

Ownership structure and dividend policy in Jordan

هيكل الملكية وسياسة توزيع الأرباح في الأردن

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ABSTRACT:

This study aims to examine the effect of ownership structure on dividend policy of Jordanian manufacturing companies listed in Amman stock exchange. More specifically, the study examine several hypotheses regarding the relationship between ownership structure (namely: concentration, foreign, institutional, and managerial) and dividend policy. To achieve study objective, this study uses a combination of time-series and cross-section data. Five year (2014-2018) panel data of 61 companies are examined. In order to test the study hypotheses, the study conduct *F*-test, Lagrange Multiplier test (LM- test), and the Hausman test to determine the best statistical method (ordinary least squares method (OLS), fixed effects or random effects models). The empirical findings of this study show that all the ownership variables (ownership concentration, institutional ownership, and managerial ownership are insignificant in affecting the dividend policy, and the direction of the relationship is positive except a negative relationship between foreign ownership and dividend policy. Also, the empirical finding showed that the company size and return on assets (ROA) were found to have a significant positive effect on dividend policy, where as leverage was found to have a significant negative effect on dividend policy.

Key words: Ownership structure, dividend policy, manufacturing companies, Jordan.

Jel classification:E10, C11

ملخص :

هدفت الدراسة إلى إختبار أثر هيكل الملكية على سياسة توزيع الأرباح في الشركات الصناعية الأردنية المدرجة في سوق عمان المالي، وبشكل أكثر تحديداً فحص الفرضيات المتعلقة بكل من (تركز الملكية، الملكية الأجنبية، الملكية المؤسسية والملكية الإدارية) وعلاقتها بسياسة توزيع الأرباح. لتحقيق أهداف الدراسة تم استخدام مدخل بيانات السلاسل الزمنية المقطعية وهي عبارة عن بيانات مقطعية لـ (61) شركة تتضمن سلسلة زمنية للفترة من (2014-2018) ولإختبار فرضيات الدراسة تم استخدام fixed effects model. توصلت الدراسة الى أن عدم وجود أثر لجميع متغيرات هيكل الملكية (تركز الملكية، الملكية الأجنبية، الملكية المؤسسية والملكية الإدارية) على سياسة توزيع الأرباح، كما توصلت الدراسة إلى وجود أثر إيجابي لكل من حجم الشركة ومعدل العائد على الأصول على سياسة توزيع الأرباح، ووجود أثر سلبي للمديونية على سياسة توزيع الأرباح.

كلمات مفتاحية: هيكل الملكية، سياسة توزيع الأرباح، الشركات الصناعية الأردنية.

تصنيف (jel): E10, C11

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1. INTRODUCTION

The relationship between ownership structure and dividend policy remains at the centre in the field of corporate finance research, and has captured the attention of researchers for many decades, dating from the seminal work of (Berle and Means, 1932) who argued that an increase in management professionalization, organizations might be operating for manager's benefits at the expense of the owners. In this respect, agency cost theory represents one of the most widely studied theories to explain why companies pay dividend (Al-Najjar and Kilincarslan, 2016). Agency cost theory was proposed by (Jensen and Meckling, 1976). This theory was derived from the problems related to the separation of management and ownership (Al-Najjar and Kilincarslan, 2016). Agency cost theory highlights the conflict of interest between the ownership and management. The role of management is to maximize wealth for the shareholders. However, managers who don't have significant ownership may choose instead to maximize their own net benefits at the expense of the owners. As a result, the owners are forced to incur an agency cost to ensure that the managers act in an appropriate way (Kim, *et al.*, 2007). In this context, (Berle and Means, 1932) indicated that the predominance of widely held corporations, where ownership structure is dispersed among small shareholders, but the control is concentrated in the hands of managers (Al-Najjar and Kilincarslan, 2016). Agency costs theory can be divided into two types; first, conflict between shareholders and management, and second, conflict between majority and minority shareholder (Setiawan *et al.*, 2016). Conflict between shareholders and management rises in widely dispersed corporations. (Jensen and Meckling, 1976) argue that information asymmetry between shareholders and management may relate to agency cost. This conflict stems from the fact that management often make decisions in their own interests at the expense of shareholders. In addition, dispersed shareholders do not have enough shares to monitor management, as the costs of doing so are too expensive (Setiawan *et al.*, 2016). On the other hand, large shareholders hold large numbers of shares to bear the costs of monitoring management, and to earn their returns on investments (Setiawan *et al.*, 2016; Shleifer, and Vishny, 1986). Conflict between

