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Ownership Structure and its Endogeneity Effect on the Quality of Financial Reporting

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Abstract
This study examines the effect of ownership structure on the quality of financial reporting. It examines ownership concentration and individual investors both foreign and local. Ownership concentration endogeneity, company age, a log of total sales and industry affiliation are controlled for in the models. Data were collected from 68 annual reports of companies listed on the Amman Stock Exchange for a sample period from 2005 to 2015. The Hausman test of ownership concentration endogeneity was performed for both models. The results from the first model show that ownership concentration has no effect on the quality of financial reporting. While, individual foreign ownership, company age, a log of total sales and industry affiliation have a positive significant effect on quality of financial reporting. Also, the second model showed a consistent result of the ownership concentration effect on quality of financial reporting. While, individual local ownership, company age, a log of total sales and industry affiliation have a positive significant effect on the quality of financial reporting. The results support the agency theory in the Jordanian context that higher ownership concentration reduces the quality of financial reporting. Moreover, the study adds to the limited literature in Jordan that highlights the endogeneity problem of ownership concentration. The results are useful to policymakers and shareholders to improve the quality of financial reporting in the Jordanian market.

Keywords: Ownership Structure. Endogeneity and Quality of Financial Reporting.

Introduction
The quality of financial reporting is an essential issue for all companies. A company seeks to convince potential investors to invest. In this context, McGee and Igoe (2008) argue that the timeliness of accounting information is a good measurement of the quality of financial reporting. Shareholders and other stakeholders are highly concerned with the timeliness of accounting and financial information. On the one hand, long periods between the end of the year and the accounting information disclosure means a lower quality of financial reporting which reduces the validity of the information to make effective decisions. On the other hand, timely publishing of financial reports means that they are of higher quality.
The convergent argument of information quality and financial disclosure is the agency theory conflict Shleifer and Robert (1997) and Shleifer and Vishny (1986). The agency theory establishes a conflict between the owners and managers. The owners appoint managers to manage the business and achieves the owners’ interests. Managers have sharking behaviour and take advantage of their position for their benefit. The managers may delay the financial statement to show higher performance and increase their commission. Therefore, the timeliness of the financial reporting and higher quality is not in the manager’s interest.

Agency theory argues that companies with a higher quality of governance structure will positively affect their financial information disclosure (Beekes and Brown, 2006). Therefore, quality of financial reporting on companies is an important phenomenon to study. In this regard, many researchers investigated the governance structure and its effect on financial reporting and found a positive effect on the quality of financial reports Healy et al., (1999), BOD, audit committee Karamanou and Vafeas (2005), non-executive directors Leung and Horwitz (2004), and outside directors and board independence (Ajinkya et al., 2005). Other researchers found a negative relationship between corporate governance and the quality of financial reporting, i.e., the opposite relationship between the number of outside directors and disclosure level at Singaporean firms (Eng and Mak, 2003). Others found a weak relationship between corporate governance and quality of financial reporting (Myring and Shortridge, 2010).

In summary, the literature has mixed results concerning the effect of corporate governance on the quality of financial reporting. Jensen and Meckling (1976) and Fama and Jensen (1983) argue that corporate governance will improve financial information quality and timeliness. Diamond (1996) finds that discloser quality reduces the agency cost of monitoring the managers. Outside investors are concerned with quality disclosure as it plays an important role mitigating the agency problem and positively effects the quality of financial reporting.

Jensen and Meckling (1976) argue that where there is higher ownership concentration, a higher agency cost is required and reduced quality of financial reporting is expected. While companies with widely dispersed ownership have less agency cost and a higher quality of financial reporting is expected (Myring and Shortridge, 2010). Healy et al. (1999) argue the substantial shareholders may strengthen and quality of corporate governance and improving the monitoring and control which will affect the quality of financial reporting. Furthermore, they argue when the disclosure policies change, the present shareholders will reduce the informativeness of disclosure.

This study tests the validity of Jensen and Meckling’s (1976) argument that ownership concentration and outside investors (Diamond, 1996) affect the quality of financial reporting. The previous researchers have been found mixed results. Thus, the motivation of this study is to investigate the reason behind mixed results in the previous research when they study the effect the ownership structure on the quality of financial reporting. This problem comes due to misspecification of the models and unobserved determinants of the quality of financial reporting. This statistical issue known the endogeneity problem which need to be investigated. Thus, the present contributes study to literature in the filed by controlling the endogeneity problem by using the companies’ characteristics such as age and growth in the models for investigating companies listed on the Amman Stock Exchange (ASE) in the Jordanian market. The Amman Stock Exchange established on March 1999 as non-profit independent institutions, but on February 20, 2017, become public shareholding company completely owned by the government under the
name of Amman Stock Exchange Company (ASE Company) (ASE, 2017). The total number of companies listed in ASE at the end of 2016 totalled 248. These companies include 23 banks, 43 insurance companies, 69 industrial companies, and 113 services companies.

