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The Relationship between Ownership Structure and Firm's Performance: Evidence from Jordan

العلاقة بين هيكل الملكية وأداء الشركات: دليل من الأردن

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Abstract:

The purpose of this study is to empirically examine the effect of ownership structure variables on firm's performance as measured by Tobin's Q and ROA of Jordanian manufacturing companies listed (ASE). Using a dataset of 55 listed Jordanian manufacturing companies for the fiscal year 2018 is used. Multiple regression analysis is undertaken to analyse the potential effect of ownership structure on firm's performance.

The study reveals different results by using different firm's performance measures. When using the first model (ROA) the results found that there is no evidence supporting the notion that ownership structure variables affects firm's performance. According to firm-specific characteristics, the results found that there is a positive and significant between SIZE and accounting-based performance measure (ROA). LEV is negatively and significantly related to accounting-based performance measure (ROA). However, when the second model (Tobin's Q) used the results found that there is no significant effect between all of the independent variables and Tobin's Q.

Keywords: *ownership structure, firm's performance, manufacturing companies, ASE.*

Jel Classification Codes: *M41, G32.*

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الملخص:

هدفت الدراسة إلى التعرف على أثر هيكل الملكية (تركيز الملكية، الملكية الأجنبية، الملكية المؤسسية، والملكية الإدارية) على الأداء مقاساً بمؤشر (Tobin's Q) ومعدل العائد على الأصول (ROA). شملت عينة الدراسة 55 شركة مساهمة عامة صناعية مدرجة في سوق عمان المالي للسنة المالية 2018. استخدمت الدراسة تحليل الانحدار المتعدد لاختبار فرضيات الدراسة. وكشفت نتائج الدراسة عن نتائج مختلفة باستخدام مقاييس الأداء المختلفة. عند استخدام النموذج الأول(ROA) ، أظهرت النتائج عدم وجود أثر لمتغيرات هيكل الملكية على الأداء. وفيما يتعلق بالمتغيرات الضابطة أظهرت النتائج أن لها أثر ذو دلالة إحصائية على معدل العائد على الأصول. وعندما تم إستخدم النموذج الثاني(Tobin's Q) ، أظهرت النتائج عدم وجود أثر ذو دلالة إحصائية لجميع المتغيرات المستقلة على الأداء.

كلمات مفتاحية: هيكل الملكية، الأداء، الشركات الصناعية.

تصنيف *Jel*: *M41, G32*.

I. Introduction

The interaction between ownership structure and firm's performance is an important issue that has received considerable attention in corporate finance literature in recent years. For many decades considerable efforts has been devoted to explain differing ownership structure in different countries and its effect on firm's performance (Yasser and Al Mamun, 2015). The connection between ownership structure and firm's performance embedded predominantly in the conceptual framework of the agency theory, these analyses added to the understanding of the complexity of governance model and their impact of organization strategy (Aluchna and Kaminski, 2017; Collin, and al., 2013). Agency theory was proposed by (Jensen and Meckling, 1976). Agency theory deals with the problem arising between principal (shareholders) and agent (managers). In that, the goal of the principal (shareholders) is maximizing wealth and for that purpose the performance of the agent (managers) is monitored and

evaluated (Alipour, 2013). Corporate governance literature provides a number of internal and external mechanisms to mitigate the problem associated with agency. These mechanisms include board composition, debt financing, ownership by both insiders and outsiders and market for corporate control (Arouri, and al, 2014). Ownership structure is an important component of corporate governance mechanisms and ownership concentration may improve firm's performance through decreasing monitoring costs (Shleifer and Vishney, 1986). Therefore, ownership structure is considered as critical factor that affect a firm's health (Zeitun and Tian, 2007). Economics and finance theory proposes that ownership structure is an important and influential factor in the organization performance, and various ownership types may have a different impact on the performance (Shawtari, 2018). Different ownership structure affects the agency theory problem differently, so it is important to know the organization ownership structure to determine the nature of agency problem and costs associated with it and how performance might be affected by that issue, for example, managers of a family business have different objectives and goals than a managers of publicly held organization (Khamis, and al., 2015).

Prior empirical studies of the relationship between ownership structure and firm's performance have yielded mixed results like (Alabdullah, 2018; Tomar and Bino, 2012; Abu-Serdaneh, and al., 2010 Zeitun and Tian, 2007). Therefore, the effect of ownership structure and firm's performance is an empirical question.