majority and minority shareholder rises in insider-dominated corporations. Majority shareholders have an opportunity to make decisions in their own best interests, and to keep resources within corporation (Setiawan *et al.*, 2016). Dividend policies associated with “management decisions on how much of the corporation’s earnings are to be paid out to shareholders as dividends vs. retaining for reinvestment in new opportunities”. According to agency theory, dividend payment reduces agency costs between shareholders and management, because it displays management commitment in maximizing the shareholders wealth without having to invest into risky or unprofitable projects (Zainudin *et al.*, 2018). Agency theory argues that cash dividend can be used to mitigate agency problems by reducing free cash flow and forcing managers to enter the capital markets for financing, hence leading to induce monitoring by the market (Al-Najjar and Kilincarslan, 2016). (Rozeff, 1982; Easterbrook, 1984) suggest that managers may prefer lower dividend to minimize having to finance new projects by issuing new capital, because new capital will increase transaction cost and the scrutiny of management as a part of external financing. They also suggest that management might engage in low-risk projects rather than high-risk (return) projects which are more preferable by shareholders. (Jensen and Meckling, 1976) argue that dividend can be effective control mechanism to mitigate conflict between management and shareholders (or between major and minority ownership). Dividend limits managers’ use of the cash in a discretionary manner. By increasing the companies’ size and diffusing its ownership structure, the resolution for the conflict of interests between the ownership and management becomes a central issue (Abu-Serdaneh, *et al.*, 2010).

Building upon the above issues, the objectives of this study are twofold. First, it aims to investigate the relationship between ownership structure and dividend policy in Jordanian manufacturing companies listed on the Amman stock exchange (ASE) during the period 2014-2018 considering multidimensional ownership structure and other companies’ characteristics as endogenous variables. Second, it aims to explore the pattern of ownership structure in Jordanian manufacturing companies. It is worth mentioning that empirical studies which

have addressed the impact of ownership structure on dividend in Jordan environment is relatively rare, and prior studies have paid extensive amount of attention on the developed countries, where financial market are well regulated and relatively transparent, and where the influence of ownership structure on dividend policy may differ from those in developing countries. Accordingly, the study aims to bridge the gap in existing ownership structure literature that might have important implications on dividend policy decisions of the Jordanian manufacturing companies.

This study provides empirical evidence from Amman stock exchange (ASE) to address the effect of ownership structure on the dividend policy of Jordanian manufacturing companies listed on the Amman stock exchange (ASE). The current study contributes to the literature in various ways. First: It adds more to the growing literature of ownership structure, and dividend policy. Second: Investigating the effects of ownership structure on dividend policy to justify the conflicting results in prior researches. Third: Exploring the pattern of ownership structure in Jordanian manufacturing companies. 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 presents the research methodology. Section 4 presents the empirical results and discussion, followed by Section 5 which contains a summary and conclusion.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Although dividend policy is a major corporate decision faced by management, it remains one of the “puzzles” in the field of corporate finance literature (Al-Najjar and Hussainey, 2009). Dividend policy relates to the payout policy that a corporation follows in determining the size and pattern of distributions to shareholders (Baker and Weigand, 2015). Dividend policies associated with “management decisions on how much of the corporation’s earnings are to be paid out to shareholders as dividends vs. retaining for reinvestment in new opportunities” (Zainudin *et al.*, 2018). Prior studies have presented theoretical

explanations for paying dividend, and there is no clear winner among the competing dividend theories, and no single theory has become the dominant solution to the dividend puzzle (Baker, *et al.*, 2019). Some common explanations for why companies pay dividend are as follows (Baker and Jabbouri, 2017; Bokpin, 2011):