The study will examine the factors that affect the quality of financial reporting in the Jordanian market. First, the study will expand and fill the gap in the literature in Arab and Middle Eastern countries specifically in weak investment markets such as Jordan. Emerging and weak market economies need to establish good governance mechanisms to improve the quality of financial reporting to convince investors to invest their resources.

The literature provides mixed evidence and conflicting results as they concentrated on more than one pattern of governance to resolve the agency problem. This study focuses on the effect of ownership structure on the quality of financial reporting in the Jordanian market. It provides evidence of the effect of ownership structures on the quality of financial reporting in the Amman Stock Exchange.

The remainder of this paper is organised as follows. In section two the study reviews the literature and hypotheses development. It then introduces the research design and models. Thereafter, the findings and the results of hypotheses testing are discussed. Finally, the study draws conclusions and offers recommendations for future research.

**Literature Review and Hypotheses Development**

Many researchers have tested the effect of governance mechanisms on accounting and financial information disclosure. The results found some positive effect (Brown et al., 2010), Coulton et al., (2001), Karamanou and Vafeas (2005) and Leung and Horwitz, (2004). While, other researchers found the weak effect of governance mechanisms on the quality of financial reporting (Myring and Shortridge, 2010). Other concluded a negative effect of governance variables on the quality of financial reporting (Ben-Amar and Boujenoui (2007), Han (2004) and Myring and Shortridge (2010).

The first stream of a positive effect Karamanou and Vafeas (2005) examines the BOD and audit committees’ effect on voluntary financial disclosure. They found that A more effective board and audit committee structures have updated earnings forecast. Also, Leung & Horwitz (2004) conclude that non-executive directors have a positive impact on the voluntary disclosure. Furthermore, Ajinkya et al. (2005) examine the relationship between the outside directors and institutional ownership on earnings forecasts. They found a positive effect of those mechanisms and accuracy of managers’ earnings forecasts. Finally, Brown et al. (2010) examined the effect of auditor independence on the quality of financial disclosures. They found a strong relationship between independence and the quality of financial disclosures. Moreover, Coulton et al. (2001) found a positive relationship between corporate governance and the level of disclosure.

As for the negative effect, Ben-Amar and Boujenoui (2007) examined the factors that determine the corporate governance and quality of information. They found a negative relationship between inside ownership, CEO duality and the quality of information. Furthermore, there is a positive relationship between board independence and corporate governance disclosure quality, and a positive relationship between firm size and corporate governance disclosure quality. While Myring and Shortridge (2010) found the opposite relationship between the number of outside directors and disclosure level at Singaporean firms. Moreover, Han (2004) examines the relationship between the patterns of ownership and quality of financial reporting.
The study found a negative relationship between the managers’ ownership and quality of financial reporting. On the other hand, the study confirms a positive relationship between the outside investors (institutional stock holdings) and the quality of financial reporting. The study found that outside investors will lead to better information quality.

Myring and Shortridge (2010) examine the relationship between corporate governance and quality of financial reporting. The study assumes that strong corporate governance will improve the quality of financial reporting, and concludes that there is weak evidence to support the results. They found that the dispersion of ownership has a positive effect on the quality of financial reporting. Furthermore, company size is not related to the quality of financial reporting.

In Jordan, several researchers focused on the quality of financial reporting. Al-Sufy et al., (2013) studied the impact of corporate governance on the quality of accounting information. The study used a questionnaire to collect data from industrial companies. The study found that effective implementation of corporate governance will have a strong effect on the quality of financial reporting. The study recommended researching the effect of governance practices on all industries in Jordanian companies. Furthermore, AL-Tahat (2015) examined the effect of company attributes on the timeliness of financial reporting of half-yearly financial information in companies listed on the Amman Stock Exchange (ASE). The study examines the relationship between company size, profitability, growth, age, leverage, audit firm size and market listing status. The study found no significant effect on the size, leverage, audit firms size and the timeliness of financial reporting. Also, the study found a significant relationship between the age, growth, market listing status, profitability and timeliness of financial reporting. They suggested that future research investigate the factors that affect the quality of financial reporting. Also, Al-Shwiyat (2013) studied the effect of several factors on the timing of annual reports in Jordanian listed companies in 2012. The study found a significant relationship between size, company’s age, financial leverage and the timing of annual financial reports and timeliness of annual reports. It found a negative relationship between earnings per share and the timing of issuance of the annual financial reports. In order to answer the research question and achieve the study objectives, hypotheses are formulated. The study highlights several ownership structures and other control variables that are considered to be the most relevant to the Jordanian market that may affect the quality of financial reporting.