Building upon the above issues, the objectives of this study are twofold. First, it aims to investigate the relationship between ownership structure and firm's performance in Jordanian manufacturing companies listed on the Amman stock exchange (ASE) considering multidimensional ownership structure and other firm-specific characteristics. Second, it aims to explore the pattern of ownership structure in Jordanian manufacturing companies.

The current study contributes to the literature in various ways. First: It adds more to the growing literature of ownership structure,

and firm's performance. Second: Investigating the effects of ownership structure on firm's performance to justify the conflicting results in prior researches. Finally, the results of the study provide insights for investors, or any interested party in order to reach a better investment decisions.

This study proceeds as follows: The following Section briefly reviews related literature and develops the study hypotheses. Section 3 describes the research methodology. Section 4 presents the empirical results. Finally, Section 5 concludes the study.

II. Literature review and hypotheses development

1. Concentration ownership and firm's performance

Ownership concentration measures dispersion of ownership among all or certain shareholders (Abu-Serdaneh, and al., 2010). Ownership concentration refers to the share of largest owner (Shleifer, and Vishny, 1994). Studies on the links between ownership structure and firm's performance are guided by the basic assumption that "different ownership structure may result in different production possibility sets and performance" (Aluchna and Kaminski, 2017). The current literature provides three main hypotheses which links ownership structure to firm's performance (Zouari and Taktak, 2014):

First, convergence of interest hypothesis which state that ownership concentration may improve performance through decreasing monitoring costs and providing better control of management. (Shleifer, and Vishny,1986) argue that ownership concentration provides the condition for large shareholders to monitor the management, thus overcoming the free rider problems associated with dispersed ownership where no single shareholder has enough incentives to incur monitoring costs for the benefit of all shareholders. The identity of large shareholder can be an important factor in determining corporate decisions (Al-Najjar, and Kilincarslan, 2016). Therefore, the corporate decisions are better aligned with shareholders interest because of the active monitoring of large shareholders (Harada, and Nguyen, 2011). (Jensen, and Meckling, 1976) argue that

the value of the firm increases with ownership concentration as long as the change in ownership concentration aligns the interest of shareholders and management. However, ownership concentration minimizes the principal-agent agency problem that arises from the separation between ownership and control, therefore, suggesting a positive relationship between ownership concentration and firm's performance (Zouari and Taktak, 2014). (Al Farooque, and al., 2010) test the relationship between ownership concentration and performance on a sample of 567 observations on firms listed on the Dhaka Stock exchange over seven years period, the results revealed that there is a significant positive relationship between ownership concentration and performance. (Berle and Means, 1932) argue that ownership structure influences performance and the suggest separation of ownership from control when firms go public. Such separation is expected to improve professionalism through management expertise and firm-specific knowledge (Gaur, and al., 2015).

Second, entrenchment hypothesis states that the existence of large controlling shareholders can lead to expropriation behavior, this expropriation behavior may limit the firm's ability to borrow or to issue new shares. Consequently decrease firm's performance (Zouari and Taktak, 2014). Higher level of ownership concentration will provide the incentive and power of majority shareholders to expropriate minority shareholders wealth (La Porta, and al., 1999). In that, ownership concentration creates a different type of agency problem known as principal-principal conflict (Gaur, and al., 2015). If the ownership concentration increased to such level then the firm value and performance will decrease (Fama and Jensen, 1983). In USA (Demsetz and Villalonga, 2001) found that the higher the ownership concentration, the lower the firm's performance.

Third, neutrality hypothesis states that maximizing the firm value depends on external factors such as its environment characteristics, market and its own operating condition. Therefore, separation exists between ownership and control, and there is no

reason to think that a concentrated firm is more efficient than the dispersed firm (Zouari and Taktak, 2014). (Demsetz and Villalonga, 2001) reporting that firms with majority shareholders do not differ from firms of diffused ownership in terms of performance. (Wang and Shailer, 2015) conducted a meta-analysis using data from 42 primary studies of listed firms across 18 emerging markets and they reveals that ownership concentration has negative relationship with performance across countries. Considering the literature on the relationship between ownership concentration and performance, the following hypothesis can be formulated:

H1. There is a significant relationship between ownership concentration and performance of Jordanian manufacturing companies listed on the (ASE)

2. Foreign ownership and firm's performance

Another important ownership structure aspect is the nature of the shareholders. Thus, the composition of ownership structure is important in understanding differences in firm's performance (Al-Saidi, 2013). Therefore, in the current study, foreign ownership, institutional ownership, and managerial ownership were examined.

