International Journal of Academic Management Science Research (IJAMSR)
ISSN: 2643-900X
Vol. 8 Issue 6 June - 2024, Pages: 141-156

The Involvement of Tax Administration as a Mediator in the Association Between Corporate Governance and Financial Performance of Public Listed Companies

Nidal Zaqeeba

Faculty of Administrative & Financial Science, Irbid National University, Jordan.

.

n.zaqeeba@inu.edu.jo

Abstract: *The study underscores the significance of tax administration in bolstering a company's capacity to carry out shareholders' rights initiatives and manage their demands effectively. It highlights the crucial role of tax administration as a mediator in this connection. The study is a noteworthy addition to the existing literature on financial performance because prior research on the relationship between the board of directors' characteristics and the adoption of financial performance has mostly assumed a direct relationship between the two constructs, leading to an incomplete and ambiguous understanding of this association. The findings reveal that tax administration acts as a mediating variable in the relationship between the board of directors' characteristics examined in the study and financial performance, except for board size.*

Keywords: **Board of Directors Characteristics, Financial Performance, Board Size, Independent Board Chairman, Multiple Board Memberships, Board Relevant Education, and Tax Administration**.

INTRODUCTION

Tax administration can help reduce tax payments (Zaqeeba & Iskandar, 2020). Tax administration provides several economic benefits to the firm by reducing company profits. The department should seek to reduce the tax load that is deposited as predictable by shareholders. nevertheless, shareholders also predict tax administration to be done correctly to obviate penalties and fines which could decrease performance and profits significantly Mgammal, (2020).

The characteristics of a company's board of directors have a significant impact on corporate tax administration (Zaqeeba, & Iskandar, 2020). They are involved in decision-making processes and internal organization that affect tax administration and contribute to improving financial performance. Shareholders consider tax administration as a means to increase the value of the company. Wang et al. (2020) note that firms with higher characteristics of the board of directors tend to engage in more tax avoidance, which may not necessarily align with the interests of shareholders. Ariff and Hashmin (2014) found that tax reduction can enhance shareholders' wealth. However, personal incentives may lead managers to over or under-invest in an effort to avoid tax. If the board of directors fails to monitor administration activities and protect the interests of shareholders, the company's financial performance may suffer, leading to significant losses for both the company and stakeholders (Hasnan et al. 2017). Therefore, the board of directors has a crucial responsibility of safeguarding the owners' interests and aiding the administration in making decisions that would maximize benefits for the shareholders (Zaqeeba,& Iskandar 2020; Tihanyi et al., 2014).

The current literature on the relationship between weak financial performance and board of directors' characteristics is insufficient. Therefore, the tax administration may serve as a mediator between board of directors' characteristics and weak firm performance (Nugroho & Agustia, 2018). A wide range of directors' characteristics, such as board size, independent chairman, multiple membership, and financial literacy, play a crucial role in monitoring administration, promoting governance, improving efficiency and transparency, defining strategy, planning, and tax avoidance (Almashhadani & Almashhadani, 2022; Neville et al., 2019; Fariha et al., 2022; Compen, B., De Witte, K., & Schelfhout, W., 2019).

The term "board size" refers to the total number of directors on a firm's board (Bashir & Asad 2018). Corporate governance codes issued by the Companies Control Department apply to both service and industrial companies and specify that a board's size should consist of between 5 to 13 directors (as per code 6). The literature on corporate governance views board size as a significant characteristic of a board (Higgs, 2003), with the size of a board of directors playing a critical role in its ability to effectively supervise managers (Bashir & Asad, 2018). In the context of corporate governance, an independent board chairman is a term used to describe the non-duplication of roles between the chief executive officer and the chairman of the board, which can be seen as a significant indicator of the CEO's independence within the company (Merendino & Melville, 2019). When referring to corporate governance, multiple board memberships are a term used to indicate the number of other boards and companies in which a director serves. Specifically, it refers to the number of memberships held by each director within a given firm (Saleh et al., 2020).

The term "board financial literacy" in the context of corporate governance refers to the assessment of board members based on their educational background in financial disciplines, as defined by Darmadi (2013). Forbes and Milliken (1999) suggest that financial literacy extends beyond academic qualifications and includes general business knowledge and skills related to conventional business and administrative practices, such as legal and compliance knowledge, finance, accounting, and human resource management. Therefore, evaluating the educational backgrounds of board members in financial disciplines is an important aspect of corporate governance (Darmadi, 2013).

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Tax Administration

Within the accounting research field, there is a significant focus on how tax administration impacts financial statements and the relevance of tax information in financial reporting, as highlighted by Mgammal (2020). However, Chen et al. (2018) note that there is a lack of a comprehensive conceptual framework that can effectively integrate research findings from various disciplines related to this topic. Tax administration involves a company's strategies to minimize tax payments, and tax planning aims to achieve the lowest possible tax liability by utilizing legal means that may differ from the intentions of the legislature. In this context, according to Lanis et, al. (2018), tax planning is similar to tax avoidance, as both seek to increase post-tax income from an economic perspective.

Firm performance

The construct of firm performance is a crucial dependent variable in accounting research, as it serves as evidence of effective corporate governance and its contextual factors, according to Kyere and Ausloos (2021). They also note that concepts of firm performance typically revolve around efficiency or effectiveness, as long-term profitability is vital for a firm's survival. The relationship between board director characteristics and financial performance remains unclear, as various studies have produced differing results. For instance, Buallay et al. (2017) found that a board with 12 members had a significant negative impact on firm performance due to potential hindrance to board independence. On the other hand, Alyousef and Alsughayer (2021) identified five members as the ideal board size. However, Boussenna (2020) argued that a board comprising 13 members would be better for promoting transparency, improving monitoring, and enhancing networks.

Literature suggests that having an independent chairman on the board leads to better firm performance, as noted by Mishra and Kapil (2018), Merendino and Melville (2019), and Jermias and Gani (2014). However, some studies have found that an independent chairman has a negative impact on firm performance, such as Shahid et al. (2018) and Bansal and Singh (2022).

The influence of multiple board memberships on firm performance is also a topic of debate in the literature. Scholars have found either a positive linkage between multiple memberships and firm performance, as seen in Hasnan et al. (2017), Laoworapong et al. (2015), and Mitsudome (2023), or a negative linkage, as observed in Alqahtani et al. (2022), Bischoff and Buchwald (2018), and Saleh et al. (2020).

The position of an independent board chairman involves having two separate individuals as CEO and chairperson, while CEO duality refers to the same person holding both positions (Lechem, 2003). There are arguments in support of both options - having the same person as CEO and chairperson, and having different individuals in these roles. The separation of roles is believed to ensure the effectiveness of the board (Fama & Jensen, 1983; Higgs Report, 2003).

The scarcity of empirical studies on the educational background of board members is a concern, as it is an important aspect of corporate governance (Darmadi, 2013). Jaya et al. (2016) argued that individuals with a degree in finance have a higher level of professional expertise to solve complex problems, which can ultimately impact the performance of the company.

Board of directors characteristics

The board of directors' characteristics play a crucial role in overseeing and managing corporate taxes, from an agency perspective. On the other hand, from the resource dependency perspective, these characteristics are seen as resources that companies can utilize. The present study specifically focuses on four board characteristics: board size, independent board chairman, multiple board memberships, and board members' relevant education.