- Bird in the hand theory suggests that investors prefer less risky dividend to potential capital gains (unseen retained earnings).
- Signaling theory assert that a firm's announcement of dividend changes provides a signal of its future prospects since investors have asymmetric information.
- Agency theory asserts that paying dividend reduces the cash available at the discretion of managers to spend on potentially unprofitable projects. Agency theory proposed an inverse relationship between agency costs and dividend.
- Tax preference theory (Tax clientele theory): suggest that investors select a firm or portfolios with a specific dividend policy because of different tax treatment.
- Firm life cycle theory of dividend contends that a firm's optimal dividend policy depend on its stage in the firm life cycle. Growth firms tend to retain all their profit to fund growth opportunities and avoid expensive external financing, but mature firms with few or no growth potential tend to pay dividend, while young firms refuse to do so.
- Free cash flow theory suggests that an increase in dividend is favourably received by investors because it means that management will have less cash to invest in negative net present investments.
- Catering theory of dividend advances that firms pay dividend as a response to investor's needs or preferences for dividend.
- Inflation and dividend payment theory contends that managers pursue an optimal dividend policy where they pay a desired level of real income to their investors.

2.1 Ownership Concentration and dividend policy

Ownership concentration measures dispersion of ownership among all or certain shareholders (Abu-Serdaneh, *et al.*, 2010). (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 (Harada, and Nguyen, 2011). 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. Empirically, findings of the relationship between ownership concentration and dividend are mixed. Many studies found that ownership concentration is associated with higher dividend payout; other studies concluded that ownership concentration is associated with lower dividend payout. (Faccio, *et al.*, 2001) investigates the relationship between dividend payout and the dispersal of ownership rights and control rights by studying different agencies in Western Europe and Asia. They argue that the existence of a second large shareholder increases dividend payments. Also the study found that ownership concentration has a positive effect on dividend policy. In Finland, (Maury and Pajuste, 2005) examined the effect of multiple large shareholders on dividend policy. They found that the existence of multiple large shareholders could be considered as an effective corporate governance mechanism that protects minority shareholders. The study concludes that multiple large shareholders affect dividend payout positively. (Harada, and Nguyen, 2011) test the effect of ownership concentration on dividend policy using a large sample of Japanese companies. The results showed that ownership concentration is associated with significantly lower dividend in proportion to earning, in other words controlling shareholders has a negative effect on dividend payout. Also firms with concentrated ownership are less likely to increase dividends when earnings increase. Consistent with these findings, (Claessens and Djankov, 1999) using a sample of 706 Czech companies from 1992 to 1997, they found that ownership concentration reduces firm's value, which decreases dividend payout. In Jordanian context, (Obaidat, 2018) found that there is a negative relationship

between concentration ownership and dividend policy, using a sample of 64 financial companies listed on Amman Stock Exchange during 2014-2016. Based on the literature review, the following hypothesis is formed:

H1: There is a significant relationship between ownership concentration and dividend policy of Jordanian manufacturing companies listed on the Amman stock exchange (ASE)

2.2 Foreign Ownership and dividend policy

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 foreigner increases, performance is expected to increase (Abu-Serdaneh, *et al.*, 2010). Also, foreign investors have to maintain their reputation and meet regulation on corporate governance practices in host countries, which indicate that they may pay more dividends (Setiawan *et al.*, 2016). According to (La Porta, *et al.*, 2000) foreign controlled companies have better corporate governance mechanisms which subsequently lead them to pay more dividends. (Kao, *et al.*, 2018) argued that because foreign ownership has less connection with insiders than domestic investors, they monitor insiders more effectively. However, the prior literature that examined the impact of foreign ownership on dividend policy found different results. In addition; there is limited evidence in understanding the relationship between foreign ownership and dividend policy in emerging markets (Al-Najjar and Kilincarslan, 2016). Therefore, it is important to investigate the relationship between foreign ownership and dividend policy. (Alabdullah, 2018) found that there is insignificant relationship between foreign ownership and market share in non-financial companies in Jordan. (Kumar, 2003) examined the link between ownership structure, corporate governance and firms dividend payout policy. Using a sample of 2575 Indian corporate firms over the period 1994-2000, the study indicated that there is no evidence in favour of association between foreign ownership and dividend payout growth. (Al-Najjar and Kilincarslan, 2016)