Quality of Financial Reporting

The quality of financial reporting plays an important role in emerging and developed markets. According to the Accounting Standards Board (ASB), one of the main characteristics of the financial reporting is the quality of the information. Its importance is due to several reasons such as helping outside users to make decisions when evaluating a company’s performance. Also, evaluating the company’s ability to pay debt when resources are provided. Low quality financial and accounting information is a threat facing companies.

The problem is the agency contract. The owners do not have time to manage the business and as such appoint managers (Fama and Jensen, 1983). The agency problem arises due to information asymmetry between the managers and owners. Both have access to different levels of information. The managers take advantage to activate their sharking behaviour, and there is a
high possibility to use the information to their benefit and distort the real picture of the company’s performance (Jensen and Meckling, 1976). To mitigate the problem, quality of financial reporting will help minimise the uncertainty and information asymmetry between the managers and owners. Moreover, the quality of accounting and financial information helps the users to make better decisions. Martinez-Ferrero (2014) and Jonas and Blanchet (2000) argue that a company’s performance is not the main issue of financial disclosure. McGee and Igoe (2008) state that the shareholder and stakeholders need timely information to be relevant and help them make decisions.

The quality of information increases when there is less time between the end of the financial year-end and financial information disclosure (Atiase et al., 1989), Lawrence (1998). McGee and Igoe (2008) state that one of the important measurements of the quality of financial reporting is timeliness. A lower level of quality financial reporting will increase the agency cost and affect the market and resource allocations. Therefore, companies should establish a good governance system that helps them mitigate the agency problem (information asymmetry) and positively affect the quality of accounting and financial information.

Many researchers rely on the agency theory to identify the factors that affect the quality of financial reporting. The agency theory helps resolve information asymmetries such as ownership concentration and its effect on the quality of financial reporting (Basuony and Mohamed, 2014), Kabara and Danyaro (2016) La Porta et al., (2000), Rouf and Abdullah-Al Harun (2011).

Institutional investors both foreign Alsmady et al., (2013) and local Omari et al., (2014) also affect the quality of financial reporting. This study chooses these and other variables as they are related to the Jordanian corporate governance guide.

Ownership Concentration

La Porta et al. (2000) argue that the agency problem accrues with higher ownership concentration and the conflict between the majority and monitory shareholders. The problem arises when the controlling shareholders affect the policy direction, which will affect the management and quality of financial disclosure. Increasing the rights of monitory shareholders will lead to a higher quality of financial disclosure. In this regard, Basuony and Mohamed (2014) examine the relationship between the ownership concentration and its effect on voluntary internet disclosure in Oman. The study found a negative effect of ownership concentration and voluntary internet disclosure. Furthermore, they conclude that more diffused ownership leads to better disclosure. Furthermore, Nakhodchari and Garkaz (2014) examined the effect of ownership concentration on the voluntary disclosure of the Tehran Stock Exchange. The study found that voluntary disclosure affected the information asymmetry of companies with higher ownership concentration. The study cannot confirm the inverse correlation between the information asymmetry and voluntary disclosure. This result was also found by Omari et al. (2014) which confirms the effect of ownership concentration on information asymmetry.

Juhmani (2013) studied the effect of ownership structure on voluntary disclosure in the Bahrain Stock Exchange. They found blockholder ownership negatively affects voluntary disclosure. Furthermore, Kabara and Danyaro (2016) studied the effect of ownership concentration on voluntary disclosure in the Nigerian Stock Exchange. They argue that in oil marketing, the ownership concentration positively affects the voluntary disclosure. Also, Rouf
and Abdullah-Al Harun (2011) studied the effect of ownership structure on the voluntary disclosure of Bangladesh listed companies. The study found institutional ownership positively affects a company’s disclosure. Alsmady et al., (2014) argue that ownership concentration is an important governance mechanism in Jordan which may help companies mitigate the agency problem. Based on the previous discussion, the following hypothesis is Proposed:

H₁: There is a negative relationship between ownership concentration and FRQ.