The main reasons that have put forward to explain the relationship between foreign ownership and firm's performance are, first, foreign investors are more likely to have the ability to monitor managers, providing them with performance-based incentives, right information, and avoid the entrenchment of any passive behavior that destabilises the value creation of the firm (Arouri, and al., 2014). (Kao, and al, 2018) argued that because foreign ownership has less connection with insiders than domestic investors, they monitor insiders more effectively. Foreign investors might be efficient monitors of the companies in emerging markets, because of their expertise of establishing better global standards and practices (Al-Najjar and Kilincarslan, 2016). They usually invest in profitable firms, because they do sophisticated analysis prior to their investments, therefore, as a proportion of stock owned by foreign investors increase, performance is expected to increase (Abu-Serdaneh, and al.,

2010). Second, the technology provided by foreign investors helps managers to improve their efficiency through reducing operating expenses (Arouri, and al., 2014). Also, foreign investors have to maintain their reputation and meet regulation on corporate governance practices in host countries (Setiawan and al., 2016). However, the prior literature that examined the impact of foreign ownership on firm's performance found different results. For instance, (Alabdullah, 2018) found that there is insignificant relationship between foreign ownership and financial performance in non-financial companies (service and industrial sectors) in Jordan. Similarly (Abu-Serdaneh, and al., 2010) documented that there is no significant relationship between foreign ownership and performance. On the contrary, (Bentivogli and Mirenda, 2017) in Italy, (Tornyeva and Werko, 2012) in Ghana have found positive relationship between foreign ownership and firm's performance. (Omran, and al., 2008) used a sample of 304 firms from four Arab countries for the period 2000-2002 and he found that there is a positive relationship between foreign ownership and firm's performance. Considering the literature on the relationship between foreign ownership and performance, the following hypothesis can be formulated:

H2. There is a significant relationship between foreign ownership and performance of Jordanian manufacturing companies listed on the (ASE)

3. Institutional ownership and firm's performance

Institutional investors represent "companies and organization that choose to investments with more returns and profitability". They like to increase their wealth by investing on profitable projects (Alipour, 2013). Institutional ownership, by virtue of their large shareholding, is better informed than individuals and have high incentives to monitor organization performance, because they potentially benefit the most from monitoring and enjoy greater voting power that facilitate corrective action when necessary. Thy have the resources and the ability to discipline managers and to keep them away from any opportunistic behaviour (Shleifer and Vishney, 1986:

Abdul Jalil and Abdul Rahman, 2010). Institutional investors threats of "voting with their feet" serves as a significant role to monitor, discipline and influence corporate managers (Chung, and al., 2002). There are three hypotheses regarding the relationship between institutional ownership and firm's performance (Pound, 1988).

- The efficient monitoring hypothesis.
- The conflict of interest hypothesis.
- The strategic alignment hypothesis.

According to the efficient monitoring hypothesis, institutional investors have the necessary tools for efficient monitoring of the board of directors and reducing the costs and thus there is a positive relationship between institutional ownership and performance (Alipour, 2013). The conflict of interest hypothesis and the strategic alignment hypothesis both predict a negative relationship between institutional ownership and performance (Barnhart and Rosenstein, 1998). In addition, some researchers came to the conclusion that there is no relationship between institutional ownership and performance (Cronqvist and Nilsson, 2003). Therefore, the effect of institutional ownership on performance is an empirical question.

Agency theory proposed that institutional investors may reduce the agency conflict by monitoring managerial action, they not only have the motivation and duty to monitor organization, and they also have the expertise and resources to do so (Shin-Ping and Tsung-Hsien, 2009). The main reason offered to explain the phenomenon of performance associated with institutional ownership is the expectation that institutional ownership would decrease the principal-agent relationships problems, which would in turn lower the incentives and opportunities for managers to control earning while raising the effectiveness of the performance (Arouri, and al., 2014). Institutional investors play a significant role in transfer of information to other shareholders of the organization and these investors decrease the need for external monitoring, also they have much influence on the decisions of the organization they have invested on, for they have bought a large portion of the shares of these organizations (Brickly,

and al., 1988). Prior studies that examined the relationship between institutional ownership and performance have yielded mixed findings. For instance, (Kao, and al, 2018) found that institutional ownership has direct impact on firm's performance and firm's value. (Khamis, and al., 2015), studied 42 companies in Bahrain Stock Exchange from 2007-2011, and concluded that institutional ownership had positive and statistical significant effect on performance when using Tobin's Q, while it had negative effect without statistically significance when using ROA. Using a sample of 130 Kuwaiti firms listed on Kuwaiti stock exchange (KSE) from 2009-2012, (Al-Saidi, 2013) found that institutional shareholders do not significantly affect firm's performance. (Tomar and Bino, 2012) found that the banks with institutional majority ownership have the highest performance. (Shin-Ping and Tsung-Hsien, 2009) examine the interrelation and determinant between ownership structure and performance using data of 569 Taiwanese listed companies from (1994-2003), the results show that there is a significant negative correlation between institutional ownership and performance. (Agrawal and knoeber, 1996) found that there is an insignificant relationship between institutional ownership and performance.

