



The Effect of Corporate Governance on Audit Quality: Evidence from Jordanian Listed Firms

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Authors' contributions

This work was carried out in collaboration among all authors. The author QKAA designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. The author SAAA collected the study's data. The author AMS managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Aims: The current study's goal is to investigate how corporate governance impacts audit quality. Study design: utilizing 624 observations from a panel of 78 firms that were listed on the Amman Stock Exchange (ASE) over 8 years, from 2012 to 2019.

Methodology: Regression with panel-corrected standard error (PCSE) was used to correct heteroskedasticity and serial correlation and analyze the data.

Results: According to the study, board independence and family ownership have a negative impact on audit quality, whereas board size and concentration ownership have a positive impact. On the other hand, the study demonstrates that managerial ownership and the number of women on the board have no impact on the quality of the audit.

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Conclusion: This study is significant because it is up-to-date and provides policymakers with information about the connections between corporate governance structures and audit quality in emerging nations. The fact that it offers insights to managers, researchers, lawmakers, and professional accounting organizations makes it important as well. Few empirical studies have been conducted in the past on the impact of corporate governance on audit quality, and those that have been done mostly focus on developed countries. The current study is also one of the few that has looked into the connection between corporate governance and audit quality in the context of Jordan.

Keywords: Audit quality; corporate governance; Jordanian listed firms; agency theory.

1. INTRODUCTION

In recent times, major corporate financial scandals like Enron and World Com have occurred due to conflicts of interest, weak internal control systems, financial irrationality and greed, manipulation on the part of the current auditors, and various fraudulent activities [1]. The collapse of firms around the world has highlighted several key issues regarding audit quality and corporate governance, where the function of external auditors in corporate governance is crucial [2] because auditors fill the gap between owners and agents. They are also viewed as management monitoring tools because they enhance the standard of financial reporting and defend investors' interests [3]. Institutional differences exist in capital markets that are developing, like Jordan. The contrasts have been previously studied, including a weak corporate control market and more concentrated stock ownership in public firms [4]. Because of insufficient protections for investors, users of financial statements have paid special attention to the work of auditors to assure the truth and credibility of the accounting records [5]. In the Jordanian context, after starting the privatization program, the Jordanian government introduced essential regulations and laws to attract more investment and boost investors' confidence. Securities Law No. 23 of 1997 in Jordan states that the accounting records of the listed firms must be audited by independent auditors.

On another side, a corporate governance code has been issued in Jordan to protect investors, where corporate governance is concerned with fairness, transparency, and principles of accountability [4]. One of the greatest significant topics in accounting, management, and financial studies is agency conflicts. According to [6], precise corporate governance mechanisms may be an efficient tool to mitigate asymmetric information and agency issues between management and owners. Likewise, [7] indicated

that corporate governance is a crucial tool for reducing managers' self-centred behaviours that harm shareholders. As well as [8] found that corporate governance mechanisms enhance firm performance. Alzoubi ES, [9] pointed out that corporate governance enhances the quality of financial reporting. As well as, corporate governance mostly seeks to protect stockholders by creating some transparency and ensuring accountability [10].

Corporate governance consists of several forms. The first form is board composition, this form serves as an observing umbrella to ensure properly serves all shareholders [10]. Furthermore, managing and supervising details in the annual reports of the firm is one of the responsibilities of the directors' board. Another essential form is the ownership structure. Due to its influence on managers' actions that are related to business performance, this form is crucial to firm growth strategies [11]. Previous literature has demonstrated the association between audit quality and corporate governance. However, less has been researched about the association between audit quality and corporate governance in developing nations. Thereby, it might be an interesting chance to present critical kinds of corporate governance that may enhance audit quality.

Several reasons were a motivation to conduct the current study. There is a plethora of literature on corporate governance and audit quality in developed nations. However, the Middle Eastern nations, notably the Arab nations, have received little attention. Further research in Arab nations such as Jordan may be fascinating due to institutional variances that exist between Jordan and developed economies, including stricter rules auditor liability laws, and fewer transparency requirements. Second, even though corporate governance is seen as an effective observing tool, little research has looked into how they affect audit quality in the Jordanian

context. Thereby, the present research closes the gap by investigating the influence of corporate governance on audit quality in Jordanian firms.