**Institutional Ownership**

Omari et al. (2014) argue that institutional investors play important roles in the quality of disclosure. They examine the effect and found institutional ownership positively affects voluntary disclosure. Furthermore, Dulacha (2007) studied the effect of institutional ownership on the disclosure quality of Kenyan companies as good governance practices. They argue that the institutional investors have strong incentive to disclose quality information and have a positive effect on the quality of financial disclosure.

In addition, El-Diftar et al., (2016) argued that improving the quality of financial disclosure improves the communication between the manager and outside investors. They examine the effect of institutional shareholders on the quality of financial disclosure in Egyptian companies. They found a positive relationship between the level of institutional ownership and the quality of financial disclosure. Therefore, institutional shareholders play important roles in the information environment (Boone and White, 2015). The authors confirmed that institutional investors lead to less information asymmetry and affect the quality of information production. Moreover, Barako (2007) studied the factors that determine the corporate financial reporting of Kenyan companies. The study found that ownership structure, particularly foreign ownership, positively affects corporate financial reporting. Also, institutional ownership and firm size affect all types of information such as financial and general strategy. Alsmady et al. (2013) argue that foreign and local investors in the Jordanian market have different orientations on the quality of financial information. Thus, different types of institutional ownership may have different effects on the quality of financial reports. Based on the previous argument, the following hypotheses are formulated:

H₂ₐ: There is a positive relationship between foreign ownership and FRQ.
H₂ₐ: There is a positive relationship between local ownership and FRQ.

**Company Age**

The learning curve theory interpretation by Owusu-Ansah (2000) suggests that the quality of financial reporting increases when the annual financial reports are produced. Furthermore, the learning curve of the accountants increases and the accounting information gathering will improve the quality of financial reporting. In addition, older companies have higher levels of internal control which lead to less mistakes and delays of the financial reports (Iyoha, 2012). On the other hand, younger companies have less experience which may affect the quality of financial reporting (Hope and Langli, 2008; Iyoha, 2012). Iyoha (2012) argues that company age has an impact on accounting practice in terms of timeliness. He studied the impact of company attributes that may affect the quality of financial reporting in the annual reports of Nigerian companies. The result of ordinary least square supports the important effect of company age on
quality of financial reporting. This is supported by Owusu-Ansah (2000) who found a strong relationship between company age and the quality of financial reporting.

Furthermore, older companies comply better with quality disclosure for many reasons. They have a more defined market image and stronger communication with outside investors which leads to more concern with the information quality. Older companies also have longer operating information which positively affects the quality of financial reporting (Owusu-Ansah, 2005; Iyoha, 2012). Agboola and Salawu (2012) support the argument that younger companies do not have higher expenditures and are less motivated to make a higher disclosure which affects their competitive advantage. In Jordan, Al-Tahat (2015) and Han (2004) found a positive relationship between the company age and financial reporting disclosure. Based on the previous argument, the following hypothesis is formulated:

**H₃:** There is a positive relationship between company age and FRQ.

**Company Growth**

Agency theory argues that companies with higher disclosure record higher growth. Juhmani (2013) and Ahmed and Nicholls (1994) argue that institutional investors focus on short and long-run growth and will disclose higher quality financial reporting. Cao et al., (2012) studied the effect of a company’s reputation on the quality of financial reporting. The authors use 2SLS modelling which have control variables such as company sales. The study found that company growth measured by the volume of sales positively affects the quality of financial reporting.

Mehrpisheh and Vakilifard (2016) studied the factors that affect the investment decisions of companies listed on the Tehran Stock Exchange. They found the company growth measured by sale affects the quality of financial reporting which then affects the investment decisions. Hamidzadeh and Zeinali (2015) studied the effect of sales growth on the quality of financial reporting on companies listed on the Tehran Stock Exchange. They confirmed a high effect of sale on the quality of financial reporting. Al-Tahat (2015) studied the factors affecting the timeliness of financial reporting in Jordanian companies. They found that company growth measured by sales positively affects the timeliness of financial reporting. Rafiee and Heidarpoor (2014) studied the factors that affect financial information quality of companies listed on the Tehran Stock Exchange. They argue that growth opportunities should control the modelling that measures the effect of the factors on the quality of financial reporting such as sales (Evans, 2017). Based on the previous argument, the following hypothesis is formulated:

