables; they find a quadratic form of the effect of ownership on performance but they argue that this evidence is tentative because of the weakness of their instruments due to the fact that any variable that plausibly determines the optimal level of managerial ownership, it is also possible to argue that the same variable might plausibly affect firm performance.

McConnell and Servaes (1990) examine the relation between Tobin's Q and insider and blockholder ownership in two different cross-sectional samples, one for 1976 and the other for 1986, using slightly more than 1000 Compustat firms.Tobin's Q is regressed on different variations and combinations of measures of insider and blockholder importance

in the ownership structure of the firm. They find a positive relation for insider ownership, but diminishingly so as ownership becomes more important, and a positive but insignificant relation for blockholders. The relation between Q and insider ownership slopes upward until insider ownership reaches 40% to 50% and then slopes slightly downward.

Simoneti and Gregoric (2004) examine the influence of the ongoing consolidation of managerial ownership on the performance of Slovenian firms. The empirical analysis testing this relationship is based on a panel of 182 Slovenian firms in the 1995-1999 period and they use EBITDA/SALES ratio as performance measure as it is most reliable and allows little accounting discretion. They find that there is no evidence of any positive effects of the increasing managerial control on Slovenian firms' performance. If any, a positive incentive effect is only observed in those firms whose managers' holdings exceed 10-percent only in firms that are not listed on the capital market. Some studies find a negative relationship between ownership concentration and firm's performance like:

Hyagneh, (2001) examines the impact of capital structure's determinants on financial performance of industrial firms, within a sample of 12 publicly listed industrial firms in Jordan from 1990 to 1999, he use ownership concentration, financial leverage, size, operating risk, growth, and other variables as capital structure's determinants, return on assets and return on equity were used as financial performance measures. He finds that ownership concentration and firm's size negatively related to firm's return on equity, and there is negative relationship between firm's operating risk and firm's return on equity.

Loderer and Martin (1997) uses acquisition data to estimate a simultaneous equation model in which Tobin's Q and insider owners are endogenous. Different variables are used to explain the insider owners, such as Tobin's Q, log of sales, daily standard deviation of the firms' stock returns, and daily variance of the firm's stock returns. In order to explain Tobin's Q they used log of sales, insider ownership, and a dummy for whether the acquisition is financed with stock or not. Insider ownership fails to predict Tobin's Q, but Tobin's Q is a negative indicator of insider ownership.

Al- Rawashdeh (2007) investigates the true relation between management ownership (Insiders) and performance in Jordanian industrial companies listed in Amman Stock Exchange through empirical analysis and by using fixed panel regression. It was proven that the percentage of shares owned by both the members of board pf directors, and the

top management is negatively related to performance. Individual blockholders who own more than 5% of share have no effect on performance, and institutional blockholders also have no effect on performance.

The rest of studies find a positive and significant relationship between ownership concentration and firm's performance like: Earle, Kucsera and Telegdy (2004) examine the impact of ownership concentration on firm performance using panel data for firms listed on the Budapest Stock Exchange. There addition was in examining the effect of blockholders' interaction on firm performance as they argue that a group of blockholders may face collective action problems or the presence of a large owner makes the marginal contributions to managerial monitoring of additional smaller blockholders are small, so the inclusion of their shareholdings in the concentration variable effectively adds measurement error. They measure ownership concentration by the fraction of shares held by the largest blockholder, sum the holdings of the largest and the second largest blockholder, and sum the holdings of the three largest blockholders respectively, and use profitability measured as return on equity (ROE) and operating efficiency (OE) as performance measures. They find that the size of the largest block increases profitability and efficiency strongly and monotonically, but the effects of total blockholdings are much smaller and statistically insignificant. Controlling for the size of the largest block, point estimates of the marginal effects of additional blocks are negative.