The research's remaining portions are included below. The literature on the research hypotheses is provided in Section 2. In Section 3, the approach is presented. Section 4 presents the findings and the discussions that follow.

2. LITERATURE REVIEW

2.1 Theoretical Framework

The present study highlights agency theory which explains how corporate governance and audit quality are used to control this relationship and how corporate governance could be utilized to support audit quality as a way to address agency conflicts and abnormal information [12]. As a result, agency theory was applied since corporate governance includes accounting components that increase control, prevent management fraud, and advance stakeholders' interests [13]. One of the main causes of external audits is the agency issues that occur between managers and owners as a result of their information asymmetry. According to [14], an external auditor has responsibilities to minimize agent-principal issues and alleviate asymmetric information between managers and owners since agents prefer increasing their own gains at the expense of principals. As a result, it is anticipated that auditors will exert more effort to produce improved audit quality in the situation of a major agency problem [4]. According to agency theory, companies with effective corporate governance systems will request more audit work and audits of higher quality than what auditors typically offer [14], where primarily observing strategies, like corporate governance is introduced to balance the interest of principals and agents and to alleviate information asymmetry between managers and stakeholders [15]. Moreover, [16] claim that the need for quality audits raises when agency costs increase. Additionally, corporate governance promotes information balance and consistency, which helps to reduce conflicts between directors and shareholders.

2.2 Hypothesis Development

2.2.1 Board size and audit quality

The board of directors' primary duties are advising and management observing [17]. Larger

boards are seen as better able to keep an eye on management's behaviour since it is harder for CEOs to control bigger boards [18]. Furthermore, companies with larger boards benefit from more skill and experience, [19] argues that bigger boards are linked to the board observing capability. In line with these considerations, it has been a presumption that the size of the board ensures the board's high quality and that like a board may necessitate an audit of the highest standard. Soliman WS [20] used 103 Egyptian non-financial firms to demonstrate the direct influence of board size on audit quality and documented that board size affects positively audit quality. Likewise, [21] utilized a sample of Bangladesh firms and reported that larger boards enhance audit quality. In the same way, [22] used 1,616 observations and pointed out that firms with larger boards require high audit quality. By analyzing 565 observations [23] found that larger boards spend higher audit expenses to improve the observing capabilities and safeguard the shareholders. Pratheepkanth P and Rajumesh S [24] indicated that boards with large sizes produce an efficient control environment that is frequently used to improve audit quality. On another hand, [25,26] documented that firms with larger boards spend fewer expenses on auditing. On contrary, [27,28] found no relationship between board size and audit quality. Thereby, the following hypothesis is:

H1: There is a positive relationship between board size and audit quality.

2.2.2 Board independence and audit quality

Supporters of the stewardship hypothesis [29] contend that employing independent directors increases the likelihood of conflict within the board and reduces the efficiency of the decision-making process makes, where independent directors are less informed on the difficulties and capabilities of the firm to advise the company's strategic directions. Jiraporn P et al. [30] argued that it does not require to appoint of a professional external auditor whereas an independent board typically provides better supervision. To the extent that companies with an independent board confront fewer agency difficulties, the appointment of a Big 4 auditor may not be as necessary and could result in unwise expenditures on rising audit fees, ultimately decreasing shareholder wealth. Similarly, this theory substitutes board independence for high-quality external auditing. Guizani M and Abdalkrim G [31] used 162 firms

listed on GCC from 2009 to 2016 and found that board independence affects negatively audit quality. Bakare I [32] also documented that firms with independent boards spend low audit fees since they are less likely to require substantial audit services. However, [14] indicated that board independence affects positively audit quality. On the contrary, Mustapha UA et al. [33] found that board independence has no effect on audit quality. Thereby, the following hypothesis is:

H2: There is a positive relationship between board independent and audit quality.