**H₄:** There is a positive relationship between company growth and FRQ.

**Industry Affiliation**

Ashton, Graul, and Newton (1989) identified that industry classification and the sign of net income are important factors that affect quality and timeliness of financial reporting. In this regard, Cao et al. (2012) studied a sample of restatements to investigate the effect of the company’s reputation on the quality of financial reporting. The study controls for several factors such as the industry type which they confirm affects the quality of financial reporting. Furthermore, Martinez-Ferrero (2014) studied the consequences of quality of financial reporting on a company's performance at the international level. They argue that the industry is an important variable that should be considered when the modelling the quality of financial reporting.
In addition, Rafiee and Heidarpoor (2014) studied the ownership structure and its effect on the quality of financial reporting. The authors argue that when a company’s production is high, the disclosure quality is also high. Companies need higher resources from providers which requires more valuable competitive information. Thus, when the study examines the effect of ownership structure on accounting information and quality of financial reporting, it needs to control the industry of the firms. Ibrahim et al., (2004) studied the factors affecting the timeliness of financial reporting. They examine the effect of the ownership structure on the timeliness of the financial reports. To investigate the ownership structure, they control the industry type, and found that the industry affects the financial reporting disclosure. Ika and Regina (2011) studied the effect of factors on the timeliness of the financial reporting in Indonesia companies. The study found the type of industry highly affected the timeliness of financial reporting. Based on the previous argument, the following hypothesis is formulated:

H5: There is a positive relationship between industry affiliation and FRQ.

Research Design

The study uses secondary data from annual reports of Jordanian companies listed on the Amman Stock Exchange as shown in Table (1). The sample consists of 68 companies from 2005 to 2015. The sample has insurance, manufacturing and services companies which represent 30% of the population. The sample is selected from listed companies due to compliance with the Jordanian corporate governance guide. Banks were excluded because they have special disclosure standards. The data has 11 years for 68 companies that includes 30% of the total population of 225 which means the results can be generalised for the sample period (Babyak, 2004). The expected total number of observations is 748. The law requires companies to improve the quality of financial reporting disclosure through timely disclose within a maximum of three months after the end of the fiscal year.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Population</th>
<th>Sample size</th>
<th>Expected number of observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance</td>
<td>43</td>
<td>13</td>
<td>143</td>
</tr>
<tr>
<td>Industrial</td>
<td>69</td>
<td>21</td>
<td>231</td>
</tr>
<tr>
<td>Services</td>
<td>113</td>
<td>34</td>
<td>374</td>
</tr>
<tr>
<td>Total</td>
<td>225</td>
<td>68</td>
<td>748</td>
</tr>
</tbody>
</table>

*Note: As listed in Amman Stock Exchange (ASE) at 2016*

The dependent variable in this study is FRQ as measured by the difference between the date of annual reports issued and the end of the fiscal year. The study uses six independent variables that have been collected from the Jordanian companies’ annual reports as summarised in Table (2). The quality of financial reporting models used is developed from the previous studies.
and the theoretical framework discussed above based on the agency theory and the learning curve theory. The following models will be used to test the study hypotheses:

\[ FRQ_{it} = \alpha + \beta_1 CONC_{it} + \beta_2 FOR-OW_{it} + \beta_3 AGE_{it} + \beta_4 INT_{it} + \beta_5 G_{it} + \epsilon_{it}, \]  \hspace{1cm} (1) 
\[ FRQ_{it} = \alpha + \beta_1 CONC_{it} + \beta_2 LOCAL-OW_{it} + \beta_3 AGE_{it} + \beta_4 INT_{it} + \beta_5 G_{it} + \epsilon_{it}, \]  \hspace{1cm} (2)

Where the quality of financial reporting (\( FRQ_{it} \)) for the company (\( i \)) at year-end (\( t \)) is measured by the difference between the fiscal year and the annual reports issuance and (\( \alpha \)) the intercept. The ownership concentration (\( CONC \)) measured by the percentage of the highest three shareholders, (\( FOR-OW \)) is ownership held by foreign shareholders and (\( LOCAL \)) is ownership held by local shareholders. The company’s age (\( AGE \)) is measured by the time between the date of its establishment and the current date. The (\( INT \)) is the industry affiliation and (\( G \)) the company growth, \( \beta_1 \) to \( \beta_5 \) the parameters of the models, \( \epsilon \) the random error term.