Board Size

Increasing the size of a company's board has a notable impact on improving its financial performance (Boussenna, 2020). From an agency viewpoint, a larger board enables better coordination and communication among members who possess diverse knowledge and experience in the company's affairs, as noted by Buallay et al. (2017) and Bashir and Asad (2018). The resource dependence theory posits larger boards as more effective, as the size of the board indicates a company's capacity to connect with external environments and acquire crucial resources necessary for the firm's functioning (García et al. 2017). Consequently, the hypothesis is put forth as follows:

H1 Board size relates positively to financial performance.

Independent Board Chairman

Mishra and Kapil (2018) suggest that agency theory proposes the separation of the positions of independent chairman on a board, to prevent power concentration in a single individual. On the other hand, according to Shahid et al. (2018), several large institutional investors have advocated for corporate governance reforms and urged for the elimination of CEO duality to align the interests of top management with shareholders, as per the resource dependence theory. Based on this, the following hypothesis is put forward:

H2: Independent board chairman relates positively to financial performance.

Multiple Board Memberships

According to Mitsudome (2023), multiple board memberships refer to situations where a director holds a position in another company. From an agency perspective, such directors are diligent monitors who can enhance a firm's financial performance. This is because they acquire skills, knowledge, and expertise to actively oversee managers' activities by serving on multiple boards. Within the resource dependency perspective, Pfeffer and Salancik (2003) suggest that directors with multiple memberships can generate benefits for their company by being more networked and helping to attract necessary resources, suppliers, and customers. Therefore, based on the agency and resource dependence theories, the following hypothesis is proposed:

H3: Multiple board memberships relate positively to financial performance.

Board Relevant Education

The educational background of a board is a factor that affects its performance in running a company (Kartikaningdyah & Putri 2017). While it is not mandatory for a board to have academic knowledge in business administration, members who possess knowledge of business and economics are expected to be more capable of managing businesses and making decisions that improve the company's performance. Furthermore, in line with the resource dependency theory, the board is regarded as a network of connections that can provide resources to enhance performance, as proposed by Pfeffer and Salancik (2003). Based on these points, the following hypothesis is proposed:

H4: Board financial literacy relate positively to financial performance.

The mediation role of tax administration with the relationship between board characteristics and Firm performance

The board's decision directly influences the tax administration carried out by companies (Staubli 2016). This decision-making process is related to the characteristics of the board of directors and their role in determining the company's tax administration, as highlighted by Francis et al. (2014). The board's composition is recognized as playing a crucial role in making decisions, as proposed by Fama and Jensen (1983). The tax administration decisions made by the board can potentially increase profits, which could positively impact the company's performance, as stated by Zaqeeba, and Iskandar, (2020). A positive assessment of such decisions by shareholders and investors can increase the company's value, as noted by Nugroho and Agustia (2018). Conversely, if the tax administration implemented by the company results in added expenses and reduced profits, this could have a negative impact on the company's shareholders and investors, leading to a decline in the company's value.

Managers are motivated to attract tax avoidance activities as They can be interested in extra income (Mgammal 2020). However, the board of directors characteristics can either encourage or discourage such activities. When the board's characteristics are favorable for blocking perversions, managers are less likely to engage in conflicting tax administration, and they cannot benefit from the extra income generated, as noted by Zaqeeba, and Iskandar, (2020). Conversely, when the board's directors characteristics are depressed, Managers can extract additional income from the tax administration, as highlighted by Kerr et al. (2016).

According to the resource dependence-perspective, Organizations requirement to link with the persons or groups of people that control and monitor the resources to acquire and maintain adequate resources (Gomes, 2016). Therefore, while tax administration activities may save investors' money (Mgammal, 2020).

The size of the board is a factor that contributes to a better understanding of the company (Hasnan et al. 2017). Large boards of directors are supportive of good tax administration practices and are effective in decision-making due to the availability of more information (Boussenna, 2020). Tax administration relate positively to financial performance (Lugtu & Ferrer, 2017), and the tax administration practices of the board can influence the board's size. Therefore, it is reasonable to assume that good tax administration practices can lead to the possibility of having a larger board of directors, which can enhance the company's financial performance.

Companies with CEO duality tend to have lower tax administration and higher tax expenses (Gomes 2016). To ensure efficiency in the separation of the chairman of the board and CEO functions, tax administration is necessary, as highlighted by Khaoula and Ali (2012). It is worth noting that the CEO is often directly involved in tax administration. However, the purpose of tax administration is not always clear, as it may be a by-product of investment, funding, or operational decisions within the company (Gomes, 2016). Tax administration can also serve as a mediator in improving the relationship between an independent board chairman and financial performance.

According to Fan (2017), effective tax administration is linked to the presence of directors who hold multiple board memberships and are an important source of information and control mechanism, as also noted by Laoworapong et al. (2015). Companies that adopt a stable tax administration strategy tend to have directors with strong external networks, who can obtain more information and implement innovative strategies through their multiple board memberships (Fan, 2017; Chen et al., 2018). This can enhance the board's performance, facilitate learning of new approaches, and help to solve agency problems by establishing linkages with external organizations (Jermias & Gani, 2014). Furthermore, directors who provide high levels of tax administration oversight are more likely to be offered additional board memberships, while compliant directors who allow greater discretion in tax administration are also likely to receive such opportunities (Suffian et al., 2017).

The development of tax administration strategies relies on financial literacy skills, such as knowledge of economics, accounting, and business administration, to benefit the organisation's board of directors (Donaldson, 2002). To effectively plan and implement tax strategies, it is essential to apply diagnostic testing and consultation techniques, which require a deep understanding of business operations and creative thinking to tailor solutions to specific managerial and economic challenges that align with the board's relevant educational backgrounds (Jaya et al., 2016). Based on this, the following hypotheses can be proposed:

H5a: Board size relates positively to tax administration, which in turn has a positive effect on financial performance.

H5b: Independent board chairman relates positively to tax administration, which in turn has a positive effect on financial performance.

H5c: Multiple board memberships relates positively to tax administration, which in turn has a positive effect on financial performance

H5d: Board financial literacy relates positively to tax administration, which in turn has a positive effect on financial performance

RESEARCH DESIGN

The research methodology employed in this study is a quantitative correlation design. To address issues of heteroscedasticity, autocorrelation, normality, and multicollinearity, panel data regression analysis was utilized.

RESEARCH METHODOLOGY

This study utilizes a quantitative correlation design to examine the mediating role of tax administration in the relationship between the characteristics of the board of directors and firm performance in Jordan. The sample comprises 135 firms, including service and industrial companies on the Amman Stock Exchange. The data for this study is secondary and quantitative, gathered through panel data analysis from 2008 to 2017. The data is analyzed using the STATA software after accounting for heteroscedasticity, autocorrelation, normality, and testing for multicollinearity.

Table 1: The average score value.