2.2.3 Board gender and audit quality

The theory of resource dependence claims that the existence of female board members provides helpful advances for firms [34]. Female directors have particular psychological characteristics that may make them more receptive to particular stakeholder arguments [35]. As well as, they are essential in improving a company's ethical legitimacy [36]. On another side, agency theory suggests that having women on board makes monitoring management more efficient, where diversity boosts boards' independence. In the same vein, female directors tend to reinforce internal control systems. Thus, financial reporting quality [37]. Previous studies indicated that the presence of female board members leads to a demand for high-quality auditing. Akpotor VA et al. [38] showed that the of presence women on board positively affects audit quality. Also, a study performed in the US by Lee HS [39] showed a positive association between the presence of women on board and audit quality. Likewise, Otuedon AM [40] used 50 Nigerian firms and documented that female on board affects positively audit quality. In another research from the developing market, [41] found a female in board positively affects audit quality. On the contrary, Eseoghene O [42] documented female in board negatively affects audit quality. However, other trends studies found that female in board does not affect audit quality [43]. Thereby, the following hypothesis is:

H3: There is a positive relationship between board gender diversity and audit quality.

2.2.4 Managerial ownership and audit quality

The theory of agency indicates contradicted viewpoints of managerial ownership. The first is the alignment between management and

shareholder interests. Thus, reducing information asymmetry between them [6]. According to the converging interest hypothesis, firms with managerial ownership prefer a better audit quality to present more trustworthy financial information to stakeholders [44]. Shan YG et al. [45] indicated that when managerial ownership is centred on the zones of converging benefits, managers are more unlikely to try to participate in pragmatic behaviours. Also, Mitra S, [46] suggested that companies with managerial ownership are inclined to require better audit quality to obtain more assurance about the accuracy and dependability of financial reports and to provide a positive impression of their financial information to the investment community. Guizani M and Abdalkrim G [3] used 207 firms listed in GCC from 2009 to 2016 and demonstrated that managerial ownership positively affects high audit quality. Another viewpoint is the managerial entrenchment argument, which claims that providing managers more discretion and significant ownership encourages them to consider their benefits over the benefits of shareholders [47]. AlQadasi A and Abidin S [48] used 544 Malaysian firms from 2009-2012 and documented a negative relationship. Another trend of studies found that managerial ownership does not audit quality [2]. Thus, the next hypothesis is:

H4: There is a positive relationship between managerial ownership and audit quality.

2.2.5 Concentration ownership and audit quality

Agency problems may be increased or decreased in concentrated ownership firms. When a firm's ownership is highly concentrated, agency issues between management and owners may be reduced [12,49]. As well as, shareholders have the authority to observe managers [50]. Eventually, enhance firm performance [5,51]. As such, by using 300 Indonesian firms [52] showed that firms with concentrated ownership have high audit quality. As well as [53] used 300 Malaysian firms and indicated that ownership concentration affects positively audit quality. In the Arab environment, [54] analyze data from Omani companies and indicated that ownership concentration affects positively audit quality. However, by using 107 firms from Finland [55] documented that Finnish firms with lower ownership concentration are inclined to require high-quality audits. Likewise, [56] pointed out that concentrated ownership

firms are less demanding of audit quality in Uruguay and Peru. Zureigat QM [57] analyzed data from Jordanian non-financial companies and reported that ownership concentration affects negatively audit quality. However, Alzeaideen KA and Al SZ, Hartanto R [58,59] indicated that ownership concentration does not affect audit quality. Thereby, the next hypothesis is:

H5: There is a positive relationship between concentration ownership and audit quality.