Zeitun, and Tian (2007) examine the impact that ownership structure has on the performance of firms and the default risk found within a sample of 59 publicly listed firms in Jordan from 1989 to 2002. They calculate four ratios to measure the firm's performance, return on equity (ROE), return on assets (ROA), Tobin's Q, and market to book value ratio (MBR). They also use various measures of ownership concentration, percentage of shares held by the largest shareholders, the percentage of the two largest shareholders, the percentage of the first three largest shareholders, the percentage of the first five largest shareholders, and the Herfindahl index of ownership concentration, They find that ownership structure has a significant effect on the accounting measure of performance return on assets, government shares are negatively related to the firm's performance ROE, defaulted firms have a higher concentration of ownership than non-defaulted firms, and firms with a higher proportion of foreign ownership have a low incidence of default, and government ownership is negatively related to the firm's probability of default.

Jensen and Meckling, (1976) argue that the relative amount of ownership held by insiders (management) and outsiders (investors with no direct role in the management of the firm) provide managers with the incentives to pursue activities to serve their own benefits. According to their hypothesis, both a firm's value and its performance increase with the level of insider ownership. The agency conflict between the owner-manager and outside shareholders is manifested by the manager's tendency to appropriate perquisites out of the firm's resources for his own consumption.

3. Research Methodology

3.1. The Research Sample

The sample of this study includes all non-financial firms listed on Amman Stock Exchange (ASE) over the time period 1/1/1994 to 31/12/2005, which is limited by the availability of detailed data. A firm is excluded if it has no blockholder; or if it is delisted or if it is listed after 1/1/1994; or if it merged with or got acquired by other firms; or it went through mandatory or voluntary liquidation. The final sample consists of 49 firms that operate in the service or manufacturing industries.

3.2. Variables of the Study

3.2.1. Dependent Variable- Firm performance

Various measures of firm performance are used in previous studies, some of which are backward looking using accounting profit measures while others are forward looking using firm value measures. This study uses the Return on Assets (ROA) which measures how efficiently the firm's assets are used to generate profit and is calculated by dividing net income by average total assets), Return on Equity (ROE) which represents what return the firm is making on the shareholders' funds invested in the firm and is calculated by dividing net income by stockholders' equity , and the Tobin's Q which is defined as the firm's market value divided by its assets and it regarded as a valuation measure reflecting investors' evaluations of the likely future profitability of the firm, as an alternative measures for firm performance to combine both the backward looking and forward looking.

3.2.2. Independent variables- Ownership concentration

To determine the ownership concentration, various measures are used to measure the effect of ownership concentration on firm performance as the percentage of shares owned by the largest three or five blockholders, the log transformation of these concentration measures, and approximations of the Herfindahl index1.

In this research the measures of ownership concentration are constructed to account for different levels of ownership concentration and owners with different interests

For the purpose of this study, ownership concentration is measured using the following different specifications as were used by Earle, Kucsera and Telegdy (2004) to account for different levels of ownership concentration.

1. Percentage of shares owned by the largest managerial blockholder, where blockholder defined as shareholder who owns at least 10% of equity and managerial ownership stands for shares owned by the CEO, and board members.

2. Percentage of shares owned by the largest and second largest managerial blockholder, where the second largest blockholder is a shareholder who owns at least 10% and follows the largest blockholder in ownership percentage.

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1. The Herfindahl index is measured as the sum of squared ownership shares

This study controls for firms size, debt to equity ratio, stock turn over ration, and dummies for industrial sector. These variables are used by most of studies conducted in Arab counties and Jordan like Zeitun, and tian (2007), and Hyagneh, (2001)

i. Firm size: measured by the log of firm's total assets, the larger is firm size, the larger is the capital sum that investors require to own a given share of a firm. Larger firm size requires more investment from an owner of a given fraction of equity, and, hence, that more of this owner's "eggs" be put "in one basket," so that he will assume more risk.

ii. Stock turnover ratio: it is calculated by dividing number of traded shares during the year by number of subscribed shares at the end of the year and used as a measure of stock liquidity as there is empirical evidence that the liquidity of a firm's stock is inversely related to its cost of capital. Accordingly, the manager of a firm should undertake actions that improve the liquidity of the firm's stock to raise firm value.

iii. Debt to equity ratio: serves to reflect the possibility that creditors provide some of the monitoring of management that otherwise would have come from equity holders.