Considering the literature on the relationship between institutional ownership and performance, the following hypothesis can be formulated:

H3. There is a significant relationship between institutional ownership and performance of Jordanian manufacturing companies listed on the (ASE)

4. Managerial ownership and firm's performance

(Berle and Means, 1932) argued that the non-owner managers of the organizations try to maximize their interest at the expense of the owners and they predicted that the organization profit will affected negatively. They also argued that when managerial ownership is less and shareholders are dispersed, the motivation of the managers to maximizing shareholders wealth decreases and the organization assets are exploited for the benefit of the managers (Alipour, 2013). There

are two hypotheses regarding the relationship between managerial ownership and firm's performance: Convergence of interest hypothesis and entrenchment hypothesis (Aluchna and Kaminski, 2017). According to convergence of interest hypothesis managerial ownership aligns the interests of managers with those of shareholders and is viewed as the mechanism for reducing principal-agent conflict. On the other hand, entrenchment hypothesis state that managerial ownership at significant levels generates costs and increase the risk of expropriation by insiders. Managerial ownership and concentration ownership are related to agency cost problem, which create subject of on-going debate in the literature on the impact and merit of separation of ownership and control (Abu-Serdaneh, and al., 2010). Agency theory deals with the problems arising between shareholders (principal) and management (agent), when the management holds an inadequate equity. A small level of managerial ownership leads to failure of maximizing shareholder's wealth (Alabdullah, 2018). Agency cost will increase when the management hold a small proportion of firm's share because the managers will pursue to use a firm's assets to enhance their own benefits rather than maximize shareholder's wealth (Jensen and Meckling, 1976). Prior studies that examined the relationship between managerial ownership and performance have yielded mixed results. For instance, (Alabdullah, 2018) found that there is highly significant positive relationship between managerial ownership and financial performance in non-financial companies (service and industrial sectors) in Jordan. (Kumar and Singh, 2013) investigated the relationship between managerial ownership and firm's performance and they found that there is a significant positive relationship between these two variables. (Shin-Ping and Tsung-Hsien, 2009) show that there is an inverse relationship between managerial ownership and performance. (Acharya and Bisin, 2009) reporting that there is a negative relationship between managerial ownership and firm's performance (Demsetz and Villalonga, 2001) demonstrate that there is no association between managerial ownership and firm's performance.

Considering the literature on the relationship between managerial ownership and performance, the following hypothesis can be formulated:

H4. There is a significant relationship between managerial ownership and performance of Jordanian manufacturing companies listed on the (ASE)

III. Methodology

1. Sample

The sample of the study consists of all Jordanian manufacturing companies listed in Amman stock exchange (ASE) as cross-sectional study. The data for the fiscal year 2018 have been used and collected mainly from Amman Stock Exchange (ASE) database. Beside the annual reports and financial statements of the quoted companies, other information required to measure the variables of the study is obtained from the Securities Exchange Commission, and the Securities Depositary Center. Of the 63 manufacturing companies listed in Amman stock exchange (ASE), 55 manufacturing companies comprises final sample, representing 87.30 per cent of original population

2. Model specification and variables definition

To examine the effect of ownership structure on the firm's performance of Jordanian manufacturing companies listed in (ASE), it is assumed that the firm's performance depend on a number of explanatory variables; ownership structure dimensions, and other firm-specific characteristics. A multiple linear regression analysis was estimated in order to assess the effect of each variable on the firm's performance and to test associated hypotheses. Thus, the following regression models are estimated:

Model 1:

$$\mathbf{ROA} = \beta_0 + \beta_1 \mathrm{CON} + \beta_2 \mathrm{FOR} + \beta_3 \mathrm{INS} + \beta_4 \mathrm{MAN} + \beta_5 \mathrm{SIZE} + \beta_6 \mathrm{LEV} + \varepsilon$$

Model 2:

$$\textbf{Tobin's Q} = \beta_0 + \beta_1 \text{CON} + \beta_2 \text{FOR} + \beta_3 \text{INS} + \beta_4 \text{MAN} + \beta_5 \text{SIZE} + \beta_6 \text{LEV} + \varepsilon$$

Where:

ROA: return on assets

Tobin's Q: Tobin's Q ratio.