2.2.6 Family ownership and audit quality

Prior studies documented mixed findings concerning the role of family ownership. This is a finding of disagreements over the significance of family ownership. On the one hand, family ownership is a tool for reducing agency issues that result from asymmetric information, thus leading to interest alignment [60]. As well as, family reputation is a crucial aspect to take into account, because families frequently consider their companies as a part of the family, thus, they are worried about their reputation in its society [61]. This may be especially important for Jordan, where a company's name is frequently connected to its family name. As such, [4] contend that family firms in Jordan are concerned with their reputation. Thus, family members are implicitly obligated to uphold the family name, and this obligation enhances their motivation to spend more on monitoring and auditing expenses in order to avoid negative outcomes. Gaaya S [62] used 55 Tunisian firms and found that family firms have a high audit quality. Likewise, Husnin AI, [53] reported that family ownership influences positively audit quality. The second school argues that family-owned firms provide less protection for the rights of minority shareholders. These settings may provide chances for a family member to expropriate minority shareholders, excessive advantages enjoyed by family members, poor management in employing family members, and nepotism. Accordingly, [3] showed that family-owned companies spend low audit fees since they are less likely to require substantial audit services. As well as [63] pointed out that family ownership influences negatively audit quality. While [2] demonstrated that family ownership does not affect audit quality. Thereby, the next hypothesis is:

H6: There is a positive relationship between family ownership and audit quality.

3. METHODOLOGY

3.1 Sample

For the period from 2012 to 2019, the current study collected data through the annual reports of 78 non-financial companies listed on the Amman Stock Exchange. The non-financial companies were picked because of what they provide to the Jordanian market.

3.2 Definition and Measurement of Variables

3.2.1 Measuring audit quality

There is no agreement concerning the measure of audit quality. Many researchers utilized audit firm size as a measurement for audit quality [12]. This measurement is based on a number of factors, like audit firm size. In other research, the reputation of the auditors was utilized to measure audit quality [64,65]. As well as [27] investigated audit quality using the specialization of the auditor. Furthermore, previous studies employed a variety of methods, like the estimated discretionary accruals, to quantify audit quality. In accordance with the explanation above, the current study evaluated audit quality using a dummy variable to determine whether the firms in Jordan used a Big 4 audit firm or a Non-Big 4 company to examine its financial statements.

3.2.2 Corporate governance measurements

Board independence, board gender, family ownership, managerial ownership, board size, and concentration ownership are the corporate governance dimensions utilized. The average of directors' independence is utilized to define board independence. The number of board members is utilized to mark the size of the board. The number of females on the board is utilized to calculate the gender of the board. The number of shares held by the directors as a percentage is used to calculate managerial ownership. By calculating the percentage of shares held by families, family ownership is calculated. The ratio of the top shareholder controlling greater than 5% of the total stock is how concentration ownership is calculated.

3.2.3 Control variables measurements

The present study's control variables were firm age and firm leverage. Firm age is the length of time a company has been in existence. Total

debt to total assets is the ratio used to calculate firm leverage.

3.3 Research Model

Before running the model, some diagnostic tests were performed. The Wooldridge test was carried out to see if there was any autocorrelation in the models, and the results indicated that there was. Heteroscedasticity was discovered utilizing the Breusch-Pagan/Cook-Weisberg test, which revealed its presence. Results from running the model without resolving these problems are biased. Due to its suitability as an estimator that corrects both heteroscedasticity and autocorrelation, panel-corrected standard errors (PCSE) were utilized in the present investigation to address these econometric issues [66,67]. As mentioned, the panel-corrected standard errors are utilized to estimate the following model (PCSE).

$$AQ_{it} = \alpha_{it} + \alpha_1 BS_{it} + \alpha_2 BI_{it} + \alpha_3 GEN_{it} + \alpha_4 MO_{it} + \alpha_5 CO_{it} + \alpha_6 FO_{it} + \alpha_7 FA_{it} + \alpha_8 LEV + \varepsilon_{it}$$

AQ = Audit Quality
 BS = Board Size
 BI = Board Independence
 GEN = Board Gender
 MO = Managerial Ownership
 CO = Concentration Ownership
 FO = Family Ownership
 FA = Firm Age
 FL = Firm Leverage

3.4 Research Findings

The aim of the current research is to discover the influence of corporate governance on audit

quality. Descriptive statistics, diagnostic tests, and regression analysis findings are presented and analysed in this section.