3. Percentage of shares owned by the three largest managerial blockholders where the third largest blockholder is a shareholder who owns at least 10% and follows the second largest blockholder in ownership percentage.

4. Percentage of shares owned by the largest non-managerial blockholder.

5. Percentage of shares owned by the largest and second largest non-managerial blockholder.

6. Percentage of shares owned by the three largest non-managerial blockholders.

3.2.3. The control variables

Several control variables are used in the literature to deal with the possibility that a variety of factors can confound the relationship between ownership concentration and firm performance and thus induce a spurious correlation; such confounding factors include firm size, capital expenditure, financial leverage, Beta risk, and asset growth rate.

Dummies for industrial sector: to control for possible spurious correlation between ownership and firm performance through industry effects. We have two sectors, the manufacturing sector and service sector. The analysis is based on pooled observations collected from 49 non-financial listed firms over the period between 1994-2005. The resulting data will be processed statistically utilizing some of statistical methods include, descriptive statistics, simple regression to test relationship between one independent variable and a dependent variable thus either to accept or reject the null hypothesis depending on T-value and significance level. The regression models used are treating the data as pooled observations and, therefore, assume that the residuals are not correlated either across different time periods or across different firms during the same or different time periods (i.e. observations are homoskedastic) and not serially correlated, ie,

E (eit eji) = 0

E (eit eis) = 0

E (eit ejs) = 0

H01: There is no relationship between percentage of shares held by the largest managerial blockholder and firm performance holding all else constant.

H02: There is no relationship between percentage of shares held by the largest and the second largest managerial blockholder and firm performance holding all else constant.

H03: There is no relationship between percentage of shares held by the three largest managerial blockholders and firm performance holding all else constant.

H04: There is no relationship between percentage of shares held by the largest non-managerial blockholder and firm performance holding all else constant.

H05: There is no relationship between percentage of shares held by the largest and the second largest non-managerial blockholder and firm performance holding all else constant.

H06: There is no relationship between percentage of shares held by the three largest non-managerial blockholders and firm performance holding all else constant.

3.3. Research Model

To carry out the hypotheses testing, the researchers use two regression equations linking the two variables after controlling for some firm variables as follows:

$PERFit = \alpha it + \gamma CMit + \delta FVit + eit$

$PERFit = \alpha it + \beta Cit + \delta FVit + eit$

PERF is the firm performance, measured by return on assets (ROA), return on equity (ROE), and the firm's market value of assets to their replacement cost (Tobin's Q).

CM: represents alternative measures of managerial ownership concentration in several alternative specifications (percentage of shares held by the largest managerial blockholder, sum the holdings of the largest and the second largest managerial blockholders, the holdings of the three largest managerial blockholders).

FV: represents proxies for controlling variables including, firm size, stock turn over ratio, debt to equity ratio and dummy variable for the industry.

C: represents alternative measures of non-managerial ownership concentration in several alternative specifications (percentage of shares held by the largest blockholder, sum the holdings of the largest and the second largest blockholder, the holdings of the three largest blockholders).

e: donates the error term.

Where i denotes firm and t denotes time period.

4. Statistical Analysis

Before indulging in the correlation and regression analysis and hypotheses testing, it is necessary to get a 'feel' for the data analyzed in order to have a preliminary idea of how sensible the data is. Table 1 is an exhibit of the summary statistics of time-series cross sectional means, medians, standard deviations, minimum and maximum values for the dependent and independent variables included in the model for the sample firms and across the sample period.