Variable		Mean	Std. Dev.	Min	Max	Observations
Year	overall	2012.5	2.873346	2008	2017	N = 1,350
	between		0	2012.5	2012.5	n = 135
	within		2.873346	2008	2017	T = 10
ROA	overall	-0.1221511	12.45781	-195.296	43.299	N = 1,350
	between		7.434548	-24.0638	28.2522	n = 135
	within		10.01466	-171.08	38.54895	T = 10
BS	overall	7.938141	2.183444	4	14	N = 1,350
	between		2.091714	4.7	14	n = 135
	within		0.6491141	4.740741	11.54074	T = 10
BIC	overall	0.7853704	0.4071951	0	1	N = 1,350
	between		0.3681081	0	1	n = 135
	within		0.1766587	-0.1096296	1.69037	T = 10
BMM	overall	0.5470408	0.3215954	0	1	N = 1,350
	between		0.2970879	0	1	n = 135
	within		0.1255039	-0.1338036	1.270641	T = 10

International Journal of Academic Management Science Research (IJAMSR)
ISSN: 2643-900X
Vol. 8 Issue 6 June - 2024, Pages: 141-156

BFL	overall	4.513704	2.083171	0	11	N = 1,350
	between		1.911107	0	9.5	n = 135
	within		0.8435865	0.2637037	7.963704	T = 10
TA	overall	.677118	23.77849	-544.6182	513.362	N = 1,350
	between		5.539921	-0.3438063	48.05992	n = 135
	within		23.12856	-580.6726	477.3076	T = 10

Table 1. shows that the average score value of each variable for every year was computed by adding up the observations of the 135 companies and dividing the sum by 135. Additionally, the overall average score value for each variable from 2008 to 2017 was calculated by adding the mean scores of each year and dividing the sum by 10. Table 2. presents a summary of the average score value for each variable and the overall average score value for the entire period of 2008–2017.

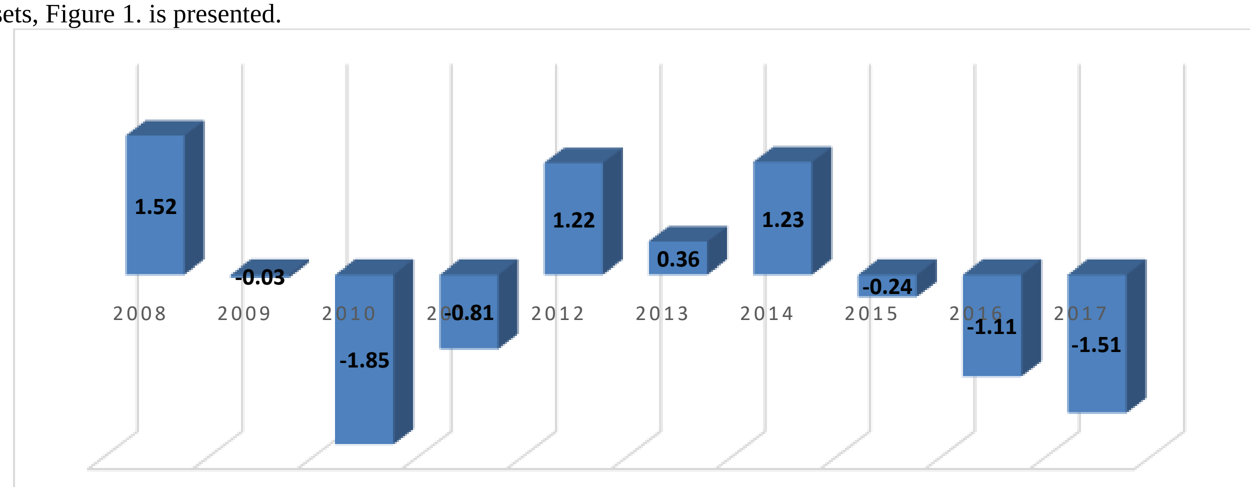
Table 2: Summary of Mean Score and Overall Mean Score of Panel Data

Variable	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**Overall Mean**
ROA	1.52	-0.03	-1.85	-0.81	1.22	0.36	1.23	-0.24	-1.11	-1.51	-0.122
BS	8.15	8.21	8.1	8.01	7.95	7.96	7.9	7.75	7.7	7.65	7.938
BIC	0.74	0.75	0.76	0.78	0.8	0.8	0.8	0.81	0.8	0.81	0.785
BMM	0.55	0.55	0.56	0.56	0.55	0.54	0.54	0.54	0.54	0.54	0.547
BFL	4.34	4.38	4.4	4.45	4.50	4.54	4.62	4.63	4.64	4.65	4.51
TA	0.75	0.78	0.61	0.61	0.6	0.61	0.69	0.67	0.73	0.72	0.677

Time (T) =10, Number of Companies (n) =135 company, Observations (N) = 1,350.

Level of Return on Asset of Panel Data among 2008-2017

The analysis of the return on assets revealed a decreasing trend in its mean score between 2008 and 2017. Specifically, the mean score decreased from 1.52 in 2008 to -0.03 in 2009 and further declined to -1.85 in 2010. However, from 2011 to 2014, the mean score gradually increased to 1.23. After that, a decreasing trend started from 2015 and continued until 2017. The overall mean score value of the ten-year period from 2008 to 2017 was found to be -0.122. To visualize the changes in the mean value of the return on assets, Figure 1. is presented.



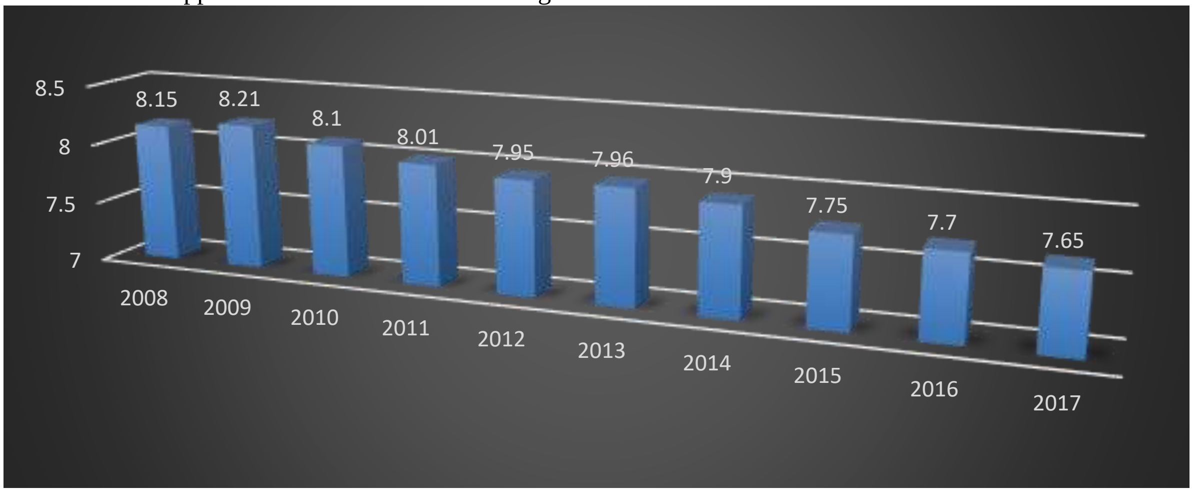
ROA

Figure 1: *Mean score of Return on Assets among 2008-2017*

The overall mean of -0.122 indicates that the return on asset is generally negative between the year 2008 and 2017. Overall, it can be seen that the return on asset was positive in 2008 and among 2012 to 2014. While in other years, the return on asset was negative.

Level of Board Size of Panel Data between 2008 and 2017

The board size level was presented in Table 5.2. It shows that the board size has been in a decreasing trend since 2008. In 2008, the level of board size was 8.15 dropped to 8.01 in 2010. The decrease was also seen in 2011 to 7.95 and 7.9 in 2014. In 2015, the level of board size dropped to 7.75 and 7.65 in 2017. Figure 2. shows the level of board size.