3.4.1 Descriptive statistics

Table 1 displays summary data for the test variables utilized for this regression, including the median, mean value, standard error, minimum value, and maximum value. The descriptive analysis is shown in Table 1. Table 1 indicated that the ratio of companies that are audited by the Big 4 is 41 per cent. This outcome is in line with the previous study [12] which discovered that the ratio of Jordanian companies that are audited by Big 4 is 44 per cent. While this result is not in line with the prior study [68] which refers that the ratio of Jordanian companies that are audited by the Big 4 is 58 per cent.

Table 1 additionally shows that the sample's mean management ownership is 0.03 and has a 0.07 standard deviation. The minimum value is 0, and the greatest value is 0.28. Table 1 showed that the mean concentration ownership value is 0.62 and that the highest concentration ownership value is 0.93. Table 1 indicated that 0.23 of Jordanian listed firms in the industrial and service sectors are family owned. Concerning board size, the greatest value of board members is 13, whereas the lowest value is 5. The mean value of board independence is 0.36, whereas the greatest value is 0.77. Moreover, Table 1 showed that the mean value of women in the board is 0.26, demonstrating that the presence female in the board is not large in Jordanian firms consistent with related literature. Regarding control variables, the average value of firm age is 25.42, whereas the average value of firm leverage is 0.32.

Table 1. Descriptive statistics

| Variables | Observations | Mean | Standard deviation | Minimum | Maximum |
|-----------|--------------|-------|--------------------|---------|---------|
| AQ | 624 | 0.41 | 0.49 | 0 | 1 |
| BS | 624 | 8.12 | 2.46 | 5 | 13 |
| BI | 624 | 0.36 | 0.21 | 0 | 0.77 |
| GEN | 624 | 0.26 | 0.65 | 0 | 4 |
| MO | 624 | 0.03 | 0.07 | 0 | 0.28 |
| FO | 624 | 0.23 | 0.26 | 0 | 0.80 |
| CO | 624 | 0.62 | 0.22 | .167 | 0.93 |
| AGE | 624 | 25.42 | 16.78 | 2 | 81 |
| LEV | 624 | 0.32 | 0.20 | .056 | 0.79 |

Table 2. Correlation matrix

| Variables | AQ | BS | BI | GEN | MO | FO | CO | AGE | LEV | VIF |
|------------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|------------|------------|------------|
| AQ | 1 | | | | | | | | | |
| BS | 0.278 | 1 | | | | | | | | 1.105 |
| BI | -0.301 | -0.052 | 1 | | | | | | | 1.248 |
| GEN | 0.024 | 0.15 | -0.089 | 1 | | | | | | 1.074 |
| MO | -0.182 | -0.052 | 0.004 | 0.075 | 1 | | | | | 1.221 |
| FO | -0.304 | -0.179 | 0.059 | 0.036 | 0.361 | 1 | | | | 1.305 |
| CO | 0.23 | -0.204 | -0.371 | -0.062 | 0.008 | 0.257 | 1 | | | 1.371 |
| AGE | 0.063 | 0.014 | 0.025 | 0.055 | 0.008 | 0.017 | 0.014 | 1 | | 1.009 |
| LEV | 0.077 | -0.064 | -0.045 | -0.153 | -0.213 | -0.067 | -0.042 | 0.047 | 1 | 1.092 |

Table 3. Descriptive statistics

| Variable | Observations | Mean | Standard deviation | Minimum | Maximum | p1 | p99 | Skewness | Kurtosis |
|-----------------|---------------------|-------------|---------------------------|----------------|----------------|-----------|------------|-----------------|-----------------|
| Residuals | 624 | 0 | 0.41 | -0.995 | 0.977 | -0.774 | 0.883 | 0.226 | 2.305 |

3.4.2 Pre-tests for regression

Any shared coefficients between the independent variables are visible in the correlation matrices, as illustrated in Table 2. The strongest correlation, 0.36 between management ownership and family ownership, demonstrates that there is no problem with multicollinearity between the independent variables utilized in the current research model [69]. Table 2 presents that the variance inflation factors that apply to the entire set of independent variables are well below the threshold value of 10 [70]. The findings show that 1.37 is the greatest VIF value. Multicollinearity is not expected to pose challenges for analysis.