Table 1: Sample Summary Statistics

	Mean	Median	SD	Max	Min
ROA	0.0337	0.0348	0.1023	0.5109	-0.3733
ROE	0.0308	0.0579	0.4069	0.5205	-0.4633
TQ	0.9633	0.8466	0.6448	2.7281	0.1062
Log (TA)	7.0713	7.0087	0.6097	8.6656	5.0633
ST	0.3513	0.1108	0.7780	2.5874	0
D/E	0..6575	0.4069	.9680	3.3765	0.0023
C1	0.0174	0	0.0472	0.2888	0
C2	0.0316	0	0.0697	0.3895	0
C3	0.0385	0	0.0812	0.5645	0
CM1	0.2432	0.196	0.1936	0.877	0
CM2	0.3193	0.2921	0.2503	0.97	0
CM3	0.3366	0.3	0.2627	0.97	0

ROA is the return on assets and its measured as (net income/total assets), ROE is the return on equity and its measured as (net income/total equity), TQ is the Tobin's Q and is measured as(firm's market value/total assets), Log (TA) logarithm of total assets, ST (number of traded shares during the year/ number of subscribed shares at the end of the year), D/E (total debt/total equity), C1 percentage of shares owned by the largest non-managerial blockholder, C2 percentage of shares owned by the largest and second largest non-managerial blockholder, C3 percentage of shares owned by the three largest non-managerial blockholders, CM1 percentage of shares owned by the largest managerial blockholder, CM2 percentage of shares owned by the largest and second largest managerial blockholder, CM3 percentage of shares owned by the three largest managerial blockholders.

Noticeable features for non-financial listed firms can be elicited from this descriptive statistics as follows: The mean and median values of accounting measures of profitability (ROA & ROE) fall between 3%-6% which indicates relatively low profit rate compared to firms in other Arab countries which ranges from 4%-10%[2]. The mean of Tobin's Q-ratio is less than one which means that the market value of the firms did not cover their assets book value.

- There is a high variation between firms in their return on equity as indicated by (.40) standard deviation and (.9838) range between the maximum and minimum value.
- There is a high variation between firms in their return on assets as indicated by (.10) standard deviation and (.8842) range between the maximum and minimum value.
- At the mean stock turnover ratio did not increase over 35% and some of firms' stocks did not traded during the year as the minimum value of stock turnover is equal to zero which reveals that some firms suffer from liquidity problems.
- High financial leverage characterizes the firms in the sample as the mean of debt to equity ratio equal to 65%, but there are some firms that almost rely only on equity to finance its operations.
- Managerial ownership percentage is much larger than non-managerial ownership as indicated by the means and medians of percentage of shares held by the largest blockholders, by the two largest, and all three largest blockholders.
- Some firms almost owned by two individual only as it appears for the maximum value of percentage of shares held by the largest and the second largest managerial blockholder.
- The ownership percentage held by the largest and second largest blockholdes is close to the percentage held by the three largest blockholders which indicates minor difference between number of firms that have only two blockholders and number of firms that have three blockholders.

2. See Bolbol, A. A. Fatheldin and M. Omran, (2004).

Table 2: Person Correlation Matrix between the variables of the study is presented for the sample period.

	ROA	ROE	TQ	ID	Log (TA)	ST	D/E	C1	C2	C3	CM1	CM2	CM3
ROA	1	0.466**	0.450**	-0.023	0.205**	-0.035	-0.168**	-0.082	-0.044	-0.011	0.050	0.037	0.019
ROE		1	0.213**	-0.049	0.098*	-0.041	-0.665*	-0.009	0.009	0.021	0.038	0.037	0.029
TQ			1	-0.093*	-0.024	-0.061	-0.245**	-0.086*	-0.058	-0.011	0.104*	0.083	0.082
ID				1	0.081*	0.004	-0.060	0.150**	0.195**	0.198**	-0.334**	-0.285**	-0.262**
Log (TA)					1	-0.082*	0.223**	-0.096*	-0.145**	-0.183**	0.102*	0.140**	0.156**
ST						1	-0.009	0.050	0.030	0.006	-0.148**	-0.189**	-0.191**
D/E							1	-0.023	-0.041	-0.056	0.108*	0.130**	0.118**
C1								1	0.842**	0.766**	-0.427**	-0.428**	-0.430**
C2									1	0.944**	-0.408**	-0.431**	-0.440**
C3										1	-0.380**	-0.385**	-0.397**
CM1											1	0.942**	0.900**
CM2												1	0.984**
CM3													1

*, ** refer to 1%, 5% and levels of significance, respectively.

