

The Impact of Ownership Structure and Board Characteristics on Earnings Quality: Evidence from Saudi Arabia

M. M. Aldoseri^{1,*} and R. Hussein²

¹Department of Finance, College of Business Administration, Prince Sattam bin Abdulaziz University, Al-Kharj, Saudi Arabia

²Department of Accounting, Faculty of Commerce, Benha University, Benha, Egypt

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Abstract: This paper investigates the impact of managerial and ownership structures on earnings quality in Saudi Arabia. The starting point was a literature review that was focused on earnings quality and its determinants. A study population was used when collecting the study data that consisted of all listed companies in the Saudi Stock Exchange during the period from 2019 to 2021, excluding financial sector firms. The final sample included 110 non-financial joint stock companies, the study results showed that managerial ownership has a positive and significant impact on earnings quality, while leverage has a negative and significant impact on earnings quality. Results showed a positive but non-significant impact for institutional ownership and board of directors' size on earnings quality, the study results also showed a negative and non-significant impact for ownership concentration, board of directors' independence, CEO duality, and corporate size on earnings quality. Finally, the study results will add to the accounting literature by helping stakeholders in understanding various determinants of earnings quality.

Keywords: Earnings Quality, Managerial Ownership, institutional ownership, BOD independence

1 Introduction

Accounting and finance theories assume that the primary objective of any corporation is to maximize the wealth of stockholders, but the matter is slightly different in practice, especially with the agency problem. While doing so, managers often prefer to maximize their personal interests over the interests of stockholders [1], and this is by focusing on investments with a high and quick profit in short term. In the meanwhile, earnings as a number in the financial report is considered the most important source of information for stockholders to fill the communication gap that results from the agency relationship [2]. Moreover, earnings ratios are a useful tool that can measure a corporation's financial performance and fundamental value. So, earnings and their ratios are used to illustrate the failure or success of a corporation in achieving the operating objectives due to the corporation's financial information mirrored in profit is major information observed by all stakeholders in decision-making regarding investment and predicting future profits [3]. So, the issue of earnings quality has received the attention of the accounting literature.

Along the same line, disclosed earnings can have favorable characteristics, such as smoothness, persistence, and timeliness that reflect positive performance. However, earnings manipulation practices cause disclosed earnings to be misleading, where managers can use inside information and make the annual reports for their private interests. This behavior is known in accounting and finance as earnings management [1]. Furthermore, the earnings quality illustrates the current and future capability of the corporation to support the decision-making process by the board of directors and other stakeholders [4]. On another side, Earnings management is a worldwide phenomenon in accounting practices and annual reports [5]. The main purpose of managing earnings is to disclose logical earnings quality that meets the stakeholders' expectations [6]. Where Earnings quality represents an accurate image of the corporation without any accounting manipulation. and gives a close illustration of the corporation's finances. It refers to the corporation's income generated from its primary operations. Usually, net profit doesn't represent the true monetary image of a corporation [7]. It may happen that a corporation discloses a huge net profit, but the cash flows from main operations are negative. In that case, we cannot say that the corporation is financially healthy. To get the true financial image in these cases, it is necessary to measure and depend on the ratios of earnings quality [8]. Thus, earnings management is mainly associated with the quality of earnings. So, all managed earnings have a low level of quality. It doesn't mean, that the absence of earnings management practices is enough to report high-quality earnings or accounting profit. There are many other elements contributing to achieving earnings quality [6].

Earnings quality is a significant element that mainly affects decision-making by a stockholder. The quality of earnings is closely related to the earnings' persistence [9]. Persistent earnings can reflect the future earnings sustainability that is determined by the cash flows [6]. Based on the literature, the quality of earnings can be measured by four methods: (A)

*Corresponding author e-mail: mm.aldoseri@psau.edu.sa

discretionary accruals, (B) persistence and predictive ability (C) earnings variability, and (D) target beating and properties of analysts' forecasts [10]. So, high-level quality of earnings provides more helpful information about the advantages of a corporation's performance related to the process of making-decision made by stakeholders. Where Earnings are one of the evaluation inputs for stakeholders in their decision-making which will affect the wealth of the corporations [11]. From above, this research aims to investigate the impact of Ownership Structure and Board Characteristics on earnings quality, it contributes to the accounting literature in the context of the Saudi business environment. thus, the research continues as follows: Part two, reviews accounting literature, focusing on earnings quality determinants and hypotheses development. Part three develops the research model, part four, the Results, and part five, the Conclusion.