To confirm that the residuals have a normal distribution, a normality test was applied. The Skewness and Kurtosis statistics, with corresponding values of 0.22 and 2.30, corroborate this level of normality in light of Table 3. Hair Jr. JF [69] demonstrated that the normality issue arises when the Skewness and Kurtosis values are outside of the acceptable ranges of 1.96 and 3.00, respectively. The Skewness and Kurtosis test for normalcy

indicates that the residuals are normally distributed.

Because consistent covariance, variance, and mean requirements need to be achieved to validate the suggested values and models, data stationarity is essential for panel data analysis. Thus, before measuring the influence of corporate governance structures on audit quality, it is crucial to take into account if the data are stationary or not. For stationarity testing, utilise the Levin-Lin-Chu test. Table 4 shows that every variable employed in the models was discovered to be stationary at each of its levels.

3.4.3 The result of regression

The current study required conducting a few significant checks, including residual normality, heteroscedasticity, and autocorrelation, before doing the panel data regression. The outcomes showed that heteroscedasticity and autocorrelation are prevalent. Panel corrected standard errors (PCSE), an adequate estimate that corrects for heteroscedasticity, and autocorrelation were utilised in the current study to address these econometric issues [66,67].

Table 4. Unit root test

| Variables | Statistics | p-value |
|-----------|------------|---------|
| MO | -2500 | 0.00 |
| FO | -110 | 0.00 |
| CO | -52.08 | 0.00 |
| BS | -13.7 | 0.00 |
| BI | -4.1 | 0.00 |
| GEN | -4.65 | 0.00 |
| AGE | -29.02 | 0.00 |
| LEVE | -11.57 | 0.00 |

Table 5. Prais-winsten regression

| Dependent variables | Independent Variables | Coef. | St.Err. | p-value | Sig |
|---------------------|-----------------------|--------------|--------------|---------|-----|
| AQ | BS | 0.029 | 0.01 | 0.005 | *** |
| | BI | -0.167 | 0.069 | 0.015 | ** |
| | GEN | -0.017 | 0.04 | 0.671 | |
| | MO | -0.359 | 0.254 | 0.157 | |
| | FO | -0.478 | 0.109 | 0.00 | *** |
| | CO | 0.441 | 0.106 | 0.00 | *** |
| | AGE | 0.001 | 0.001 | 0.134 | |
| | LEV | 0.127 | 0.096 | 0.185 | |
| | Constant | 0.023 | 0.119 | 0.848 | |
| | | Chi-square | 41.42 (0.00) | | |
| | R-squared | 16.40% | | | |
| | Heteroscedasticity | 15.95 (0.00) | | | |
| | Autocorrelation | 4.76 (0.00) | | | |
| | N | 624 | | | |

*** $p < .01$, ** $p < .05$, * $p < .1$

The findings of the study on the influence of corporate governance on audit quality are presented in Table 5. The outcomes of the praise-Winston regression are presented in Table 5. The Wald chi2 with p_value 0.000 confirms the acceptability of the statistical model, as seen in Table 5.

Table 5 presented that board size affects significantly and positively audit quality where (St. Err. = 0.01, Sig = 0.00) at the 1% level. Accordingly, H1 is supported. These findings are consistent with prior research that argued larger boards require high audits to improve the ability to monitor and safeguard a larger range of stakeholders [21,23]. Also, Table 5 also indicated that board independence affects significantly but negatively audit quality where (St. Err. = 0.069, Sig = 0.01). Thereby, H2 is not supported. These findings are consistent with prior research [31,32], the nomination of independent directors in emerging nations like Jordan may rely on connections with individuals rather than expertise or qualifications, which is in conflict with the agency theory argument [71].