documented that foreign ownership is associated with a less likelihood of paying dividends and has a significantly negative impact on dividend yield and dividend payout ratio. Using a sample of 264 Turkish companies listed in ISE during the period 2003-2012. In china, (Lam *et al.*, 2012) reported that foreign investors prefer to keep dividends in their companies to fund future investment. Foreign ownership has significant negative effects on cash dividends. (Glen *et al.*, 1995) also indicated that foreign ownership has a negative relationship between foreign ownership and dividend payments; they argued that foreign investors often hold stocks of emerging markets for their long- run growth potential, not for the short-term dividend income they will produce. On the contrary, (Setiawan *et al.*, 2016) show that foreign ownership has a positive impact on dividend payout, with a sample consist of 710 firm- year observations from 2006-2012 in Indonesian Stock Exchange. Similarly, (Obaidat, 2018) documented that there is a positive relationship between foreign ownership and dividend policy, using a sample of 64 financial companies listed on Amman Stock Exchange during 2014-2016. But the study of (Al-Nawaiseh, 2013) suggests a positive but not significant relationship between foreign ownership and dividend policy. Based on the literature review, the following hypothesis is formed:

H2: There is a significant relationship between foreign ownership and dividend policy of Jordanian manufacturing companies listed on the Amman stock exchange (ASE)

2.3 Institutional Ownership and dividend policy

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 (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, *et al.*, 2002).

(Abdelsalam *et al.*, 2008) examine the effect of institutional structure on dividend policy, using pooled cross-sectional observations from the top 50 listed Egyptian companies between 2003 and 2005. They found that there is a significant positive relationship between institutional ownership and dividend policy. In UK, (Short *et al.*, 2002) examine the link between dividend policy and institutional ownership and found a positive association between them. In Jordanian context, the study of (Al-Nawaiseh, 2013) suggests a positive and significant relationship between institutional ownership and dividend policy. (Obaidat, 2018) found that there is a positive relationship between institutional ownership and dividend policy, using a sample of 64 financial companies listed on Amman Stock Exchange during 2014-2016. It is worth mentioning that most institutional ownership in Jordan consists of Social Security Corporation (SSC) and financial institutions. Based on the literature review, the following hypothesis is formed:

H3: There is a significant relationship between institutional ownership and dividend policy of Jordanian manufacturing companies listed on the Amman stock exchange (ASE)

2.4 Managerial Ownership and dividend policy

(Alabdullah, 2018) found that there is highly significant positive relationship between managerial ownership and market share in non-financial companies in Jordan. (Short *et al.*, 2002) examine the link between dividend policy and managerial ownership and found a negative association between them. (Abdelsalam *et al.*, 2008) found that there is no significant association was found between board compositions with both dividend decision and dividend ratios. In Jordanian context, (Al-Nawaiseh, 2013) suggests a negative and significant relationship between managerial ownership and dividend policy. (Obaidat, 2018) found that there is a positive relationship between managerial ownership and dividend policy, using a sample of 64 financial companies listed on Amman Stock Exchange during 2014-2016. Based on the literature review, the following hypothesis is formed:

H4: There is a significant relationship between managerial ownership and dividend policy of Jordanian manufacturing companies listed on the Amman stock exchange (ASE)

3. METHODOLOGY

3.1 Population and sample

The population of the study consists of all Jordanian manufacturing companies listed in Amman stock exchange (ASE) during the period 2014-2018. The sample includes all manufacturing companies for which all the required data are available. The total number of Jordanian manufacturing companies listed on the Amman stock exchange (ASE) in 2018 is 63 companies. The total number of companies analysed is (61), representing 96.8 per cent of the original population and the total number of observations added up to (305) after excluding the outliers to avoid the impact of the extreme values. Data was obtained 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 Depository Center.

3.2 Variable definition and measurement

To examine the effect of ownership structure on dividend policy of Jordanian manufacturing companies listed in Amman stock exchange, it is assumed that dividend policy depend on a number of explanatory variables; ownership structure dimensions, and other company characteristics.