2. Academic Accounting Literature Review and Hypotheses Development:

2.1. Background of Earnings Quality in the Accounting Thought:

The term quality in general means that something is fit for the purpose for which it was prepared. Since the accounting function is primarily a service. Therefore, the quality of the accounting function's outputs is a relative issue, and its determinants are that it is acceptable to stakeholders and its ability to meet their financial and accounting information needs [7]. Moreover, the researchers dealt with the nature of earnings quality and its concept with several aspects, according to the fact of stakeholders' needs. First, the concept of earnings quality is one of the vital and argumentative accounting concepts, and despite its importance and the substantial number of studies in the accounting literature that have dealt with it, there is no specific definition of the concept of earnings quality. Where many researchers [9,12,13] identified earnings quality as (A) The ability of investors to predict future earnings based on current information. (B) The degree to which the disclosed earnings express the financial condition. (C) The relationship between earnings and cash flow, the more positive this relationship is, the higher earnings quality appears. So, from previous academic studies, the researcher can define the concept of earnings quality as the ability of the disclosed earnings in the financial report to faithfully represent the financial performance and support the predictions of stakeholders through the feature of continuity, predictive ability, and relative stability (non-volatility of profits). Generally, the quality of earnings is defined from two different perspectives [14] decision-making perspective and economic-based perspectives. Under decision-making, the quality of earnings is considered high when earnings are particularly useful to stakeholders for the process of decision-making purposes. While an economic-based view the quality of earnings is considered high when it can illustrate the changes in a corporation's wealth

The importance of earnings quality is derived from the earning itself. As the corporation's earnings, regardless of their quality, are considered one of the important inputs in the process of making administrative, investment, and financing decisions [11]. in addition to using, it in the evaluation and predictive studies for current and future financial performance and fundamental value. Hence, the researcher believes that the importance of earnings quality is that it achieves two goals: (A) The ability of the disclosed earnings in the financial report to honestly express and show the essence of the actual performance of the economic unit. (B) The earnings' ability to influence the stakeholders of various categories to take administrative, investment, and financing decisions.

From another aspect, [2] referred to the changes in earnings quality measures over the past forty years as a result of changes in the business environment and accounting standards. Where measuring earnings quality is a fundamental issue for the users of accounting information, especially for investment decisions of current and potential investors. And according to the differences in the academic viewpoints in defining the concept of earnings quality, led to a difference in the proxies and criteria for determining the degree of earnings quality.

The accrual adjustments have implications for the corporation's financial condition. This has caused financial information becomes detrimental to investors due to fraud. where Fraud that occurs in corporations is closely related to the quality of earnings such as mark-ups, manipulation of financial statements, and overstatement [7].

Earnings management and manipulation through disclosed annual financial statements result in many doubts about the creditability of these statements, which will make stakeholders lose their trust and can lead to an understating of the stock market reaction to disclosed earnings [5]. This can show a decrease in the quality of earnings. The phenomenon of financial crises illustrates that the annual financial statements have failed to meet the stakeholders' needs of these reports. Thus, Earnings as an important part of the annual financial statements, don't present facts about the corporation's financial condition, so the profit disclosed can't be useful to stakeholders [7]. Furthermore, a review of the accounting literature on earnings quality determinants was conducted. And there are three main categories of determinants to be reviewed: Managerial structure, Ownership structure, and Corporation characteristics.

2.2. Managerial Structure and Earnings Quality:

The relation between earnings quality and agency theory is the agency relationship that appears between stockholders and

the corporation's managers. where Earnings quality illustrates information about the situation of a corporation [3]. The assumption that managers have a selfish nature as humans will encourage them to behave more selfishly than act to increase the corporation's value. This will affect the quality of earnings disclosed in the annual financial report which causes managers to be free in doing earnings management practices [11]. resulting in many Conflicts of interest occurring between managers and stockholders, and this will result in information asymmetry.