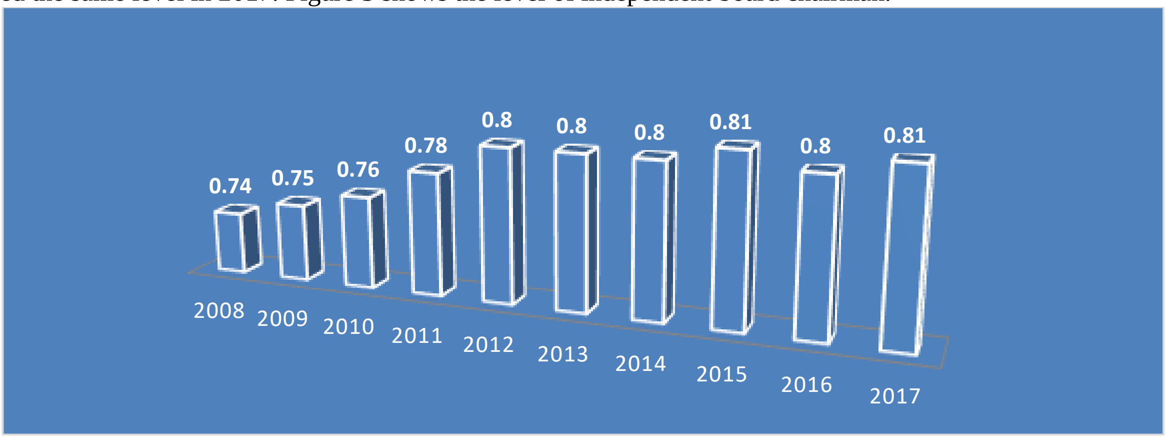
BS

Figure 2: *Level of Board Size*

The overall level of board size between 2008 and 2017 was 7.94 as shown in Table 2. This indicates that the level of board size was in a decreasing trend since 2008.

Level of Independent board chairman of Panel Data Among 2008-2017

The level of independent board chairman is presented in Table 5.2, and a graphical description is given in Figure 3. It shows that the level of independent board chairman in 2008 was 0.74 and increased over 2010-2014 to 0.80. In 2015 increased to 0.81 and maintained the same level in 2017. Figure 3 shows the level of independent board chairman.



BIC

Figure 3: *Level of Independent board chairman*

The overall mean score of the level of independent board chairman is 0.785 indicating that the level of the independent chairman was in an increasing trend between 2008 and 2017.

International Journal of Academic Management Science Research (IJAMSR)
ISSN: 2643-900X
Vol. 8 Issue 6 June - 2024, Pages: 141-156

Multiple Board Memberships of Panel Data among 2008-2017

The level of multiple board memberships is given in Table 5.4. It shows that the level was steady during the period between 2008 and 2017. In 2008, the level of multiple board memberships was 0.55 and maintained a similar level during 2009, 2010 to 2017 where the level in 2017 was 0.54. Figure 4. shows the level of multiple board memberships.

MM

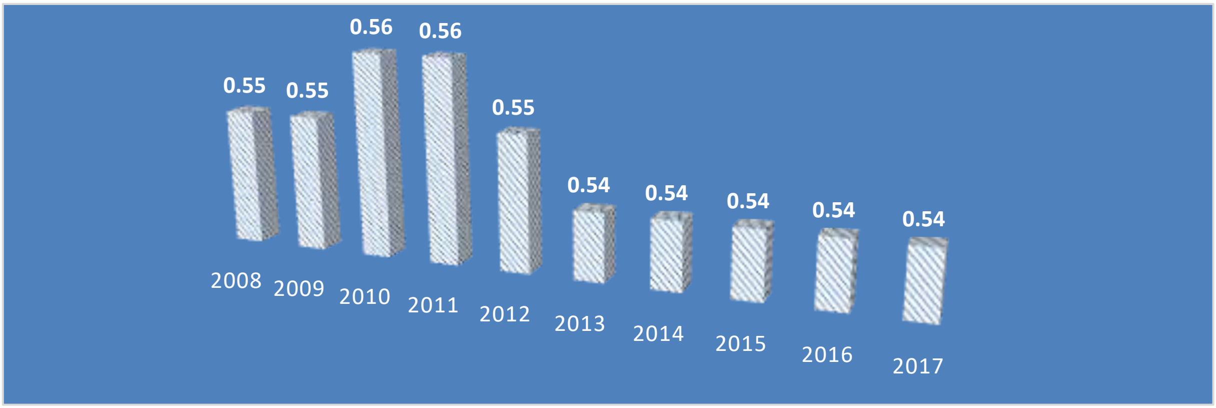
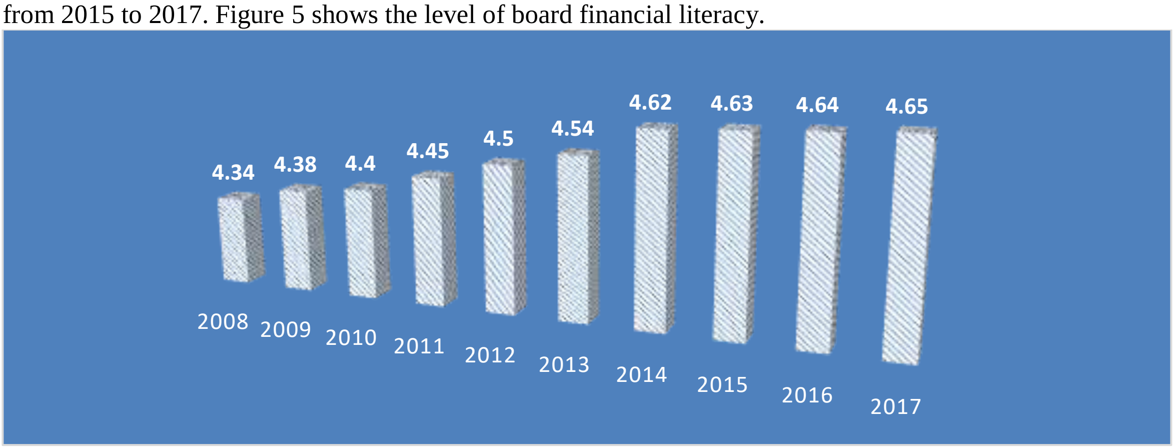


Figure 4: *Level of Board Multiple Membership*

Level of Financial Literacy of Panel Data among 2008-2017

The level of board financial literacy is presented in Table 5.2 and depicted in Figure 5. It shows that the level of board financial literacy was increasing between 2008 and 2017. For example, the level was 4.34 in 2008, and it increases to 3.38, 4.40 and 4.45, 4.50, and 4.54 in 2009, 2010, 2011, 2012, and 2013 respectively. In 2014, the level increased to 4.62 and maintained the same level from 2015 to 2017. Figure 5 shows the level of board financial literacy.