- Accounting measures of performance are positively correlated with firm size and statistically significant at 1%. This might be due to competition effects, whereby the market power of large-size firms enables them to outperform small-size firms.

- TQ is positively correlated with managerial ownership concentration's measures on all levels while it is negatively correlated with non-managerial ownership concentration's measures on all levels but statistical significant at 5% only when largest blockholder is used to measure ownership concentration even it was managerial or non-managerial one.

- Positive statistically significant correlations were found between firm size and managerial ownership concentration on all levels which contradicts our expectations that risk-aversion people should discourage any attempt to preserve concentrated ownership in the face of larger capital because this would require owners to allocate more of their wealth to a single venture.

- Positive statistically significant correlations were found between debt to equity ratio and managerial ownership concentration on all levels which also contradict the notion that management chooses not to hold as many shares if creditors are important to the monitoring of management behavior.

- Negative statistically significant correlations were found between stock liquidity and managerial ownership concentration on all levels which also contradict the existing theories that suggest inverse relationship between stock liquidity and cost of capital therefore it increases the firm value and enhancing benefit to shareholders so they will be more willing to invest more in the firm.
- Managers tend to own less (or even not own) when there are a large outside blockholders proved by the significant negative correlation between managerial ownership and non-managerial ownership.

As shown from table (2) there is a high correlation between independent variables which may lead to multi-colinearity problem as a high degree of correlation among the independent variables increases the variance in estimates of the regression parameters, and to avoid this problem we will not put these variables together in the same regression model .

In the following section we test the impact of ownership concentration on firm performance. It is not, however, a task that should produce clear results because there is no consensus in the corporate governance literature as to whether or not concentrated ownership structures enhance firm performance. Table 3 shows the multiple regression results for the 49 sample firms over the period that spanning from 1994 until 2005 for the following regression models:

Model 1: $PERFit = \alpha it + \gamma CM1it + \delta 1\ Log(TA)it + \delta 2\ (D/E)\ it + \delta 3\ STit + \delta 4\ IDit + eit$

Model 2: $PERFit = \alpha it + \gamma CM2it + \delta 1\ Log(TA)it + \delta 2\ (D/E)it + \delta 3\ STit + \delta 4\ IDit + eit$

Model 3: $PERFit = \alpha it + \gamma CM3it + \delta 1\ Log(TA)it + \delta 2\ (D/E)it + \delta 3\ STit + \delta 4\ IDit + eit$

Model 4: $PERFit = \alpha it + \beta C1it + \delta 1\ Log(TA)it + \delta 2\ (D/E)it + \delta 3\ STit + \delta 4\ IDit + eit$

Model 5: $PERFit = \alpha it + \beta C2it + \delta 1\ Log(TA)it + \delta 2\ (D/E)it + \delta 3\ STit + \delta 4\ IDit + eit$

Model 6: $PERFit = \alpha it + \beta C3it + \delta Log(TA)it + \delta (D/E)it + \delta STit + \delta IDit + eit$

Where three measures are used to measure firm performance (ROA, ROE, and TQ)

Table 3. Shows estimates of regression analysis

Panel A:

ROA is the return on assets and its measured as (net income/total assets), ROE is the return on equity and its measured as (net income/total equity), TQ is the Tobin's Q and is measured as(firm's market value/total assets), Log (TA) logarithm of total assets, ST (number of traded shares during the year/ number of subscribed shares at the end of the year), D/E (total debt/total equity) , C1 percentage of shares owned by the largest non-managerial blockholder, C2 percentage of shares owned by the largest and second largest non-managerial blockholder, C3 percentage of shares owned by the three largest non-managerial blockholders, CM1 percentage of shares owned by the largest managerial blockholder, CM2 percentage of shares owned by the largest and second largest managerial blockholder, CM3 percentage of shares owned by the three largest managerial blockholders.