2.2.1. Board of Directors' Size: There are three explanations for the relation between the Board of Directors' Size and the quality of earnings, the first explanation argued that the Board of Directors Size has a positive impact on earnings quality [15] because of the large-size board tends to more disclosure's quality and that related to earnings quality. the second explanation argued that the Board of Directors Size has a negative impact on earnings quality [6] because a large-size board tends to have more investment incentives, so earnings management may be applied in a wild range. Meanwhile, the third explanation argued that there is no relation between the Board of Directors' Size and the quality of earnings. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.1 "There is no relation between Board of Directors' Size and Earnings Quality."

2.2.2. Board of Directors' independence: There are three explanations for the relation between the Board of Directors' independence and the quality of earnings, the first explanation argued that the Board of Directors' independence has a positive impact on earnings quality [6] because of the independence mainly gives the board member more authority to control earnings management practices. The second explanation argued that the Board of Directors' independence has a negative impact on earnings quality [16] because of that information asymmetry plays an important role between the board's members, and the independent member doesn't have the same information about the corporation like an executive member. Meanwhile, the third explanation argued that there is no relation between the Board of Directors' independence and the quality of earnings [13] Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.2 "There is no relation between Board of Directors' independence and Earnings Quality"

2.2.3. CEO Duality: There are three explanations for the relation between CEO Duality and the quality of earnings, the first explanation argued that CEO Duality has a positive effect on the quality of earnings [17] because the CEO has full authority in the corporation and tend to show perfect financial performance to get more confidence from investors. The second explanation argued that CEO Duality has a negative impact on earnings quality [18] because the CEO may tend to hide bad news or low financial performance to secure his position in the corporation in case of achieving a low level of profit, which will decrease earnings quality. Meanwhile, the third explanation argued that there is no relationship between CEO Duality and earnings quality [6]. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.3 "There is no relation between CEO Duality and Earnings Quality."

2.3. Ownership Structure and Earnings Quality:

The structure of ownership is considered one of the most important mechanisms of corporate governance for deducting agency costs and mitigating earnings management motivations.

2.3.1. Managerial Ownership: it can be illustrated as the volume of stocks owned by the managers of a corporation to the total volume of stocks [19]. Where there are three explanations for the relation between managerial ownership and the quality of earnings, the first explanation argued that managerial ownership has a positive impact on the quality of earnings [3] because of when managers possess a significant volume of stocks, the tendencies of managers to act in their self-interest will disappear because their attention will be on the attainment of the overall interest [19]. According to the agency theory, managers tend to be in line with other groups of stockholders to achieve an organizational main objective when they are also stockholders. The second explanation argued that managerial ownership has a negative impact on earnings quality [2,18] because of the expected behavior from managers to increase the market value of the corporation through disclosed earnings despite its real quality. Meanwhile, the third explanation argued that there is no relation between managerial ownership and earnings quality [16]. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.4 "There is no relation between Managerial Ownership and Earnings Quality."

2.3.2. Institutional Ownership: There are three explanations for the relation between Institutional ownership and the quality of earnings, the first explanation argued that Institutional ownership has a positive impact on the quality of earnings [2,3,19]. Based on that Institutional ownership is a major factor in corporation's governance in general. Institutional investors act an important role in companies due to their ability to monitor managers [20]. The second explanation argued

that Institutional ownership has a negative impact on earnings quality [1,13]. based on that institutional ownership does not consider the quality of numbers in the financial statements; the only concern is the volume of earnings created by the corporation. Meanwhile, the third explanation argued that there is no relation between Institutional ownership and the quality of earnings [5,12]. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.5 “There is no relation between institutional Ownership and Earnings Quality”

2.3.3. Ownership Concentration: it refers to the equity percentage of the major stockholders. a stockholder who holds at least 5% of a corporation's equity is considered a major stockholder [2]. where Agency theory suggests that ownership concentration will improve the monitoring system installed in the corporation. and resulting in solving the principal-agent problem. Where, there are three explanations for the relation between Ownership Concentration and the quality of earnings, the first explanation argued that Ownership Concentration has a positive impact on the quality of earnings [1,2]. Because of ownership concentration provides sufficient inducements to monitor managers. The second explanation argued that Ownership Concentration has a negative impact on the quality of earnings [16,19]. Because of ownership Concentration gives managers more motivations to manipulate and manage earnings to achieve short-term opportunistic interest. Meanwhile, the third explanation argued that there is no relation between Ownership Concentration and the quality of earnings [4]. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.6 “There is no relation between ownership concentration and Earnings Quality.”