<table>
<thead>
<tr>
<th>Variables name</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>( FRQ )</td>
<td>Time between the fiscal year and date of annual reports issuance</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>( AGE )</td>
<td>Time between the date of companies establishment and the current date</td>
</tr>
<tr>
<td>( INT )</td>
<td>Affiliation of industry</td>
</tr>
<tr>
<td>( G )</td>
<td>Loge of sales</td>
</tr>
<tr>
<td>( CONC )</td>
<td>Percentage of the highest 3 shareholders</td>
</tr>
<tr>
<td>( For-ow )</td>
<td>Shared owed held by the foreign shareholders</td>
</tr>
<tr>
<td>( local-ow )</td>
<td>Shared owed held by the local shareholders</td>
</tr>
</tbody>
</table>

**Findings**

**Descriptive Analysis**

Table (3) indicates the descriptive analysis of the continuous explanatory and predicted variables. The descriptive statistics shed light on the data. The table shows that the mean of the dependent variable is 50 days with minimum and maximum day of 0 and 254, respectively. The result shows high variation among the companies. Furthermore, the mean shows that the Jordanian companies have a good quality of financial reports. The quality improves in terms of the relevance of financial reports and timeliness to be available when decisions need to be made. In contrast, Al Daoud et al., (2014) found the mean, minimum and maximum days of 68, 13 and 271, respectively during 2011 and 2012.

Company age has a mean of 29 with a maximum and minimum of 64 and 8 years respectively. Concerning the companies’ growth, it is measured by total sales which recorded a mean of 6 million JD and maximum and minimum 9 and 2 million respectively. Ownership concentration has a mean of 50% and maximum and minimum 95% and 0.00 respectively. The results show that
Jordanian companies have high ownership concentration which is consistent with Alsmady et al. (2013).

Furthermore, foreign ownership has a mean of 20% with maximum and minimum 0.00 and 95% respectively. This is also consistent with Alsmady et al. (2014). While the local investors have ownership ranging between a minimum and maximum of 4% and 100%. This indicates that high variation in ownership type.

Table (3): Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N(Missing)</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>744(4)</td>
<td>8.00</td>
<td>64.00</td>
<td>29.35</td>
<td>14.96</td>
<td>0.73</td>
<td>-0.19</td>
</tr>
<tr>
<td>G</td>
<td>720(28)</td>
<td>2.20</td>
<td>9.67</td>
<td>6.75</td>
<td>0.95</td>
<td>-0.26</td>
<td>1.33</td>
</tr>
<tr>
<td>CONC</td>
<td>745(3)</td>
<td>0.00</td>
<td>95.59</td>
<td>50.46</td>
<td>19.93</td>
<td>-0.14</td>
<td>-0.26</td>
</tr>
<tr>
<td>local ow</td>
<td>264(484)</td>
<td>4.49</td>
<td>100.00</td>
<td>79.56</td>
<td>21.75</td>
<td>-1.52</td>
<td>1.81</td>
</tr>
<tr>
<td>for-ow</td>
<td>263(485)</td>
<td>0.00</td>
<td>95.51</td>
<td>20.46</td>
<td>21.78</td>
<td>1.51</td>
<td>1.79</td>
</tr>
<tr>
<td>FRQ</td>
<td>720(28)</td>
<td>0.00</td>
<td>254.00</td>
<td>50.13</td>
<td>35.51</td>
<td>0.88</td>
<td>3.81</td>
</tr>
</tbody>
</table>

Correlation

The correlation coefficient matrix analysis identifies the multicollinearity between the explanatory variables and the direction of the relationship within the models employed in the study. The matrix is presented in Table (4). The highest correlation is between company growth and company age. However, the value of correlation coefficient between the two variables is less than the critical value which means that there is no problem in the regression models (Hair et al., 2010). Moreover, the correlation between the company age and growth is expected as older companies are more established and as such have a higher volume of sales.