CON: concentration ownership.

FOR: foreign ownership.

INS: institutional ownership.

MAN: managerial ownership.

SIZE: company size, natural logarithm of total assets.

LEV: leverage, total debt to total assets.

α: is the constant.

β_1 – β_6: the slope of the independent and control variables.

ε it: residuals or error term.

The dependent variable: firm's performance which is measured using both accounting-based performance measure (ROA) and market-based performance measure (Tobin's Q). Return on assets (ROA) measures the overall effectiveness of management in generating profits with its available assets (Gitman, 2003). Many studies on ownership structure and performance use this measure (Kao, and al, 2018; Gaur, and al., 2015; Yasser and Al Mamun, 2015; Arouri, and al., 2014; Al-Saidi, 2013; Alipour, 2013; Abu-Serdaneh, and al., 2010; Zeitun and Tian, 2007). Even though there is a high correlation between different accounting-based measures of performance, return on assets is preferred over return on equity and return on sales as there is greater variation in equity and sales from year to year as compared to total assets (Gaur, and al., 2015). ROA is computed as the ratio of net income after tax to total assets. The study also uses Tobin's Q as alternate performance measure for robustness tests. Tobin's Q is popularly adopted as a measure of performance because it reflects the market's expectation of firm future earnings (Arouri, and al., 2014). The advantage of Tobin's Q is that it indicates the current value and potential future earnings of the firm. It measures

value the investors put on a firm compared to the cost of setting up such a firm. If Tobin's Q is greater than one, value has been added to firms over years, indicating a well-managed firm and if Tobin's Q is less than one, value has disappeared (Alipour, 2013). Following prior studies (Kao, and al, 2018; Abweeni and Al-Omari, 2016; Yasser and Al Mamun, 2015; Khamis, and al., 2015; Arouri, and al., 2014; Al-Saidi, 2013; Alipour, 2013; Abu-Serdaneh, and al., 2010; Zeitun and Tian, 2007; Demsetz and Villalonga, 2001) Tobin's Q is computed as the ratio of the sum of the market value of common shares and the book value of total debt divided by the book value of total assets.

Moreover, there are four independent variables in the current study, which are:

Concentration ownership: the ratio of total percentage of shareholding by persons who have 5%, 10%, 15% or 20% of issued company's shares (Setiawan and al., 2016; Abu-Serdaneh, and al., 2010). Foreign ownership: the ratio of total shares owed by foreign investors to the total company's shares (Alabdullah, 2018). Institutional ownership: this variable related to a portion of equity owned by institutional investors, it is measured as the proportion of shares owned by institutional shareholders to the total of company shares (Kao, and al, 2018; Abweeni and Al-Omari, 2016). Managerial ownership: The ratio of total shares owed by directors or officers to the total company's shares (Alabdullah, 2018).

In an attempt to minimize potential bias that may arise on account of omitted variables, the researcher control for other firm-specific characteristics by incorporating company size and leverage. Moreover, the selection of control variables is guided by the prior literature related to the relationship between ownership structure and firm's performance such as (Alabdullah, 2018; Kao, and al, 2018; Al-Najjar and Kilincarslan, 2016; Abweeni and Al-Omari, 2016; Abu-Serdaneh, and al., 2010).

Company size: this variable was used widely in prior studies, because it has direct effect on firm's performance, large companies have an advantage in raising external fund in capital markets and

depend less on internal fund, which can have valuable effects on firm's performance (Kao, and al, 2018). Larger companies may be more efficient, as they exploit economics of scale and have the ability to diversify risks, employ more skilled managers and targeting a large number of customers (Zouari and Taktak, 2014; Abu-Serdaneh, and al., 2010). Company size is measured by the natural logarithm of end of total assets. Accordingly, the researcher predicts a positive relationship between company size and firm's performance.

Leverage: determines the firm's long-term debt-paying ability. (Jensen and Meckling, 1976) identified leverage as a strong mechanism for solving the agency problem due to its ability to prevent managers from investing in value-destroying investments. Firms finance their activities through borrowing commit themselves to fixed charges that include principal payments and interest. Failure to repay debt may subject the company to risk of bankruptcy. Creditors would actively monitor the firm's capital structure to protect their own interest. Therefore leverage influences firm's performance (Arouri, and al., 2014). Leverage indicates the percentage of assets financed by creditors. The lower this ratio the better the firm's position (Gibson, 1995). Leverage was measured as the ratio of total debt to total assets. Accordingly, the researcher predicts a negative relationship between leverage and firm's performance.