2.4. Corporate Characteristics and Earnings Quality:

Several academic research provided descriptive evidence that corporation characteristics are linked to the various measurements for the quality of earnings, including a corporation's choice of accounting principles, and properties of its profits such as accruals, volatility, and persistence [14]. so, evidence about three specific corporation characteristics needs to be reviewed: Size, Leverage and Profitability

2.4.1. Corporation Size: There are three explanations for the relation between corporation Size and the quality of earnings, the first explanation argued that Corporation Size has a positive impact on the quality of earnings [2,9,11]. because of the large-size corporations have more effective internal control systems and more pressure from the stock market and the ability to get more funding so that they can achieve higher quality earnings than small-size corporations. The second explanation argued that Corporation Size has a negative impact on the quality of earnings [1,10,12]. because of that big corporations are more likely to manage earnings than small corporations to avoid reporting earnings decreases. Furthermore, the large-size corporation would make profit-decreasing accounting choices to avoid greater regulatory and political scrutiny. Meanwhile, the third explanation argued that there is no relation between Corporation Size and the quality of earnings [4,21]. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.7 “There is no relation between Corporation Size and Earnings Quality.”

2.4.2. Leverage: There are three explanations for the relationship between Leverage and earnings Quality, the first explanation argued that Leverage has a positive impact on earnings quality [5,12,22]. because of creditors are considered an external control tool over a corporation's management, thus low opportunities to manage earnings. And the second explanation argued that Leverage has a negative impact on earnings quality [4,9,18]. because of managers in more highly leveraged corporations could be taking action to increase earnings or manipulate the annual statements to avoid violating a covenant [11]. Such actions would decrease the earnings quality for decision-making. Meanwhile, the third explanation argued that there is no relation between Leverage and earnings quality [10]. Build on the above, literature studies led to inconclusive and inconsistent results. So, the following hypothesis can be existing:

H.8 “There is no relation between Leverage and Earnings Quality.”

2.4.3. Profitability: it can be measured by many ratios but return on assets (ROA) considered the best ratio that can capture the true image of the corporation's financial performance [23]. Where, there are three explanations for the relationship between Profitability and earnings Quality, the first explanation argued that Profitability has a positive impact on earnings quality [8,9,10]. because of the corporation with high profit level tends to appear its quality in the stock market, this motivation encourages managers to provide more quality in disclosed earnings and its ratios. The second explanation argued that Profitability has a negative impact on earnings quality [7,18]. Because of a low-profit ratio is connected to earnings quality as managers will not accept to disclose a financial report that displays their unwise performance. thus, managers tend to manipulate financial results to avoid reporting poor managerial effectiveness and efficiency. Furthermore,

corporations that are performing poorly involve in earnings management practices to improve their earnings volume [11]. Specifically, weak performance provides motivations to involve in earnings management practices. Meanwhile, the third explanation argued that there is no relation between Profitability and the quality of earnings [3,4]. Build on the above, literature studies led to inconclusive and inconsistent results. so, the following hypothesis can be existing:

H.9 “There is no relation between Profitability and Earnings Quality.”

3. Data and research design

3.1 Data

The study population all listed companies in the Saudi Stock Exchange during the period from 2019 to 2021. Financial sector firms such as bank, investment and financing firms and insurance companies were excluded because to their specific nature. Companies with no published sufficient data that are needed to measure the study variables were also excluded. The final sample included 110 non-financial joint stock companies with 330 observations (company-year) and the data was collected manually from the sample companies’ annual reports that are available on the Saudi Financial Market website and the companies’ websites.