Table (4): Correlations

<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>INT</th>
<th>G</th>
<th>CONC</th>
<th>local ow</th>
<th>for-ow</th>
<th>ARL</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td>-.286***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>.505***</td>
<td>-.189***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONC</td>
<td>.184***</td>
<td>-.149***</td>
<td>.307***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>local ow</td>
<td>-.214***</td>
<td>.028</td>
<td>-.240***</td>
<td>-.425***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for-ow</td>
<td>.214***</td>
<td>-.029</td>
<td>.239***</td>
<td>.425***</td>
<td>-1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRQ</td>
<td>.125***</td>
<td>-.127***</td>
<td>-.008</td>
<td>.035</td>
<td>.110*</td>
<td>-.110*</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: This table reports the correlation between the variables. Where FRQ<sub>it</sub> is the FRQ for company<sub>i</sub> at year<sub>t</sub> which is measured by the different between the fiscal year and the annual reports issuance, α the intercept, CONC Percentage of the highest 3 shareholders, FOR - OW Ownership held by the foreign shareholders, AGE the company age measured by time between the date of companies’ establishment and the current date under the study, Affiliation of industry, G is the Bod Diversity which measured by Number of female to the
total number of board, \textit{NED} Loge of sales, \textit{LOCAL-OW} is Ownership held by the local shareholders. \( \beta_1 \) to \( \beta_3 \) the parameters of the models. *, ** and *** denote a significant level of 10%, 5% and 1%, respectively.

Regression Analysis

The results for the ownership structure and its endogeneity effect on quality of financial reporting are presented in Table (5). The models used multiple regression analysis to examine the hypotheses. The Hausman test was employed before running the multiple regression. The endogeneity problem arises due to the correlation between the terms. Thus, the results of the multiple regression will be bias. Therefore, the Hausman test was employed to meet the assumption that ownership concentration should not be correlated with the error term. The t-statistic result for the coefficient on the residual from the two models is 0.00 respectively. Thus, the p-value of this test is not significant to any level. Therefore, the results cannot reject the null hypothesis of no correlation between the error term. The results lead to performing multiple regression analysis because there is no endogeneity problem.

In Table (5), multiple regression shows that R2 for the two models is 0.11 respectively. The result is consistent with Alsmady et al. (2013). The result indicates that the independent variables in the models explain the quality of financial reporting by 11%. The results of the multiple regression supported H2a, H2b, H3, H4 and H5. According to Table (5), the five independent variables are significant at different levels. The two models have consistent results such as the company age shows high significance at the 0.00 level. This result is consistent with Agboola and Salawu (2012) and Al-Tahat (2015) which found a significant positive effect of company age on the quality of financial reports. The second variable is the industry affiliation which recorded a value of 0.04 in the two models respectively. The result were found by other research conducted on the quality of financial reports such as its effect on the timeliness of financial reports (Ika and Regina, 2011) and its effect on the quality of financial reports (Martinez-Ferrero, 2014).

Concerning the third variable, company growth in the first and second model show high significance level of 0.05 and 0.06 respectively. The results are consistent with other researchers in the Jordanian market (Al-Tahat, 2015) as well as other markets (Evans, 2017).

The ownership pattern is consistent with the agency theory predictions. Firstly, the ownership dispersion measured by the shares owned by local and foreign institutional investors has a significant association with the quality of financial reports in Jordan. The delayed time is the measure of the dependent variable. The result shows that the foreign investors improve the quality of financial reports and do not prefer delay. They are more concerned with disclosing the financial reports in a timely manner. This result is consistent with Alsmady et al. (2013). In addition, the local institutional investors do not show improvements in the quality of financial reports. This may be due to less experience and knowledge of the quality standards. This result is also found by other research conducted in privatised Jordanian companies (Alsmady et al., 2013).

The last variable is the effect of ownership concentration on the quality of financial reports. The agency theory expects a negative effect. The variable predictors have the same direction as the theory, but it is not statistically significant. This is in line with the results of Afify (2009). Thus, the result partially supports the study’s expectations.
### Table (5): The Ownership Structure and Its Endogeneity Effect on Quality of Financial Reporting

<table>
<thead>
<tr>
<th></th>
<th>Model (1)</th>
<th></th>
<th>Model (2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FRQ</td>
<td></td>
<td>FRQ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>T</td>
<td>Sig</td>
<td>B</td>
</tr>
<tr>
<td>Constant</td>
<td>3.38</td>
<td>0.00***</td>
<td>1.52</td>
<td>0.13</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.35</td>
<td>-4.87</td>
<td>-0.00***</td>
<td>-0.34</td>
</tr>
<tr>
<td>INT</td>
<td>-0.13</td>
<td>-2.08</td>
<td>0.04**</td>
<td>-0.13</td>
</tr>
<tr>
<td>G</td>
<td>-0.14</td>
<td>-1.94</td>
<td>0.05**</td>
<td>-0.14</td>
</tr>
<tr>
<td>CONC</td>
<td>0.05</td>
<td>0.74</td>
<td>0.46</td>
<td>0.05</td>
</tr>
<tr>
<td>for-ow</td>
<td>-0.16</td>
<td>-2.34</td>
<td>0.02**</td>
<td></td>
</tr>
<tr>
<td>local ow</td>
<td></td>
<td></td>
<td>0.16</td>
<td>2.35</td>
</tr>
<tr>
<td>Hausman</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.13</td>
<td></td>
<td></td>
<td>0.13</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>0.11</td>
<td></td>
<td></td>
<td>0.11</td>
</tr>
<tr>
<td>$F$</td>
<td>7.40</td>
<td></td>
<td></td>
<td>7.37</td>
</tr>
<tr>
<td>Sig=</td>
<td>0.00***</td>
<td></td>
<td></td>
<td>0.00***</td>
</tr>
</tbody>
</table>