Table (1) shows a summary of study variables and measurement

Table (1) Study variables and their measurements

Variable	Acronym	Measurement
Dependent Variables		
Return on Assets	ROA	The ratio of net income after tax to total assets
Tobin's Q	Tobin's Q	The ratio of the sum of the market value of common shares and the book value of total debt divided by the book value of total assets
Independent Variables		

Concentration ownership	CON	The ratio of total percentage of shareholding by persons who have 5%, 10%, 15% or 20% of issued company's shares
Foreign ownership	FOR	The ratio of total shares owed by foreign investors to the total company's shares
Institutional ownership	INS	The ratio of total shares owed by holding companies to the total company's shares
Managerial ownership	MAN	The ratio of total shares owed by directors or officers to the total company's shares
Control Variables		
Company size	SIZE	The natural logarithm of total assets
Leverage	LEV	The ratio of total debt to total assets

IV. Empirical results

1. Descriptive statistics

Table (2) present the descriptive statistics of the study variables (dependent and independent). It summarizes the mean value, standard deviation, minimum, and maximum of all variables used in the study.

Table (2) descriptive statistics of both the dependent and the independent variables

Variable	Mean	Standard deviation	minimum	maximum
1.CONCO	19.221	24.540	0.000	83.891
2. FOREO	16.935	28.547	0.000	99.081
3. INSTO	50.510	33.450	0.000	99.919
4. MANGO	50.909	50.452	0.000	1.000
5. SIZE	16.826	1.529	13.52	20.080
6. LEV	34.302	21.911	0.815	76.181
7. ROA	-0.559	7.944	-21.09	18.056
8. Tobin's Q	0.885	0.438	0.170	1.960

As shown in Table (2). The results show that the mean ROA of Jordanian manufacturing companies is -0.559 per cent with a standard deviation of 7.944. Furthermore, minimum rate of ROA is -21.09 with

maximum level of ROA equal to 18.056 per cent. The results show that the mean Tobin's Q of Jordanian manufacturing companies is 0.885 per cent with a standard deviation of 0.438. Furthermore, minimum rate of Tobin's Q is 0.170 with maximum level of Tobin's Q equal to 1.960 per cent.

With regard to the ownership structure variables, the results show that the average percentage of managerial ownership is 50.909 per cent. Furthermore, Institutional ownership holds 50.510 per cent of the total company's shares. The average percentage of concentration ownership is 19.221 per cent, followed by foreign ownership with 16.935 per cent. These results suggest that the Jordanian manufacturing companies are characterised by a highly concentrated level of managerial ownership. This finding was close to that in the study of (Abu-Serdaneh, and al., 2010) who found that foreign ownership in the Jordanian manufacturing companies for the period 2002-2006 was around 14 per cent, and managerial ownership was around 56 per cent. As for control variables, descriptive statistics results show that the average company size is 16.826 (natural logarithm of total assets). The average leverage is 34.302.

2. Correlations analysis

Table (3) presents the results of Pearson's correlations coefficients amongst all the study variables. The Pearson's correlations coefficients between each pair of explanatory variables should not exceed 0.80 (Gujarati, 2004). As shown in table (3) the correlation coefficients between all explanatory variables are not high and they are within the acceptable range. Suggesting that no multicollinearity problem.

Table (3) Correlations Matrix

Variable	CONCO	FOREO	INSTO	MANGO	SIZE	LEV	ROA	Tobin's Q
1.CONCO	1							
2. FOREO	-0.230	1						
3. INSTO	-0.657**	0.413**	1					
4.MANGO	0.454**	-0.155	-0.234	1				
5. SIZE	-0.299*	0.330*	0.315*	-0.258	1			
6. LEV	-0.005	-0.114	0.103	-0.021	0.349**	1		

7. ROA	-0.032	0.286*	0.110	0.031	0.260	-0.284*	1	
8. Tobin's Q	-0.025	0.078	0.168	0.096	0.017	0.143	-0.011	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

3. The multicollinearity between independent variables

Table (4) presents the results of Variance Inflation Factor (VIF) and Tolerance values (calculated as 1/VIF). As a rule of thumb, when VIF values exceeds 10, and tolerance values are lower than 0.10, it indicates to a potential multicollinearity problems (Hair and al., 2010). As shown in table (4), all VIF values for all variables are less than 10, with the tolerance values that are more than 0.10. These results support the Pearson's correlations coefficients and provide proof there is no serious of potential multicollinearity problems.