First: The Dependent Variable: Earnings Quality:

The literature mainly depended on the earnings persistence as the major measurement of the quality of earnings [6]. A high-level of earnings persistence is assumed to be more helpful for equity assessment, where a part of the literature used the residual component of accruals as a tool to measure accrual-based earnings management and the quality of earnings. thus, an increase or decrease in discretionary accruals indicates a lower or higher degree of quality and a higher or lower degree of managerial opportunism [10]. in addition, a few studies in the literature used (Target beating and analysts’ forecasts) or (Earnings variability) to measure the quality of earnings. In this study earnings quality was measured using the “modified Jones” model that is used for measuring discretionary accruals. This model was developed by Dechow [24]. and was used by many studies, it is based on measuring discretionary accruals (or extra-ordinary earnings), this model is considered one of the most accurate and applicable model in regards of available data in the Saudi business environment, moreover this model has been used by many accounting studies such as those conducted by [25,26]. Therefore, the current study will use the following formula:

$$Total_Accruals_{it}/Assets_{it-1} = \alpha_0 + \alpha_1(1/Assets_{it-1}) + \alpha_2\Delta Rev_{it}/Assets_{it-1} + \alpha_3PPE_{it}/Assets_{it-1} + \alpha_4ROA_{it}/Assets_{it-1} + \epsilon_{it} \dots (1)$$

(Total Accruals): represents the total accrual accounts, measured by the difference between net profit and operating cash flows. **(Assets):** represents total assets at the end of the year, **(ΔRev):** is the change in revenues. **(PPE):** represents fixed assets (Property, plants, and equipment) at the end of the year. **(ROA):** the return on assets measured through dividing net profit by total assets. $(\alpha_1,2,3,4)$: are the regression model coefficients. **(ε):** is the Residuals or Error Term in the regression equation.

The value of the residuals in the previous model represents the value of total accruals, in which any increase in their value indicates an increase in earnings management practices and vice versa, so these residuals have been multiplied by (-1) to reflect earnings quality, so that the higher the value of these residuals, the more the earnings quality and vice versa.

Second: The Independent Variables:

1) Institutional Ownership (IO)

Institutional ownership refers to the ownership of large business groups in other firms either as to control these firms or as excess fund investment. It is measured by the percentage of the shares held by large businesses.

2) Managerial Ownership (MO)

Managerial ownership is the percentage of shares held by the top management of the firm, the importance of this percentage is that the higher this percentage the lower the agency problems as owners’ interests are somehow aligned with that of managers [27].

3) Ownership concentration (OC)

Ownership concentration is measured by the percentage of the shares held by the largest (for example top five) shareholders and the ownership concentration is considered higher if largest shareholders have at least 50 percent shares in the firm [27]

4) Board size (BODs)

There are many claims that the larger board size the more valuable is the board members' knowledge and the more ability to provide services and resources. Board size can be measured through calculating the natural logarithm of total number of directors on the board.

5) Board independence (BODI)

Board independence can play a significant role in enriching the effectiveness of corporate governance mechanisms. BODI is measured as the proportion of independent directors in the board.

6) CEO Duality (CEOD)

CEO duality describes whether, the positions of CEO and chairman of board is held by the same person or different persons [28]. It is measured as a dummy variable that takes (1) if the CEO is the chairman or (zero) if the two positions are separated.

7) Corporation Size (CS)

Sometimes referred to it as firm size; its usefulness is from showing how much resources are occupied by the firm and as Corporation size captures the influence of the "size effect" on the performance ([27,29]. Corporation size is measured by the natural logarithm of the firm's total assets.

8) Leverage (LEV)

Leverage refers to the firm's interest-bearing debt ratio compared to its total assets. It is measured by dividing total long-term liabilities to total assets.

9) Profitability (ROA)

The main aim of any firm is to generate profit and from here profitability stems its importance. In the current study profitability is measured by calculating the return on assets (ROA), return on Assets ratio is equal to the ratio of the year's net income at the end of the year to total assets.