The dependent variable was dividend policy which was measured by dividend yield which is the dividends per share (DPS) divided by market price per share (MPS). Dividend yield take a positive value if such a company paid dividends and it take on a value of zero if the company did not. (Al-Najjar and Kilincarslan, 2016; Abdelsalam *et al.*, 2008). There are two groups of explanatory variables were used. First group consist of four ownership structure variables. Second group consist of control variables, as follows:

Concentration ownership: the ratio of total percentage of shareholding by persons who have 5%, 10%, 15% or 20% of issued company's shares (Setiawan *et al.*,

2016; Abu-Serdaneh, *et 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, *et al.*, 2018). Managerial ownership: dummy 1 is used when the directors or officers are a member on the board of director, and 0 otherwise. (Abu-Serdaneh, *et al.*, 2010).

In an attempt to minimize potential bias that may arise on account of omitted variables, the researcher control for other general company characteristics by incorporating company size, leverage and return on assets. Moreover, the selection of control variables is guided by the prior literature related to the relationship between ownership structure and dividend policy (Alabdullah, 2018; Kao, *et al.*, 2018; Al-Najjar and Kilincarslan, 2016; Abu-Serdaneh, *et al.*, 2010). The following provide a brief discussion for control variables:

Leverage: determines the firm's long-term debt-paying ability. Leverage may affect a company ability to pay dividends. The companies finance their activities through borrowing commit themselves to fixed charges that include principal payments and interest. Failure to make these payments and interest may subject the company to risk of bankruptcy; therefore, the company with high leverage tend to pay fewer dividends (Al-Ajmi and Abo Hussain, 2011). (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. 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 dividend policy.

Company size: this variable was used widely in prior studies, and has become a key variable to explain the company's decision to pay dividends. "Large companies are more likely to be mature and thus have easier access to capital markets, and should be able to pay dividends" (Al-Najjar and Hussainey, 2009). Company size has the potential to influence dividend policy because large

companies have an advantage in raising external fund in capital markets and depend less on internal fund. Moreover, these companies have lower likelihood of the risk of bankruptcy and therefore should be able to pay more dividends (Al-Ajmi and Abo Hussain, 2011). Company size is measured by the natural logarithm of end of total assets. Accordingly, the researcher predicts a positive relationship between company size and dividend policy.

Return on assets (ROA): measures the overall effectiveness of management in generating profits with its available assets (Gitman, 2003). Company profitability is considered to be a critical factor that affects dividend policy (Al-Najjar and Hussainey, 2009). Companies with higher profitability tend to pay more dividends than companies with lower profitability. Accordingly, the researcher predicts a positive relationship between return on assets (ROA) and dividend policy. Return on Assets (ROA) was measured as the ratio of net income after tax to total assets.

Study variables are as defined in table (1)

Table (1) Study variables and their measurements

Variable	Acronym	Measurement
Dividends yield	DYLD	dividends per share (DPS) divided by market price per share (MPS)
Concentration ownership	CONCO	The ratio of total percentage of shareholding by persons who have 5%, 10%, 15% or 20% of issued company's shares.
Foreign ownership	FOREO	The ratio of total shares owed by foreign investors to the total company's shares.
Institutional ownership	INSTO	The ratio of total shares owed by holding companies to the total company's shares.
Managerial ownership	MANGO	dummy 1 is used when the directors or officers are a member on the board of director, and 0 otherwise
Company size	SIZE	The natural logarithm of total assets
Leverage	LEV	The ratio of total debt to total assets
Return on Assets	ROA	The ratio of net income after tax to total assets

3.3 The study model

This study aims to examine the effect of ownership structure on dividend policy of Jordanian manufacturing companies listed in Amman stock exchange. Thus,

ownership structure is reflected as independent variable, while the dividend policy is the dependent variable. The following regression model is estimated:

$$DYLD\ it = \alpha + \beta_1\ CONCO\ it + \beta_2\ FOREO\ it + \beta_3\ INSTO\ it + \beta_4\ MANGO\ it + \beta_5\ SIZE\ it + \beta_6\ LEV\ it + \beta_7\ ROA\ it + \varepsilon\ it\ (2)$$

Where:

DYLD it: dividends yield, dividends per share (DPS) divided by market price per share (MPS).