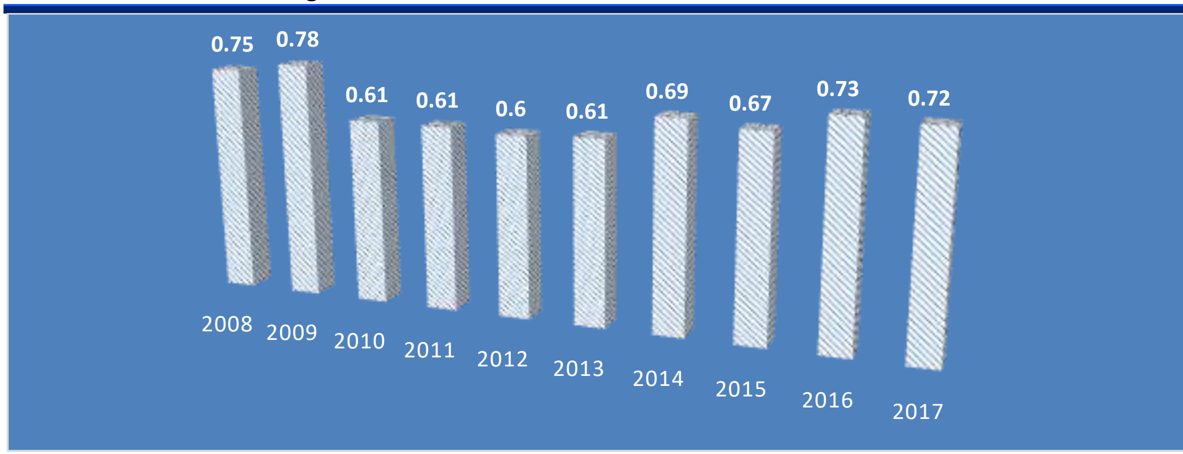
BFL

Figure 5. *Level of Board Financial Literacy*

Overall, from Figure.5, the level of board financial literacy is increasing indicating that the board has become more knowledgeable regarding financial language with an overall mean score value of 4.51.

Level of Tax Administration of Panel Data among 2008-2017

Table 2. displays the level of tax administration, which reveals that the level was 0.75 in 2008 and increased to 0.78 in 2009. From 2010 to 2013, the level remained relatively stable at around 0.61. However, there was an increase in tax administration level in 2014 with a value of 0.69, which further rose to 0.73 in 2016 and remained at 0.72 in 2017.



TA

Figure 6: Level of Tax Administration

Figure 6 shows that the level of tax administration was steady at the overall tax administration level of 0.68.

Assumption of multiple Regression Analysis and Data Examination

Before conducting the regression analysis, several assumptions were examined, including outliers, heteroscedasticity, autocorrelation, normality, and multicollinearity. It should be noted that there is no consensus among researchers on the assumptions of regression analysis using panel data, but it is commonly used in literature to test for heteroscedasticity, multicollinearity, autocorrelation, and normality of the data. This study examines the analysis of these assumptions.

Outliers

Outliers are data points that deviate significantly from the mean score of a variable (Hair et al., 2010). To address outliers, researchers can use various approaches. According to Pallant (2016), when the sample size exceeds 250, outliers have a minimal effect, and thus, examining them is unnecessary. Alternatively, Ramsey (2009) suggests two methods to deal with outliers: removing them from the dataset, which reduces the number of observations, or applying winsorization, a data transformation technique that replaces extreme values with values within an acceptable range. This study employed winsorization to handle outliers since it is commonly used in panel data analysis and preferred to data trimming (Henry & Sansing, 2013; Rivest, 1994; Zhang, 2017). After winsorizing, the data no longer contained outliers.

Heteroscedasticity

To test for heteroscedasticity in data, there are two methods: using scatterplots or conducting a mathematical test like the Breusch-Pagan/Cook-Weisberg test. This test involves a null hypothesis that assumes the data has constant variance, with no heteroscedasticity. In this study, the test was run, and the results showed that Prob->Chi2=0.2904, where Prob represents the significance level (P-value or Sig). Since the null hypothesis cannot be rejected based on this result, it can be concluded that the data is free from the issue of heteroscedasticity.

Autocorrelation

In this study, lag variables were generated, and the Durbin Watson test was performed to detect autocorrelation. This was further validated by conducting the Breusch Godfrey LM analysis.

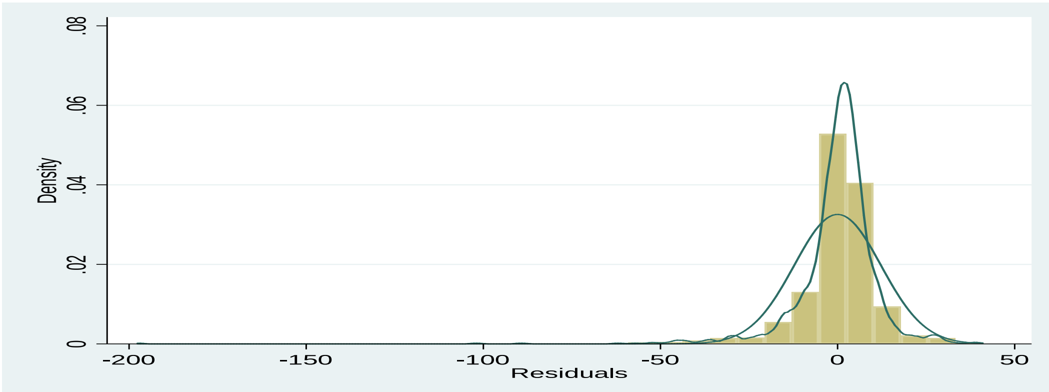
To verify the results of the Durbin test, the Breusch Godfrey LM test was recommended. The outcome of this test indicates that the p-value (Prob>chi2) is higher than 0.05, which supports the null hypothesis that there is no serial correlation among the variables.

Normality Test

To assess the distribution shape of the data in this study, the histogram was inspected. Additionally, the normality hypothesis was tested using the Jarque-Bera test, and the skewness and kurtosis of all variables were computed to further validate normality.

The histogram in Figure 7 shows that the data distribution has a bell-shape indicating that the data is normally distributed.

International Journal of Academic Management Science Research (IJAMSR)
ISSN: 2643-900X
Vol. 8 Issue 6 June - 2024, Pages: 141-156



Normality

Figure 7. *Histogram of Normality*

Multicollinearity

In this study, both the VIF and tolerance as well as the correlation matrix are examined to check for multicollinearity. Table 3 shows the result of multicollinearity analysis using VIF and tolerance.

Table 3: *Result of Multicollinearity Analysis*

Variables	Tolerance>0.10	VIF<10
Board Size	.503	1.987
Independent board chairman	.885	1.130
Board Multiple Membership	.566	1.766
Board Financial Literacy	.453	2.210
Tax Administration	.822	1.216

Dependent variable: ROA

According to Table.3, all variables have tolerances above 0.10 and VIFs below 10, indicating the absence of multicollinearity issues. This was further verified by examining the correlation matrix in Table.4, where none of the correlations among the variables exceeded 0.90. This confirms that there is no significant correlation among the variables and supports the absence of multicollinearity issues in this study (Hair et al., 2010).

Table 4: *Correlation Matrix between the Variables.*

	ROA	BS	BIC	BMM	BFL	TA
ROA	1					
BS	0.144	1				
BIC	0.0836	0.0435	1			
BMM	0.0219	0.1044	0.1574	1		
BFL	0.1225	0.5794	0.1072	0.2694	1	
TA	0.0072	-0.0052	0.0198	0.017	0.0085	1

Regression analysis and Discussion of Hypotheses

To analyze the data in this study, both random and fixed effects were employed. The results of these models were saved in Stata, and the Hausman test was conducted to compare the outcomes and determine the appropriate model for data analysis.