Table (4) The Results of Tolerance, VIF values

Independent Variables	Tolerance	VIF
1.CONCO	0.453	2.208
2. FOREO	0.709	1.411
3. INSTO	0.468	2.135
4.MANGO	0.763	1.311
5. SIZE	0.678	1.474
6. LEV	0.785	1.274

4. Regression analysis

In order to examine the effect of ownership structure on firm's performance, a multiple linear regression analysis was used. Table (5) provides the regression results based on accounting-based performance measure (ROA). Table (6) provides the regression results based on market-based performance measure (Tobin's Q). It can be noted from the indication of Adjusted R^2 and Sig. F that the accounting-based performance measure (ROA) is more explanatory and powerful than the market-based performance measure (Tobin's Q).

According to the accounting-based performance measure (ROA). Table (5) reveals that the Adjusted R^2 is equal to (0.094). This indicates that the combination of the independent variables explain

9.4% of variation of the firm's performance. Further, the result shows that the F- value equal (4.113) and it is significant at the significance level ($\alpha \leq 0.05$) . This indicates that there is a significant effect between ownership structure and firm's performance.

In terms of ownership structure variables, the coefficient of CONCO is positive and statistically insignificant at less than 5 per cent significance level for ROA. Based on this result, H1 is not supported. This result is consistent with (Zouari and Taktak, 2014; Al-Saidi, 2013; Demsetz and Villalonga, 2001). According to (Demsetz and Villalonga, 2001) firms with majority shareholders do not differ from firms of diffused ownership in terms of performance. On the other hand there are a number of variables that interpreting the significant variation in the ownership concentration such as firm's size, profits, legal system, and insider ownership. Therefore, ownership concentration might have no effect on firm performance due to endogeneity; ownership concentration and firm's performance are endogenous and differ systematically by firm and industry to maximize the firm's performance (Al-Saidi, 2013). In addition, this result does not support the entrenchment hypothesis which states that the existence of large controlling shareholders can lead to expropriation behavior which may limit the firm's ability to borrow or to issue new shares. Consequently decrease firm's performance and neutrality hypothesis which states that maximizing the firm value depends on external factors such as its environment characteristics. Therefore, separation exists between ownership and control, and there is no reason to think that a concentrated firm is more efficient than the dispersed firm. Also, this result does not support the convergence of interest hypothesis which state that ownership concentration may improve performance through decreasing monitoring costs and providing better control of management.

The coefficient of FOREO is positive and statistically insignificant at less than 5 per cent significance level for ROA. Based on this result, H2 is not supported. This result is in line with (Alabdullah, 2018) who found that there is insignificant relationship

between foreign ownership and financial performance in non-financial companies (service and industrial sectors) in Jordan, (Abu-Serdaneh, and al., 2010) who documented that there is no significant relationship between foreign ownership and performance. According to (Alabdullah, 2018) the reason is although Jordanian government issued regulation (i.e., privatization) since 1996, still traditional business dominates the majority of Jordanian firms and thus the Jordanian government did not achieve attraction of foreign investments as anticipated.

The coefficient of INSTO is positive and statistically insignificant at less than 5 per cent significance level for ROA. Based on this result, H3 is not supported. This result is in line with those of (Khamis, and al., 2015; Al-Saidi, 2013; Agrawal and knoeber, 1996) who found that there is an insignificant relationship between institutional ownership and performance. The conflict of interest hypothesis and the strategic alignment hypothesis both predict a negative relationship between institutional ownership and performance (Barnhart and Rosenstein, 1998). Also, this result does not support the efficient monitoring hypothesis which implies that institutional investors have the necessary tools for efficient monitoring of the board of directors and reducing the costs and thus there is a positive relationship between institutional ownership and performance (Alipour, 2013).

The coefficient of MANGO is positive and statistically insignificant at less than 5 per cent significance level for ROA. Based on this result, H4 is not supported. This results are in line with (Shin-Ping and Tsung-Hsien, 2009) who show that there is an inverse relationship between managerial ownership and performance, (Acharya and Bisin, 2009) who reporting that there is a negative relationship between managerial ownership and firm's performance, (Demsetz and Villalonga, 2001) who demonstrate that there is no association between managerial ownership and firm's performance. According to convergence of interest hypothesis managerial ownership aligns the interests of managers with those of shareholders

and is viewed as the mechanism for reducing principal-agent conflict. On the other hand, entrenchment hypothesis state that managerial ownership at significant levels generates costs and increase the risk of expropriation by insiders (Aluchna and Kaminski, 2017).