Concerning the existence of female in board, the finding indicated that the existence of women on board does not influence audit quality. Thus, H3 is rejected. The result is contradicted by prior literature [41], while consistent with prior studies [43]. The current study argues the case that a board director's experience is more important than their gender. Additionally, Table 5 demonstrated that managerial ownership had no bearing on audit quality. Accordingly, H4 is not supported. This finding is not in line with the convergence of interest hypothesis which argues that management with more managerial ownership would prefer high audit quality in order to provide trustworthy financial information to stakeholders [44]. Regarding concentration ownership, the result showed that concentration ownership affects significantly and positively audit quality where (St. Err. = 0.106, Sig = 0.01). Thus, H5 is accepted. This finding is consistent with the agency argument, when a firm's ownership is highly concentrated, agency issues between shareholders and management may be reduced [47]. As well as, shareholders have the authority to observe management [50]. While these findings are not consistent with prior literature [56,57].

Table 5 indicates that family ownership affects significantly but negatively audit quality where (St. Err. = 0.109, Sig = 0.00) at the 1% level.

Therefore, H6 is rejected. These findings indicate that when family ownership raises, audit quality will be lowered. This finding is in line with the prior study [3] which showed that family-owned firms spend low audit fees since they are less likely to require substantial audit services, but it is contradicted with prior literature [60,4]. Concerning control variables, Table 5 presented that firm age does not affect audit quality. As well as Table 5 showed firm leverage does not affect audit quality.

4. CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND FUTURE RESEARCH

This study examines how corporate governance affects audit quality in Jordanian firms. The external auditor is viewed as a management control tool since they enhance the financial reporting quality and represent the interest of shareholders [3]. Some of the prior studies contend that the agency theory illustrates the effect of corporate governance on audit quality. Thus, this study is important for regulators to recognize how corporate governance influences audit quality, and to establish a conceptual framework to illustrate the influence of corporate governance on audit quality to determine which mechanisms are truly crucial for audit quality.

The study is quantitative by design and is based on 624 observations made over the course of 8 years, from 2012 to 2019, for 78 companies listed in ASE. The current study showed that the rate of firms whose reports are audited by Big 4 is moderate about 41 per cent. The present research's second goal is to determine whether corporate governance has an impact on audit quality in Jordanian companies. The results indicate that some corporate governance mechanisms affect audit quality such as board size and concentration ownership. Larger boards are considered to be better able to keep an eye on management behaviour since it is more challenging for CEOs to control larger boards [18]. Regarding concentration ownership, when a firm's ownership is highly concentrated, agency issues between managers and shareholders may be reduced [47].

These results should be taken seriously by policymakers and authorities to raise the audit quality and the financial reporting quality. The current study suggests that the board of directors must be raised to increase the efficiency of the board to select higher audit quality. The study

results indicated that ownership concentration performs an efficient role in the audit process. As well as shareholders have the authority to observe management, thus they play a vital role in observing and selecting the external auditor and ensuring the independence of the external auditor. While board independence and family ownership affect negatively audit quality. Regarding board independence, this outcome may be explained by the notion that the nomination of independent directors in emerging nations like Jordan may rely on connections with individuals rather than expertise or qualifications, which is in conflict with the agency theory argument [71]. As well as, family-owned firms although families frequently consider their firms as a part of the family, therefore, they are worried about their financial reputation in its society, rather than the quality of their financial reporting. On another side, board gender and managerial ownership do not affect audit quality. This result may be attributed to the existence of women in Jordanian firms is limited. Also, the percentage of managerial ownership in Jordanian firms is low. As in any other study, there are a number of limitations to the present research that must be taken into account. First, one measure for audit quality was employed. Therefore, future studies may use multiple measures. Second, the sample of the current study was restricted to the industrial and service sectors. Thus, future studies may use the financial sector.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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