Direct Effect Model

In this study, one main hypothesis and four additional hypotheses were formulated. The direct hypotheses were tested based on the prob>chi value, also known as the p-value. The outcomes of the direct effect hypotheses testing are presented in Table 5.

Table 5: *Result of Multiple Regression analysis of the Direct Effect Hypotheses*

Hypothesis	Path	Beta	T-value	p-value	Remark
	BDC→ ROA	0.896	28.52	0.000	Accepted
H1: There is a positive relationship between board size and financial performance	BS→ ROA	-0.121	9.63	0.000	Accepted
H2: There is a positive relationship between independent board chairman and financial performance	BIC→ ROA	0.307	19.25	0.000	Accepted
H3: There is a positive relationship between multiple board memberships and financial performance	BMM→ ROA	0.104	4.75	0.000	Accepted
H4: There is a positive relationship between board financial literacy and financial performance	BFL→ ROA	0.122	6.46	0.000	Accepted
Number of observations			1,350		
F (7, 1342))			365.85		
Prob>F			0.000		
R-squared			0.6562		
Adj R-squared			0.6544		
Root MSE			.58791		

Table 5. shows that the model is acceptable due to the fact that Prob>f is 0.000 indicating that the independent variables can predict the dependent variable.

Board Size and Financial Performance

This study assumed that the relationship between board size and financial performance is positive. “H1: There is a negative relationship between board size and financial performance”. The findings of the hypotheses testing in Table 5. shows that the relationship between board size and financial performance is negative (Coef=-0.121, T-value= 9.63, P-value>0.001). This confirmed the assumption of this study. H1 is supported.

Independent Board Chairman and Financial Performance

This study predicted that the independent board chairman has a positive relationship with financial performance. “H2: There is a positive relationship between independent board chairman and financial performance”. The findings in Table 5. showed that the relationship between independent board chairman and financial performance is positive and significant (Coef=0.307, T-value= 19.25, P-value>0.001). Thus, H2 is supported.

Multiple Board Memberships and Financial Performance

This study proposed that the relationship between multiple board memberships and financial performance is positive and significant. “H3: There is a positive relationship between multiple board memberships and financial performance”. The findings in Table 5. indicates that the relationship is positive and significant (Coef=0.104, T-value= 4.75, P-value>0.001). Thus, H5 is supported.

International Journal of Academic Management Science Research (IJAMSR)
ISSN: 2643-900X
Vol. 8 Issue 6 June - 2024, Pages: 141-156

Board Financial Literacy and Financial Performance

The last direct hypothesis proposed that the relationship between board financial literacy and financial performance of Jordanian companies is positive and significant. "H4: There is a positive relationship between board financial literacy and financial performance". The findings in Table 5. shows that the hypothesis is positive and significant (Coef=0.122, T-value= 6.46, P-value<0.001). Thus, H4 is supported.

Mediating Effect of Tax Administration

The table 6. shows the direct effect before entering the mediator and the direct effect after entering the mediator as well as the table shows the indirect effect.

Table 6: Result of Mediating Hypotheses

Hypothesis	Path	Beta of Direct effect before a mediator	Beta Direct effect after the mediator	Beta of Indirect effect	Remark
H5: Tax administration mediates the relationship between board characteristics and firm financial performance	BDC→ TA→ ROA	0.896*	0.787*	0.111*	Partial mediation
H5a: Board size relates positively to tax administration, which in turn has a positive effect on financial performance	BS→ TA→ ROA	-0.121*	-0.101*	-0.020*	Partial mediation
H5b: Independent board chairman relates positively to tax administration, which in turn has a positive effect on financial performance	BIC→ TA→ ROA	0.307*	0.261*	0.046*	Partial mediation
H5c: There is a positive relationship between mediating tax administration in multiple board memberships has positive effect on financial performance	BMM→ TA→ ROA	0.104*	0.078*	0.025**	Partial mediation
H5d: There is a positive relationship between mediating tax administration in board financial literacy has positive effect on financial performance	BFL→ TA→ ROA	0.122*	0.101*	0.021**	Partial mediation
	TA→ ROA		0.178*		
Number of observations		1,350			
F (6, 98322)		339.13			
Prob>F		0.000			
R-squared		0.6913			
Adj R-squared		0.69223			
Root MSE		.43123			

*significant at 0.001 level, ** significant at 0.05 level, *** significant at 0.010 level

Mediation Effect of Tax Administration between Board of Director Characteristic and Financial Performance

We apologize, but we encountered an error. This could be due to either the engine you requested not existing or some other issue during the processing of your request. If this problem persists, please reach out to us through our help center at help.openai.com for further assistance.

Mediating Effect of Tax Administration between Board Size and Financial Performance

Tax administration was proposed to mediate the relationship between board size and financial performance "H5a: Board size relates positively to tax administration, which in turn has a positive effect on financial performance". The findings of the study in Table 6. indicated that the relationship between board size and financial performance was reduced from -0.121 to -0.101 after entering the mediator tax administration. The indirect effect is significant. This indicates that mediation is partial. Thus, H5a is supported, and there is a partial mediation role of tax administration between board size and financial performance (ROA). This indicates that part of the relationship between board size and financial performance can be explained through tax administration.

Mediating Effect of Tax Administration between Independent Board Chairman and Financial Performance

A mediating relationship between independent board chairman and financial performance through tax administration was proposed in this study. "H5b: Independent board chairman relates positively to tax administration, which in turn has a positive effect on financial performance". The findings of mediation analysis in Table 6. shows a comparison between the direct effect and the indirect effect. The direct effect reduced from 0.307 to 0.261 but stay significant. Also, the indirect effect is 0.046, and it is significant. This indicates that partial mediation occurred. Part of the relationship between independent board chairman and financial performance can be explained through tax administration. Thus, H5b is supported.

Mediating Effect of Tax Administration between Multiple Board Memberships and Financial Performance

This study predicted that tax administration would mediate the relationship between multiple board memberships and financial performance "H5c: There is a positive relationship between mediating tax administration in multiple board memberships has positive effect on financial performance". The analysis in Table 6. showed that the prediction was true. The direct effect of multiple board memberships on financial performance was decreased from 0.104 to 0.078. Also, the indirect effect (0.025) is significant. This indicates that tax administration mediates partially the effect of multiple board memberships with financial performance. Also, tax administration explains the relationship between multiple board memberships and financial performance partially. Thus, H5d is supported.

Mediating Effect of Tax Administration between Board Financial Literacy and Financial Performance

The relationship between board financial literacy and financial performance was proposed to be mediated by tax administration. "H5e: There is a positive relationship between mediating tax administration in board financial literacy has positive effect on financial performance". The findings indicated that before entering the mediator the direct effect was 0.122 and it reduced to 0.101. The indirect effect (0.021) is significant. This indicates that the direct effect is reduced and there is a partial mediation effect of tax administration. This is because the effect of board financial literacy on financial performance go through the tax administration indicating that tax administration can explain part of the relationship between board financial literacy and financial performance. Thus, H5e is accepted.

DISCUSSION AND RESEARCH RESULT

The study results indicate that contrary to expectations, board size had a negative impact on financial performance. This unexpected finding could be attributed to the analysis of board size dimension from the secondary data, which exhibited lower means and standard deviations compared to other dimensions of board of directors' characteristics that showed positive and significant relationships with financial performance. Nonetheless, the negative results could be due to various factors. For instance, a large board may impede the decision-making process, according to Judge and Talaulicar (2017). Additionally, large boards may require a more formal structure for their meetings, which could lower their level of activity in terms of coordination and organization, as suggested by Liu (2016).