With respect to control variables, the results in table (5) indicated a positive and significant between SIZE and accounting-based performance measure (ROA). This result is in line with (Kao, and al, 2018; Al-Najjar and Kilincarslan, 2016). Larger companies may be more efficient, as they exploit economics of scale and have the ability to diversify risks, employ more skilled managers and targeting a large number of customers (Zouari and Taktak, 2014; Abu-Serdaneh, and al., 2010). LEV is negatively and significantly related to (ROA). This result is in line with (Kao, and al, 2018; Khamis, and al., 2015; Abu-Serdaneh, and al., 2010). Creditors would actively monitor the firm's capital structure to protect their own interest. Therefore leverage influences firm's performance (Arouri, and al., 2014).

Table (5) ROA and ownership structure

Independent Variable: ROA				
Dependent Variables	**B**	**Beta**	**t**	**Sig.**
CONCO	0.041	0.125	0.682	0.498
FOREO	0.032	0.113	0.773	0.443
INSTO	0.020	0.086	0.474	0.637
MANGO	1.702	0.108	0.764	0.448
SIZE	2.122	0.409	2.725	0.009*
LEV	-0.153	-0.421	-3.022	0.004*
Constant	-34.236		-2.662	0.011*
R	0.517			
R^2	0.268			
Adjusted R^2	0.176			
F	2.922			
Sig.	0.016			

* Statistically significant at the significance level ($\alpha \leq 0.05$)

Table (6) represents the result of the relationship between ownership structure and Tobin's Q. It can be seen form Table (6) that the F-Value is 0.621 and it is not significant at 0.05, which indicate

that there is no significant effect between all of the independent variables (ownership structure variables and control variables) and Tobin's Q. This result is in line with (Abweeni and Al-Omari, 2016; Abu-Serdaneh and al., 2010). (Demsetz and Villalonga, 2001) found that ownership structure is insignificant in interpreting firm's performance (measured by Tobin's Q).

(Khamis, and al., 2015) found that the ROA is more relevant to performance than Tobin's Q. (Zeitun and Tian, 2007) documented that the insignificant results in the Tobin's Q model may suggest that the Jordanian equity market is inefficient or there could be other factors which were missed that affect Tobin's Q.

Table (6) Tobin's Q and ownership structure

Independent Variable: Tobin's Q				
Dependent Variables	**B**	**Beta**	**t**	**Sig.**
CONCO	0.001	0.052	0.252	0.802
FOREO	0.001	0.065	0.396	0.694
INSTO	0.003	0.212	1.042	0.303
MANGO	0.099	0.114	0.719	0.476
SIZE	-0.024	-0.082	-0.487	0.629
LEV	0.003	0.160	1.019	0.313
Constant	0.945		1.183	0.243
R	0.268			
R^2	0.072			
Adjusted R^2	-0.044			
F	0.621			
Sig.	0.713			

* Statistically significant at the significance level ($\alpha \leq 0.05$)

V. Conclusion

The purpose of this study is to empirically examine the effect of ownership structure variables (concentration, foreign, institutional, and managerial) on firm's performance as measured by Tobin's Q and ROA of Jordanian manufacturing companies listed in Amman stock exchange (ASE). Using a dataset of 55 listed Jordanian manufacturing companies for the fiscal year 2018 is used. Multiple regression

analysis is undertaken to analyse the potential effect of ownership structure on firm's performance.

The study reveals different results by using different firm's performance measures. When using the first model (ROA) the results found that there is no evidence supporting the notion that ownership structure variables affects firm's performance. According to firm-specific characteristics, the results found that there is a positive and significant between SIZE and accounting-based performance measure (ROA). LEV is negatively and significantly related to accounting-based performance measure (ROA). However, when the second model (Tobin's Q) used the results found that there is no significant effect between all of the independent variables and Tobin's Q. The study also aims to explore the pattern of ownership structure in Jordanian manufacturing companies the results show that the average percentage of managerial ownership is 50.909 per cent. Furthermore, Institutional ownership holds 50.510 per cent of the total company's shares. The average percentage of concentration ownership is 19.221 per cent, followed by foreign ownership with 16.935 per cent. These results suggest that the Jordanian manufacturing companies are characterised by a highly concentrated level of managerial ownership.

This study has several limitations. First, the research was carried out in Jordan. Therefore the findings are more likely to have limited application to other countries. Second, this study is done in industrial sector due to time and other resource constraints, so it is recommended for future researchers to do study in other sectors, and consider other factors which researcher did not deal with them in this study, also the study found that the accounting-based performance measure (ROA) model is more explanatory and powerful to firm's performance rather than the market-based performance measure (Tobin's Q) model but this needs further investigation by future research.

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