Independent variables	Dependent variables								
	ROA			ROE			TQ		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
CM1	.016			.127			.331**		
CM2		.005			.118			.211	
CM3			.006			.077			.192
Log(TA)	.044*	.044*	.045*	.180*	.178*	.179*	.035	.034	.033
D/E	-.010*	-.010*	-.010*	-.130*	-.131*	-.130*	-.071*	-.071*	-.071*
ST	-.001	-.001	-.002	-.007	-.005	-.007	-.041	-.040	-.041
ID	-.012	-.013	-.015	-.090**	-.090**	-.097**	-.099	-.113	-.117
Adjusted R2	.088	.088	.088	.542	.543	.541	.074	.071	.071
F	11.44**	11.35**	11.36**	128.35**	129.04**	127.87**	9.61**	9.27**	9.21**

*, ** refer to 1%, 5% and levels of significance, respectively.

Panel B:

ROA is the return on assets and its measured as (net income/total assets), ROE is the return on equity and its measured as (net income/total equity), TQ is the Tobin's Q and is measured as(firm's market value/total assets), Log (TA) logarithm of total assets, ST (number of traded shares during the year/ number of subscribed shares at the end of the year), D/E (total debt/total equity) , C1 percentage of shares owned by the largest non-managerial blockholder, and C2 percentage of shares owned by the largest and second largest non-managerial blockholder, C3 percentage of shares owned by the three largest non-managerial blockholders, CM1 percentage of shares owned by the largest managerial blockholder, CM2 percentage of shares owned by the largest and second largest managerial blockholder, and CM3 percentage of shares owned by the three largest managerial blockholders.

Independent variables	Dependent variables								
	ROA			ROE			TQ		
	Model 4	Model 5	Model 6	Model 4	Model 5	Model 6	Model 4	Model 5	Model 6
C1	.-117			.166			-.991		
C2		-.005			.262			-.406	
C3			.050			.285			.029
Log(TA)	.043*	.044*	.046*	.185*	.189*	.192*	.037	.038	.046
D/E	-.010*	-.010*	-.010*	-.130*	-.130*	-.130*	-.069*	-.069*	-.069*
ST	-.001	-.002	-.001	-.012	-.012	-.011	-.049	-.051	-.051
ID	-.012	-.014	-.016	-.111*	-.117*	-.120*	-.130**	-.134**	-.148**
Adjusted R2	.09	.087	.089	.539	.540	.541	.071	.067	.066
F	11.70**	11.34**	11.53**	127.01**	127.76**	128.29**	9.19**	8.79**	8.57**

*, ** refer to 1%, 5% and levels of significance respectively.

We can see from models 1-3 in table (3-panel A) which estimate regression of managerial ownership concentration in different levels (percentage of shares held by the largest managerial blockholder, sum the holdings of the largest and the second largest managerial blockholders, the holdings of the three largest managerial blockholders) on firm performance measured by ROA or ROE that managerial ownership concentration on all levels do not have a statistical significant effect on neither ROA nor ROE. These findings tend to be consistent with Demsetz and Villalonga (2001) research results that document no significant relationship between managerial ownership concentration and firm performance but contradict with Hermalin and Weisbach (1991) research results which find a significant non-monotonic relation between managerial ownership and performance. However, it seems that firm size exhibits significant relationships with firm performance.

We find that large-size firms are more likely to achieve better performance as indicated by the positive and significant coefficient of size at 1% level of significance. Also, we find that higher financial leverage accompanied by lower firm performance, supported by the negative and significant coefficient of debt to equity ratio at 1% level of significance.
F test values indicate that the independent variables are able to predict the dependent variables and it is statistically accepted as this test considered being significant at value of 5% or less. It's also worth to consider that the CM1 is estimated to have the largest positive coefficient even it's not statistically significant.

Based on the above discussion we can conclude that managerial ownership concentration on all levels does not matter and has no effect on firm performance. However, if we take TQ as a performance measure different results is reached; as shown in table (2-panel A) which estimate regression of managerial ownership concentration in different levels on firm performance measured by TQ that CM1 has statistical significant effect on TQ at 5% level of significant implying that managerial ownership concentration matters in determining firm value but not in all levels of managerial ownership concentration as indicated by absence of statistically significant relationship between TQ and both of managerial ownership measures CM2 and CM3.