CONCO it: concentration ownership

FOREO it: foreign ownership.

INSTO it: institutional ownership.

MANGO it: managerial ownership

SIZE it: company size, natural logarithm of total assets

LEV it: leverage, total debt to total assets

ROA it: return on assets

α : is the constant.

$\beta_1 - \beta_7$: the slope of the independent and control variables.

$\varepsilon\ it$: residuals or error term.

4. EMPIRICAL RESULTS AND DISCUSSION

4.1 Data analysis

This study uses a combination of time-series and cross-section data. The panel data analysis will be adopted. Panel data possess several advantages over both conventional cross-sectional and time-series data sets. Panel data usually give a large number of data points, degree of freedom are increased, the collinearity among explanatory variables is reduced, and the efficiency of econometric estimates is improved (Hsiao 2003). Accordingly, fixed effects model or random effects model should be decided in the panel data (Baltagi, 2000). The standard three steps for selecting the appropriate model are (Shin-Ping and Tsung-Hsien, 2009):

First: determine the selection of fixed effects model and the ordinary least squares method (OLS) to verify whether or not there is equality between the fixed intercepts of the fixed effects model. To do so, *F*-test should be employed. Second:

determine the selection of random effects model and the ordinary least squares method (OLS) to verify whether or not the intercepts possess random variable characteristics. To do so, Lagrange Multiplier test (LM- test) should be employed to conduct verification. Third: upon the results of *F*-test and Lagrange Multiplier test (LM- test); if the fixed effects model and random effects model have been demonstrated to be more suitable than the ordinary least squares method (OLS), and proceed with the selection of the fixed effects model and random effects model. Then the Hausman test should be adopted for verification. As shown in table (2), the results of both *F*-test and Multiplier test (LM- test) indicated that the fixed effects model and random effects model have a greater applicability than the ordinary least squares method (OLS). Therefore, the Hausman test adopted to choose between fixed effects and random effects models. The results of the Hausman test indicated that the fixed effects model is preferred over the random effects model. Table (2) represents the panel data model.

Table (2) the panel data model

	F statistic	Chi² statistic	P- value
<i>F</i> -test	46.86		0.000*
LM- test		254.174	0.000*
Hausman test		401.885	0.000*

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

4.2 Descriptive statistics

Table (3) 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 as well as the number of firm-year observations over the sample period.

Table (3) descriptive statistics of both the dependent and the independent variables

Variable	Observation	Mean	Standard deviation	minimum	maximum
1.CONCO	305	22.396	26.690	0.000	95.206
2. FOREO	305	15.573	27.293	0.000	99.081

3. INSTO	305	47.640	33.130	0.000	99.919
4. MANGO	305	0.540	0.499	0.000	1.000
5. SIZE	305	16.809	1.572	12.680	21.31
6. ROA	305	-0.838	15.454	-195.296	38.397
7. LEV	305	39.284	33.711	0.400	366.035
8. DYLD	305	1.818	3.045	0.000	19.460

Based on the results of descriptive statistics, the dependent variable which is dividend yield showed that the mean dividend yield of Jordanian manufacturing companies is 1.818 per cent with a standard deviation of 3.045. Furthermore, minimum rate of dividend yield of Jordanian manufacturing companies is zero with maximum level of dividend yield equal to 19.460 per cent. With regard to the ownership structure variables, the results show that the average percentage of managerial ownership is 54 per cent. Furthermore, Institutional ownership holds 47.640 per cent of the total company's shares. The average percentage of concentration ownership is 22.396 per cent, followed by foreign ownership with 15.573 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, *et 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. Also, (Al-Nawaiseh, 2013) found closer percentages of the foreign ownership and institutional ownership in Jordanian industrial companies for the period 2000-2006: 13.95 and 54.52 per cent, respectively. As for control variables, descriptive statistics results show that the average company size is 16.809 (natural logarithm of total assets), the average leverage is 39.284, and ROA is -0.838.