The study found a positive correlation between an Independent Board Chairman and firm performance, contradicting the expectation that having one person serve as both CEO and Chairman would cause agency problems leading to poor firm performance. This finding supports the agency theory, which suggests that a non-unified board structure (with separate CEO and Chairman positions) would lead to more effective leadership for the firm. This is in line with previous research by Mishra and Kapil (2018), Merendino and Melville (2019), and Jermias and Gani (2014), which indicates that CEO duality is likely to have a negative impact on the decision-making process and monitoring of opportunistic managerial behavior, resulting in weaker performance.

The study revealed that having multiple board memberships was significantly positively correlated with financial performance. This finding is consistent with previous research conducted by Hasnan et al. (2017), Laoworapong et al. (2015), and Mitsudome (2023). The reason for this association may be that directors who serve on multiple boards gain more experience and knowledge, which enables them to better solve problems within their company.

The final hypothesis stated that there is a positive and significant relationship between board financial literacy and financial performance. This result can be explained by the fact that directors with only formal business education are more likely to prioritize short-term performance goals at the expense of innovation and long-term asset building compared to directors with other educational backgrounds (Hambrick et al., 2008). Board members need to have relevant knowledge to effectively carry out their tasks. This study's quantitative analysis confirms that the presence of knowledge is a prerequisite for its use, and knowledge creation is essential in achieving this. According to Kolb (2014), learning is a form of knowledge creation. Additionally, social interaction among board members facilitates the sharing of existing knowledge (Nonaka, 1994).

The study's findings reveal that there is no mediating effect of tax administration on the relationship between board size and firm performance. Despite having a supervisory board, there is no evidence of a monitoring effect on tax planning activities in the firm. This could be due to the supervisory board's composition, which undermines its effectiveness. Therefore, there is a need to improve the supervisory board's effectiveness and strengthen its monitoring function. This relationship suggests that larger board sizes are associated with lower levels of tax administration, as evidenced by higher ETRs indicating a lower level of tax administration. Smaller boards may be more agile in decision-making, such as allocating resources to tax administration.

The results of the test indicate a significant indirect influence between having an independent board chairman and financial performance through the mediation relationship. This suggests that companies with lower levels of tax administration and higher tax expenses are more likely to have CEO duality, which is in the interest of shareholders and separates the functions of the CEO and chairman.

The present study's findings indicate that the mediation relationship has a notable indirect impact on financial performance in the case of multiple board memberships. Directors who hold multiple board memberships and adopt a stable tax administration strategy have access to extensive external networks that enable them to acquire valuable information and develop effective implementation plans. As a result, they can explore new strategic options, approaches, and innovations, enhancing their ability to fulfill their board duties and establish links with external organizations. Consequently, financial performance improves.

The study's mediation analysis revealed that tax administration served as a mediator in the relationship between board financial literacy and financial performance. This was evidenced by a significant reduction in the regression coefficient of board financial literacy and financial performance, rather than a complete elimination of the relationship. The tax strategy development process utilizes the financial literacy of board members to advance the organization's goals. In addition, tax planning involves testing and consultation to diagnose and implement treatment, requiring a thorough understanding of business and creativity to tailor managerial and economic specialties to the relevant educational backgrounds of the board members.

CONCLUSION

The modern business climate, coupled with shareholders' desire to minimize taxes, has resulted in an increased focus on tax administration within the services and industrial sectors. As a result, companies should leverage every opportunity available to them to enhance their performance. With this in mind, certain characteristics of the board of directors in services and industrial companies that impact firm performance warrant closer consideration. These include board size, independent chairmanship, multiple memberships, and financial literacy. Companies must recognize the significant dual effect that these board characteristics can have on firm performance.

The study highlighted the relevance of agency theory in understanding how tax administration impacted the relationship between board of directors' characteristics and firm performance, specifically regarding its mediating effect. Furthermore, the study underscored the importance of resource dependency theory in comprehending how the level of tax administration, as a resource, influenced the association between board of directors' characteristics and firm performance. Shareholders in Jordanian services and industrial companies should enhance their knowledge of the characteristics of the board of directors to complement their aim of minimizing taxes while also maintaining or enhancing performance.

To summarize, the primary goal of this research was to examine the characteristics of the board of directors, and it has been accomplished through the results of the analysis. These achievements serve as the foundation for the study's value, particularly its theoretical and practical contributions, as well as its capacity to inspire and encourage future academic pursuits. If the findings of this study are supported by future replications, then the message to shareholders is clear - companies that cultivate and utilize the characteristics of their board of directors for decision-making purposes will achieve better performance compared to companies that rely solely on conventional corporate governance.

REFERENCES

Almashhadani, M., & Almashhadani, H. A. (2022). The beneficial of firm size, board size, ownership structure, and independence in developing markets' firm performance: Evidence from Asia. International Journal of Business and Management Invention, 11(7), 88-92.

Alqahtani, J., Duong, L., Taylor, G., & Eulaiwi, B. (2022). Outside directors, firm life cycle, corporate financial decisions and firm performance. Emerging Markets Review, 50, 100820.

Alyousef, L., & Alsughayer, S. (2021). The relationship between corporate governance and voluntary disclosure: The role of boards of directors and audit committees. Univers. J. Account. Financ, 9, 678-692.

Ariff, A. M., & Hashim, H. A. (2014). Governance and the value relevance of tax avoidance. Malaysian Accounting Review, 13(2).

Bansal, D., & Singh, S. (2022). Does board structure impact a firm's financial performance? Evidence from the Indian software sector. American Journal of Business, 37(1), 34-49.

Bashir, A., & Asad, M. (2018). Moderating effect of leverage on the relationship between board size, board meetings and performance: A study on textile sector of Pakistan. American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), 39(1), 19-29.

Bischoff, O., & Buchwald, A. (2018). Horizontal and vertical firm networks, corporate performance and product market competition. Journal of Industry, Competition and Trade, 18(1), 25-45.

Boussenna, H. (2020). Board of Directors' Size and Firm Performance: Evidence from Non-Financial French Firms Listed on CAC 40. Studies in Business and Economics, 15(2), 46-61.

Buallay, A., Hamdan, A., & Zureigat, Q. (2017). Corporate governance and firm performance: evidence from Saudi Arabia. Australasian Accounting, Business and Finance Journal, 11(1), 78-98.

Chen, N. X., Chiu, P. C., & Shevlin, T. (2018). Do analysts matter for corporate tax planning? Evidence from a natural experiment. Contemporary Accounting Research, 35(2), 794-829.

Compen, B., De Witte, K., & Schelfhout, W. (2019). The role of teacher professional development in financial literacy education: A systematic literature review. Educational Research Review, 26, 16-31.

Darmadi, S. (2013). Board members' education and firm performance: evidence from a developing economy. International Journal of Commerce and Management, 23(2), 113-135.

Donaldson, L. (2002). Damned by our own theories: Contradictions between theories and management education. Academy of Management Learning & Education, 1(1), 96-106.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. The journal of law and Economics, 26(2), 301-325.

Fan, L. (2017). Certified inside directors and tax avoidance: international evidence.