The last point provides evidence that some forms of managerial ownership concentration tend to increase firm performance. These results are inconsistent with the view that blockholders are easily able to form coalitions to monitor management effectively. Rather, they are consistent with the hypothesis that only the extent of concentration by the top blockholder has a positive effect and that including additional blockholders into the concentration measure reduces this positive effect. In principle, the reduction in the estimated effect could occur either because the additional blockholders actually decrease performance or because adding them only introduces

noise into the concentration measure. The same results were found by Earle, Kucsera and Telegdy (2004).

In respect to financial leverage it was accompanied by lower firm value and supported by the negative and significant coefficient of debt to equity ratio at 1% level of significance.
F test values indicate that the independent variables able to predict the dependent variables and it is statistically accepted as this test considered being significant at value of 5% or less. It is interesting here to ask why different proxies for firm performance (accounting and market measures) produce different relationships with managerial ownership concentration. One explanation is that while ROA and ROE measure the past and current performance of the firm, TQ, in addition to that, captures the expected future performance of the firm. Consequently, rapidly growing firms might have larger TQ with relatively smaller accounting performance measures, resulting in substantial differences between the impact of managerial ownership concentration on ROA or ROE, and TQ. A second explanation or implication is that the relevance of accounting earnings in determining firm value is very miniscule in developing stock markets, in the sense that there is no contemporaneous association between accounting values and the market value of firms.

On the other hand, we test the non-managerial ownership concentration effect on firm performance using models from 4 to 6 which estimate regression of non-managerial ownership concentration in different levels (percentage of shares held by the largest non-managerial blockholder, sum the holdings of the largest and the second largest non-managerial blockholders, the holdings of the three largest non-managerial blockholders) on firm performance measured by ROA or ROE or TQ. Test results are exhibited in table (3-panel B) which reveal that non-managerial ownership concentration on all levels do not have a statistical significant effect on firm performance either it measured by ROA or ROE or TQ. So that the non-managerial ownership concentration at all levels does not matter on determine firm performance.

From the above results and discussion the study finds that blockholders with different interests have different impact on firm performance supported by the statistical significant effect of largest managerial blockholder on firm performance measured by TQ, while there is no statistical significant effect of largest non-managerial blockholder on firm performance measured by TQ, also different levels of concentrations have different impact on firm performance as the only statistically relationship with firm performance was found when there only largest managerial blockholder. These results are supported by several researches as found by Demsetz and Villalonga (2001) and Bolbol, Fatheldin, and Omran (2004) F test values indicate that the independent variables able to predict the dependent variables and it is statistically accepted, as this test considered being significant at value of 5% or less.

5. Summary and Conclusion

Using the sample of 49 non-financial listed firms in the Amman Stock Exchange over the time period 1/1/1994 to 31/12/2005; this study examines the relationship between ownership concentration and company performance. The following conclusions and policy recommendations could be summed up from the analysis:

- Different proxies for firm performance (accounting and market measures) produce different relationships with managerial ownership concentration as managerial ownership concentration on all levels do not have a statistical significant effect on neither ROA nor ROE but largest managerial blockholder has statistical significant effect on TQ . However, this result seems to depend more on reputation effects and lower agency costs than on market fundamentals pertaining to firms' actual performance (Bolbol et al 2004).Hence, future improvements in corporate governance practices are better gauged through their effect on performance measures rather than market measures.
- Non-managerial ownership concentrations on all levels do not have a statistical significant effect on firm performance either it is measured by ROA or ROE or TQ. This means that legal protection of creditors is more important than improving other aspects of corporate governance since any substantial growth in external finance is likely to take the form of debt.
- Large-size firms have higher profitability and performance measures than other firms. This could be the result of favorable advantages seized by monopoly power, not advantages gained through more efficiency.

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