**Note:** This table reports the correlation between the variables. Where $FRQ_{it}$ is the FRQ for company $i$ at year $t$, which is measured by the difference between the fiscal year and the annual reports issuance, $\alpha$ the intercept, $CONC$ Percentage of the highest 3 shareholders, $FOR$ -OW Ownership held by the foreign shareholders, $AGE$ the company age measured by time between the date of companies’ establishment and the current date under the study, Affiliation of industry, $G$ is the Bod Diversity which measured by Number of female to the total number of board, $NED$ Loge of sales, $LOCAL$ -OW is Ownership held by the local shareholders, $\beta_1$ to $\beta_5$ the parameters of the models, $\varepsilon$ the random error term, Heteroskedasticity robust p-values are reported in parentheses. *,** and *** denote a significant level of 10%, 5% and 1%, respectively. Heteroskedasticity robust p-values are reported in parentheses. *,** and *** denote a significant level of 10%, 5% and 1%, respectively.

### Conclusion

The quality of financial reporting is an important issue. The present study provides new empirical evidence on the effect of ownership structure on the quality of financial reporting. The study variables are drawn from the previous studies, and related theory such as ownership structure, namely ownership concentration and instructional ownership have been largely argued by several studies as affecting the quality of financial reporting. However, many previous studies that have examined the effect of ownership concentration have examined ownership endogeneity. But, this study controlling the misspecification and unobserved determinants. The correlation between the error term and endogenous variable have been tested before study the effect of ownership concentration and the Quality of Financial Reporting. It offers insights into
the effect of ownership concentration on the quality of financial reporting in the Jordanian market. Furthermore, the effect of institutional ownership type such as foreign and non-foreign investors has not been examined for its effect on quality of financial reporting in Jordan. Company age, growth and industry affiliation were selected as control variables based on previous research.

The study conducted the Hussmann test for the endogeneity problem that comes from the correlation between the error term and the endogeneity variable on all the models. The results show that data for Jordanian companies do not suffer from such a problem. The t-statistics are .00 which means there is no association to at any level which can reject the null hypothesis of no correlation between the ownership concentration and the error term.

Then, the study examines the effect of the independent variables on the quality of financial reporting at Jordanian market. The results support the agency theory that ownership concentration is not a good mechanism to improve the quality of financial reporting. Ownership concentration leads to higher agency cost and less disclosure which do not record significant results for the Jordanian market. While the dispersion of ownership on shareholders could have a positive effect. The study investigates the dispersion ownership by foreign and no foreign holding ownership and its effect on the quality of financial reporting. The study found that the dispersion of ownership has a positive effect on the quality of financial reporting whether on foreign or non-foreign shareholding. Furthermore, the study found that the other control variables, namely company age, size and industry affiliation have highly significant effects on all models.

The study has implications for good governance practices in the Jordanian market to improve the quality of financial reporting. It concludes that ownership concentration is not a good practice to improve the quality of financial reporting which is an important indicator for outside investors. Furthermore, ownership dispersion is a good mechanism for better quality disclosure. Furthermore, the endogeneity statistical problem give a good implication for other researcher that study internal and external governance mechanisms on the quality of financial reporting which not highlighted previously.

Limitation and Future Research Suggestion

The study finding add to the body of literature and knowledge, particularly on the effect of ownership structure effect on the quality of financial reporting nevertheless this study has limitations. The sample comprises 68 companies over 11 years until 2015. A broader sample and longer period could offer more generalisable results. Finally, the study focuses on the ownership structure which is part of the corporate governance practices in Jordan. Future research could include other Internal and external governance mechanisms and examine their effect on the quality of financial reports in Jordan.

References