Table (1) Study variables

Variable	Symbol	Definition and Measurement	Independent/Dependent
Earnings Quality	EQ	Measured using the "modified Jones" model which is used for measuring discretionary accruals.	Dependent
Managerial Ownership	MO	Measured by the percentage of shares held by the top management of the firm.	Independent
Institutional Ownership	IO	Measured by the percentage of the shares held by large businesses.	Independent
Ownership concentration	OC	Measured by the percentage of the shares held by the largest (for example top five) shareholders	Independent
Board Size	BODs	The number of members in the board of directors.	Independent
Board Independence	BODI	The number of independent (non-executive) members in the board of directors.	Independent
CEO Duality	CEOD	Measured as a dummy variable that takes (1) if the CEO is the chairman or (zero) if the two positions are separated.	Independent
Corporation Size	CS	Measured by the natural logarithm of the firm's total assets.	Independent
Leverage	LEV	Measured by the ratio of total liabilities to total assets.	Independent
Profitability	ROA	Measured by the Return on Assets ratio which is equal to the ratio of the year's net profit to total assets.	Independent

3.2 Sources of Data

Data for the study were collected from the companies' annual reports, during the study period and data available on the companies' websites, Mubasher.info and argam.com websites (*).

4. Results and Discussion:

This section summarizes the results of the statistical analysis through the descriptive statistics, validity of data, correlations, results of linear regression analysis, and a conclusion based on the results of the statistical analysis.

4.1 Descriptive Statistics:

4.1.1 Description of study variables:

Table (2) presents the summary statistics for the variables in the study model, mainly the managerial ownership (MO), institutional ownership (IO), ownership concentration (OC), board size (BODs), board ownership (BODI), CEO duality (CEOD), corporation size (CS), leverage LEV and profitability (ROA).

Table (2) Descriptive statistics of the study variables

Variable	No	Minimum	Maximum	Mean	Standard deviation	T-value	Sig.
MO	150	0.00	0.34	0.10	0.08	16.01	.000
IO	150	0.12	0.71	0.37	0.13	34.08	.000
OC	150	0.04	1.00	0.24	0.18	16.27	.000
BODs	150	7.00	13.00	9.51	1.64	71.11	.000
BODI	150	0.20	0.84	0.52	0.16	39.73	.000
CEOD	150	0	1	0.58	0.50	14.34	.000
CS	150	250.00	5492.00	1283.86	984.33	15.97	.000
LEV	150	0.18	0.85	0.43	0.17	32.02	.000
ROA	150	0.05	0.36	0.23	0.07	40.82	.000

Table (2) shows that the minimum, mean and maximum for the managerial ownership are 0.00, 0.10 and 0.34, respectively. These values are relatively small which reflects that most investments in Saudi companies are by outsider investors. As for the institutional ownership the mean value is 0.34 and the maximum is 0.71 which is relatively high and shows that a high proportion of investments in Saudi listed firms are owned by large businesses. The ownership concentration is, otherwise, the minimum value is relatively low (0.04) when compared to the maximum value (1.00), revealing that there is a considerable difference in the ownership concentration of the companies in the study sample.

The next three variables are related to the board of directors' characteristics of the study sample. First the board size which has a minimum value of (7), a mean of (9.5) and a maximum value of (13), the slight difference in these values is because of the corporate governance mechanisms and that Saudi companies must have a minimum number of board members. The board members' independence mean is (0.52) which is good percentage and shows that an average of more than 50% of the board members are independent members. On the other hand, most of the companies did not adhere to separating the role of the CEO and the chairman, as the study results indicated that 58% of the firms are having their chairman performing the executive role of CEO.

Corporate size is ranging from a minimum value of (250), a maximum value of (5492) and a mean of (1283) indicating a wide dispersion in the companies' size in the Saudi business environment. Leverage also has minimum, mean and maximum values of (0.18), (0.43) and (0.85) respectively, this shows big differences in the liability to equity values ratios in the study sample companies. Finally, the profitability of the study sample indicated by the return on assets value has a maximum value of (0.36) and a mean value of (0.23) which indicates a relative similarity in the profitability the highest profitable company and the average profitability of the study sample.

4.1.2 Binomial Test:

Table (3) Binomial Test

		Category	N	Observed Prop.	Exact Sig. (2-tailed)
CEOD Independent	Group 1	1	87	.58	.060
	Group 2	0	63	.42	
	Total		150	1.00	

Table (3) shows that the total number of observations for the CEO duality in the study sample is (150) observation, out of them a number of (87) companies showed a duality in the CEO role with a percentage of (58%) of the study sample. On the other hand, there is a number of (63) observation within the study sample showing a lack of duality in the CEO role, with a percentage of (42%).