4.3 Pearson's correlations and VIF Values

Table (4) displays the results of Pearson's correlations coefficients amongst all the study variables. As shown in table (4) there is no high correlation between any two of variables, which suggests the absence of multicollinearity between

independent variables. The Pearson's correlations coefficients between each pair of explanatory variables should not exceed 0.80; thus, explanatory variables with correlation coefficients exceed 0.80 and more have multicollinearity problems (Gujarati, 2004; Bryman and Cramer, 1997). As shown in table (4) the correlation coefficients between all explanatory variables are not high and they are within the acceptable range.

Table (4) Pearson Correlations Matrix

Variable	CONCO	FOREO	INSTO	MANGO	SIZE	ROA	LEV
1.CONCO	1						
2. FOREO	-0.250**	1					
3. INSTO	-0.671**	0.428**	1				
4.MANGO	0.508**	-0.172**	-0.271**	1			
5. SIZE	-0.392**	0.277**	0.335**	-0.341**	1		
6. ROA	-0.158**	0.228**	0.146*	-0.111	0.326**	1	
7. LEV	0.062	-0.191**	0.067	0.104	0.143*	-0.205**	1

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

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

In addition, the collinearity diagnostic statistics (VIF statistics and tolerance) are used. Table (5) displays 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 *et al.*, 2010). As shown in table (5), all VIF values for all variables are less than 10, with the tolerance values that are more than 0.10. The results support the Pearson's correlations coefficients and provide proof there is no serious of potential multicollinearity problems.

Table (5) The Results of Tolerance, VIF values

Independent Variables	Tolerance	VIF
1. CONCO	0.410	2.440
2. FOREO	0.716	1.396
3. INSTO	0.444	2.250
4. MANGO	0.695	1.439

5. SIZE	0.667	1.499
6. ROA	0.820	1.220
7. LEV	0.806	1.240

4.4 Fixed effect panel regression model

Table (6) reports the fixed effects panel regression results of dividend policy on ownership structure and control variables. As seen from table (6), the regression model is statistically significant in explaining the dividend policy ($F= 7.723$, significance level= 0.000). The adjusted R^2 implies that 13.4 per cent of variation in dividend policy can be explained by model predictors.

Table (6) Fixed effect panel regression model results

Independent Variable: DYLD				
Dependent Variables	B	Beta	t	Sig.
CONCO	0.003	0.025	0.296	0.768
FOREO	0.000	-0.001	-0.018	0.986
INSTO	0.002	0.018	0.231	0.817
MANGO	0.077	0.013	0.197	0.844
SIZE	0.378	0.195	2.989	0.003*
ROA	0.044	0.225	3.811	0.000*
LEV	-0.017	-0.188	-3.164	0.002*
Constant	-4.020		-1.838	0.067
R	0.392			
R^2	0.154			
Adjusted R^2	0.134			
F	7.723			
Sig.	0.000			

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

The results in Table (6) indicate that there is a positive relationship between ownership concentration (CONCO) and dividend policy but the relationship is not significantly significant. This result is contrary to that found by (Faccio, *et al.*,

2001) who found that the ownership concentration has a positive effect on dividend policy, and (Maury and Pajuste, 2005), who found that the multiple large shareholders affect dividend payout positively, and the study of (Harada, and Nguyen, 2011) who found that the concentration ownership has a negative effect on dividend payout, (Claessens and Djankov, 1999) who found that ownership concentration reduces firm's value, which decreases dividend payout, and the study of (Obaidat, 2018) who found that there is a negative relationship between concentration ownership and dividend policy. Based on this result, *H1* is not supported.

According to institutional ownership, the results in Table (6) indicate that there is a positive relationship between institutional ownership (INSTO) and dividend policy but the relationship is not significantly significant. This result agrees with the study of (Al-Najjar, and Kilincarslan, 2016) who found that institutional ownership has insignificant relationship with dividend policy. In addition, this result contrast what mentioned in the study of (Obaidat, 2018; Al-Nawaiseh, 2013; Abdelsalam *et al.*, 2008; Short *et al.*, 2002) who found that there is a significant positive relationship between institutional ownership and dividend policy. Based on this result, *H3* is not supported.