Fariha, R., Hossain, M. M., & Ghosh, R. (2022). Board characteristics, audit committee attributes and firm performance: empirical evidence from emerging economy. Asian Journal of Accounting Research, 7(1), 84-96.

Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. Academy of management review, 24(3), 489-505.

García-Ramos, R., Díaz-Díaz, B., & García-Olalla, M. (2017). Independent directors, large shareholders and firm performance: the generational stage of family businesses and the socioemotional wealth approach. Review of Managerial Science, 11(1), 119-156.

Gomes, A. P. M. (2016). Corporate governance characteristics as a stimulus to tax management. Revista Contabilidade & Finanças, 27(71), 149-168.

Hair, Hult, T. M., Ringle, C. M., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (2nd ed.). Thousand Oakes.

Hair, J. F., Anderson, R. E., Babin, B. J., Black, W. C. (2010). Multivariate Data Analysis: A global perspective. Upper Saddle River (7th ed.). NJ: Pearson. https://doi.org/10.1016/j.ijpharm.2011.02.019.

Hambrick, D. C., Werder, A. V., & Zajac, E. J. (2008). New directions in corporate governance research. Organization Science, 19(3), 381-385.

Hasnan, S., Marzuki, H., & Shuhidan, S. M. (2017). Effects of Board Characteristics on Financial Restatement in Malaysia. Pertanika Journal of Social Sciences and Humanities, 25(S), 255-263.

Henry, E., & Sansing, R. C. (2013). Data Truncation Bias and the Mismeasurement of Corporate

Higgs, D. (2003). Review of the role and effectiveness of non-executive directors (pp. 1-120). London: Stationery Office.

Jaya, T. E., Septiarini, T., & Arafat, Y. (2016). Educational background of the board of commissioners, leverage, profitability and voluntary disclosure. Review of Integrative Business and Economics Research, 5 (2), 260.

Jermias, J., & Gani, L. (2014). The impact of board capital and board characteristics on firm performance. The British Accounting Review, 46(2), 135-153.

Judge, W. Q., & Talaulicar, T. (2017). Board involvement in the strategic decision-making process: A comprehensive review. Annals of Corporate Governance, 2(2), 51-169.

Kartikaningdyah, E., & Putri, R. N. (2017). Pengaruh Tax Avoidance dan Board Diversity terhadap Kinerja Perusahaan dalam Perspektif Corporate Governance. Journal of Applied Accounting and Taxation, 2(2), 114-122.

Kerr, J. N., Price, R., & Roman, F. J. (2016). Does Corporate Governance Reform Influence Corporate Tax Avoidance within Family-Controlled Firms.

Khaoula, A., & Ali, Z. M. (2012). The board of directors and the corporate tax planning: Empirical Evidence from Tunisia. International journal of accounting and Financial Reporting, 2(2), 142-157.

Kolb, D. A. (2014). Experiential learning: Experience as the source of learning and development. FT press.

Kyere, M., & Ausloos, M. (2021). Corporate governance and firms financial performance in the United Kingdom. International Journal of Finance & Economics, 26(2), 1871-1885.

Lanis, R., Richardson, G., Liu, C., & McClure, R. (2018). The Impact of Corporate Tax Avoidance on Board of Directors and CEO Reputation. Journal of Business Ethics, 1-36.

Laoworapong, M., Supattarakul, S., & Swierczek, F. W. (2015). Corporate Governance, Board Effectiveness, and Performance of Thai Listed Firms. AU Journal of Management, 13(1), 25-40.

Lechem, B. (2003). Chairman of the board: A practical guide. John Wiley & Sons.

Liu, H., Wang, H., & Wu, L. (2016). Removing vacant chairs: does independent directors' attendance at board meetings matter? Journal of business ethics, 133(2), 375-393.

Lugtu, J. M. M., & Ferrer, R. C. (2017). The Effects of Corporate Tax Avoidance On Financial Performance and Firm Value of Publicly-Listed Industrial Firms in The Philippines. Copyright 2017 By Institute for Global Business Research, Nashville, tn, Usa, 24.

Merendino, A., & Melville, R. (2019). The board of directors and firm performance: empirical evidence from listed companies. Corporate Governance: The international journal of business in society.

Mgammal, M. H. (2020). Corporate tax planning and corporate tax disclosure. Meditari Accountancy Research, 28(2), 327-364.

Mgammal, M. H. (2020). Corporate tax planning and corporate tax disclosure. Meditari Accountancy Research, 28(2), 327-364.

Mishra, R. K., & Kapil, S. (2018). Effect of board characteristics on firm value: evidence from India. South Asian Journal of Business Studies, 7(1), 41-72.

Mitsudome, T. (2023). Corporate Governance, Outside Directors and Firm Performance: Evidence from Japan. Outside Directors and Firm Performance: Evidence from Japan (January 26, 2023).

Neville, F., Byron, K., Post, C., & Ward, A. (2019). Board independence and corporate misconduct: A cross-national meta-analysis. Journal of Management, 45(6), 2538-2569.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. Organization science, 5(1), 14-37.

Nugroho, W. C., & Agustia, D. (2018). Corporate Governance, Tax Avoidance, and Firm Value. AFEBI Accounting Review, 2(02).

Pallant, J. (2016). SPSS survival manual: a step by step guide to data analysis using SPSS. Step by step guide to data analysis using the SPSS program.

Pfeffer, J., & Salancik, G. R. (2003). The external control of organizations: A resource dependence perspective. Stanford University Press.

Ramsey, C. B. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

Rivest, L. P. (1994). Statistical properties of winsorized means for skewed distributions.

Saleh, M. W., Shurafa, R., Shukeri, S. N., Nour, A. I., & Maigosh, Z. S. (2020). The effect of board multiple directorships and CEO characteristics on firm performance: evidence from Palestine. Journal of Accounting in Emerging Economies, 10(4), 637-654.

Shahid, M. N., Siddiqui, M. A., Qureshi, M. H., & Ahmad, F. (2018). Corporate Governance and its Impact on Firm's Performance: Evidence from Cement Industry of Pakistan. J. Appl. Environ. Biol. Sci, 8(1), 35-41.

Staubli, A. (2016). Tax management in companies. Published in association with: PricewaterhouseCoopers, Switzerland.

Suffian, M. T. M., Shamsudin, S. M., Sanusi, Z. M., & Hermawan, A. A. (2017). Malaysian Code of Corporate Governance and Tax Compliance: Evidence from Malaysia. Management & Accounting Review, 16(2)

Tihanyi, L., Graffin, S., & George, G. (2014). Rethinking governance in management research.

Wang, F., Xu, S., Sun, J., & Cullinan, C. P. (2020). Corporate tax avoidance: A literature review and research agenda. Journal of Economic Surveys, 34(4), 793-811.

Zaqeeba, N., & Iskandar, T. M. (2020). Mediating Effect of Tax Management on the Relationship Between Board of Directors Characteristics and Firm Performance. Journal of Information & Knowledge Management, 19(01), 2040022.

Zhang, D. (2017). Peer effect of share incentive of China's listed companies. Agro Food Industry Hi-Tech.

Zaqeeba, N., & Iskandar, T. M. (2020). IS THE TAX MANAGEMENT AS A MEDIATING BETWEEN BOARD OF DIRECTORS'CHARACTERISTICS AND FIRM PERFORMANCE?. *International Journal Of All Research Writings*, *2*(12), 59-73.