4.1.3 Multicollinearity Test:

This test aims to calculate the Variance Inflation Factor (VIF) for each of the independent variables to verify that they are free from self-correlation problem. The results of this test (as presented in table (4) shows that the variance inflation factor (VIF) of all independent variables for the study model are within the range of (1.067) and (1.262) which are far less than (10), this indicates that the independent variables are free from both overlapping issues and linear duplication, this also shows the strength of the model that is used for the determination of the independent variables impact on the dependent variables in the study model.

Table (4) Multicollinearity Test results

Model variables	Collinearity Statistics	
	Tolerance	VIF
MO	.874	1.144
IO	.847	1.180
OC	.900	1.111
BODs	.792	1.262
BODI	.851	1.175
CEOD	.811	1.234
CS	.937	1.067
LEV	.867	1.154
ROA	.846	1.182

4.2 Analysis of the Study Results and Testing the Hypotheses:

This study aims to examine the impact of ownership structure and board characteristics on earnings quality and to introduce practical evidence from the Saudi business environment.

4.2.1 Correlation analysis:

The study used the Pearson correlation to examine the strength and direction of the relationship between the earnings quality and both ownership structure and board characteristics. Table 5 shows Pearson correlation coefficients of the study variables:

Table (5) (Pearson Correlation Matrix)

		EQ	MO	IO	OC	BODs	BODI	CEOD	CS	LEV	ROA
EQ	Pearson Correlation	1									
	Sig. (2-tailed)										
MO	Pearson Correlation	.182*	1								
	Sig. (2-tailed)	.025									
IO	Pearson Correlation	.050	-.167*	1							
	Sig. (2-tailed)	.540	.041								
OC	Pearson Correlation	-.079	.044	-.034	1						
	Sig. (2-tailed)	.334	.591	.678							
BODs	Pearson Correlation	.108	-.149	.177*	-.204*	1					
	Sig. (2-tailed)	.190	.069	.030	.012						
BODI	Pearson Correlation	-.018	.034	.089	-.079	-.183*	1				
	Sig. (2-tailed)	.824	.680	.279	.335	.025					
CEOD	Pearson Correlation	-.051	.236**	.025	.001	-.083	-.188*	1			
	Sig. (2-tailed)	.536	.004	.757	.991	.310	.021				
CS	Pearson Correlation	-.019	.085	-.213**	.088	-.036	-.025	-.065	1		
	Sig. (2-tailed)	.815	.302	.009	.285	.666	.762	.428			
LEV	Pearson Correlation	-.177*	-.058	.223**	.089	-.040	.165*	.168*	-.103	1	
	Sig. (2-tailed)	.031	.482	.006	.279	.624	.043	.040	.210		
ROA	Pearson Correlation	.035	-.013	-.129	-.085	-.287**	.041	.191*	.019	.065	1
	Sig. (2-tailed)	.667	.876	.115	.300	.000	.620	.019	.821	.426	

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

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

First the relationship between Earnings quality and ownership structure, table (5) shows a positive correlation between managerial ownership and earnings quality with a correlation coefficient of 0.182 and a significance level of less than 0.05. The correlation analysis also showed a negative correlation between institutional ownership and earnings quality with a correlation coefficient of 0.167 and a significance level of less than 0.05.

Second the relationship between Earnings quality and board characteristics, the correlation analysis results in table x4 shows a negative correlation between the board characteristics under study and earnings quality. For example, it showed a correlation coefficient of 0.34 between ownership concentration, it also showed correlation coefficients of 0.204, 0.183, 0.188 and significance level of less than 0.05 between earnings quality and board of directors’ size, board of directors’ independence and CEO duality, respectively. Finally, the correlation analysis shows a negative correlation between corporate size and earnings quality it also shows a negative correlation between leverage and earnings quality, while showing a positive correlation between profitability and earnings quality with a correlation coefficient of 0.065.