According to managerial ownership, the results in Table (6) indicate that there is a positive relationship between managerial ownership (MANGO) and dividend policy but the relationship is not significantly significant. This result is consistent with (Abdelsalam *et al.*, 2008) who found that there is no significant association was found between board compositions with both dividend decision and dividend ratios. In addition, this result contrasts what was mentioned in the study of (Al-Nawaiseh, 2013; Short *et al.*, 2002) who suggest that there is a negative and significant relationship between managerial ownership and dividend policy, and the study of (Obaidat, 2018) who found that there is a positive relationship between managerial ownership and dividend policy. Based on this result, *H4* is not supported.

On the other hand, the results in table (6) show that there is a negative relationship between foreign ownership (FOREO) and dividend policy but the relationship is

not significantly significant. This result is in line with (Alabdullah, 2018) who found that there is insignificant relationship between foreign ownership and market share in non-financial companies in Jordan, (Kumar, 2003) who indicated that there is no evidence in favour of association between foreign ownership and dividend payout growth, (Al-Nawaiseh, 2013) who suggests a positive but not significant relationship between foreign ownership and dividend policy, (Al-Najjar and Kilincarslan, 2016) who documented that foreign ownership is associated with a less likelihood of paying dividends and has a significantly negative impact on dividend yield and dividend payout ratio. (Lam *et al.*, 2012) reported that foreign ownership has significant negative effects on cash dividends because foreign investors prefer to keep dividends in their companies to fund future investment. (Glen *et al.*, 1995) also indicated that foreign ownership has a negative relationship between foreign ownership and dividend payments; they argued that foreign investors often hold stocks of emerging markets for their long-run growth potential, not for the short-term dividend income they will produce. On the contrary, (Setiawan *et al.*, 2016) show that foreign ownership has a positive impact on dividend payout. Similarly, (Obaidat, 2018) documented that there is a positive relationship between foreign ownership and dividend policy. Based on this result, *H2* is not supported.

Regarding control variables, which were size, ROA, and leverage, have a significant effect on dividend policy. The positive relationship of company size on dividend policy is also seen which indicates that large companies are more able to pay dividends than the small one which was in line with the findings of previous studies by (Setiawan *et al.*, 2016; Al-Nawaiseh, 2013). Return on Assets is positively associated with dividend policy which indicates that more profitable companies will be able to pay more dividends (Al-Nawaiseh, 2013).

There is a negative relationship of leverage and dividend policy which indicates that more leveraged companies prefer to settle their debts rather than to pay dividends. This result is consistent with the findings of previous studies by (Setiawan *et al.*, 2016; Al-Nawaiseh, 2013).

5. CONCLUSIONS

This study examines whether ownership structure has significant effect on the dividend policy of Jordanian manufacturing companies listed in Amman stock exchange. More specifically, the study examine several hypotheses regarding the relationship between ownership structure (namely: concentration, foreign, institutional, and managerial) and dividend policy. Also, the study aimed to explore the pattern of ownership structure in the sampled companies during the period 2014-2018. Based on panel data methodology, the empirical findings showed that all the ownership variables (ownership concentration (CONCO), institutional ownership (INSTO), and managerial ownership (MANGO) are insignificant in affecting the dividend policy, and the direction of the relationship is positive except a negative relationship between foreign ownership (FOREO) and dividend policy. Among the control variables incorporated in the current study, both company size and return on assets (ROA) were found to have a significant positive effect on dividend policy, where as leverage was found to have a significant negative effect on dividend policy. With regard to the ownership structure variables, the results show that the average percentage of managerial ownership is 54 per cent. Furthermore, Institutional ownership holds 47.640 per cent of the total company's shares. The average percentage of concentration ownership is 22.396 per cent, followed by foreign ownership with 15.573 per cent.

This study suffers from some 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. Despite these limitations, the current study provides a contribution to understanding dividend policy of Jordanian manufacturing companies listed in Amman stock exchange. So it is recommended for future research to do study in other sectors, and investigate other variables such as family ownership or board structure. Possible questions for future research may include: what is the relationship between dividend policy and firm value? What is

the relationship between corporate governance mechanism, ownership structure and dividend policy?.

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