4.2.2 Linear Regression Results:

Multiple linear regression analysis was used to develop the regression model because of being one of the most used models in accounting studies, multiple linear regression leads to accurate results and helps in predicting relations forecasting, and its application requires only few assumptions for the study variables’ characteristics and does not require any specific assumptions for statistical distribution. Ordinary Least Squares (OLS) is used to formulate the regression model to measure the impact of ownership structure and board characteristics as independent variables on the earnings quality as a dependent variable. The following table (Table 6) shows the results of the multi-linear regression analysis of the relationship between ownership structure and board characteristics on earnings quality.

Table (6) regression analysis of the linear regression model

	Regression coefficients (β)	Std. Error	Beta	Sig.
(Constant)	1.240	.158		.000
MO	.588	.209	.241	.006
IO	.165	.123	.117	.181
OC	-.033	.089	-.031	.713

BODs	.015	.010	.132	.142
BODI	-.012	.102	-.010	.904
CEOD	-.037	.034	-.098	.273
CS	-6.495×10^{-6}	.000	-.034	.679
LEV	-.197	.097	-.174	.044
ROA	.325	.235	120	0.169

The previous table shows that the coefficient of determination R2 for the model is (0.56), this reflects the fact that the model interpretive value is high, which means that most changes in the study variables can be explained through this model.

The results of the regression analysis show a non-significant positive relation between Board of Directors' size and Earnings Quality. This result confirms the hypothesis H.1, which states that "There is no relation between CEO Duality and Earnings Quality". The regression analysis table shows a non-significant negative relation between Board of Directors' independence and Earnings Quality, this confirms hypothesis H.2 which states that "There is no relation between Board of Directors' independence and Earnings Quality". The regression results also show a non-significant negative relation between CEO Duality and Earnings Quality, this confirms hypothesis H.3 which states that H.3 "There is no relation between CEO Duality and Earnings Quality". Further, the regression analysis table shows that there is a significant positive relation between Managerial Ownership and Earnings Quality, this result rejects the hypothesis H.4 which states that "There is no relation between Managerial Ownership and Earnings Quality". Then the table shows non-significant positive relation between Institutional Ownership and Earnings Quality, which is in line with hypothesis H.5 stating that "There is no relation between institutional Ownership and Earnings Quality". The regression results also show a non-significant impact for Ownership Concentration on Earnings Quality, this result confirms hypothesis H.6 which states that "There is no relation between ownership concentration and Earnings Quality". Moreover, results show a non-significant relationship between Corporate Size and Earnings Quality, this is in line with hypothesis H.7, which states that There is no relation between Corporation Size and Earnings Quality". Unlikely the regression analysis results show a significant negative relation between Leverage and Earnings Quality which rejects hypothesis H.8 that states "no relation between Leverage and Earnings Quality". Finally, the regression analysis shows a non-significant positive relation between Profitability and Earnings Quality, this result confirms hypothesis H.9 which states that "There is no relation between Leverage and Earnings Quality".

The regression model for the impact of ownership structure and board characteristics on earnings quality can be formulated as follows:

$$\widehat{EQ} = 1.240 + .588(MO) + .165(IO) - .033(OC) + .015(BODs) - .012(BODI) - .037(CEOD) - 6.495 \times 10^{-6}(CS) - 0.197(LEV) + .325(ROA)$$

5. Conclusion:

This article investigates the impact of managerial and ownership structures on earnings quality in Saudi Arabia. The starting point was a literature review that was focused on earnings quality and its determinants that helped in developing a solid framework and for the introduction of the study hypotheses. A study population was used when collecting the study data that consisted of all listed companies in the Saudi Stock Exchange during the period from 2019 to 2021, excluding financial sector firms. The final sample included 110 non-financial joint stock companies with 330 observations (company-year).

The study results showed that managerial ownership has a positive and significant impact on earnings quality with a significance level of less than (0.05), while leverage has a negative and significant impact on earnings quality with a significance level of less than (0.05). Results showed a positive but non-significant impact for institutional ownership and board of directors' size on earnings quality, the study results also showed a negative and non-significant impact for ownership concentration, board of directors' independence, CEO duality and corporate size on earnings quality. Finally, the study results will add to the accounting literature by helping shareholders and other stakeholders in the understanding of various determinants of earnings quality within one of the most important emerging economies in the MENA region.

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