

Relationship between the board of directors and financial performance: Empirical Anecdote

Niyati Chaudhary, Akshita Arora

Abstract

The agency issues between shareholders and management push corporate governance issues into limelight. Our study's objective is to examine the consequences of board characteristics on a firm's financial performance. Board size, independent directors, CEO-duality, number of independent directors in the audit committee, promoter's shareholding, and board meetings have been chosen as the board variables. The fixed effects method has been applied to investigate the effect of board variables on company's performance using a panel data framework. This study demonstrates that board of directors has an impact on firm performance and the independent directors are necessary for the audit committee to improve performance. They indicate indirectly that the automobile sector has a chance to improve firm performance by strengthening the governance system with a well-balanced board composition. Additionally, audit committee with high number of independent directors ensures independent judgment and oversight during the audit of financial statements.

Keywords: Corporate governance; firm performance; automobile sector; fixed-effects.

JEL Classifications: G32, G34, L25

Niyati Chaudhary, SGT University, Haryana
e-mail: niyatichaudhary03@gmail.com
Akshita Arora, Finance, Apeejay School of Management, New Delhi, India
e-mail: akshitaarora1989@gmail.com

1. Introduction

The corporate environment in India has changed drastically in the last few decades, and a new governance system has been introduced, triggered by the corporate governance scams in the country. These scams had shaken the trust of the current and prospective investors. This has shifted the attention of academia, regulators, and corporations on corporate governance. Better firm governance practices minimize the investor's risk, enable the firm to attract investors, and improve the firm's performance. As a developing country, India is concerned about the governance systems of corporates. This system works as a device that helps to ensure the accountability of individuals in firms and minimize the agent-principal problem. A sound governance system gives strength to the trust of the stakeholders for the safety of their interests (Zaid et al., 2020).

Corporate governance is a mechanism that consists of the process, practices, and instructions laid down for the control and direction of the firm. It balances between the various stakeholders' interests and individual, societal, and economic goals. Corporate governance works as a structure that minimizes the agency cost and removes the principal-agent problem (Chaudhary & Gakhar, 2018). It provides transparency in the firm, which helps maintain trust and balance, beneficial for both the firm and the economy. Corporate governance systems carry both (internal & external) control mechanism that focus on the benefits of both shareholders and management (Schauble, 2019). The governance system of the firm is a process that monitors the performance of the individuals, protects the stakeholders. Investors are eager to recompense different prices for a sound governance system (Assidi, 2020).

The area of corporate governance has been studied in line with multiple theories which exist to support the need for a strong mechanism. A brief narration of agency theory projects the contours for the present study. The focal point of agency theory has been principal-agent relationship. It states that board members must emphasize on maximizing the value of shareholders. The board of directors' need to act as the monitoring instruments of the company. Agency costs can be minimized with such practices and concentrated efforts for shareholders. They can act in the capacity of stewards to focus on primary objective of firm's value and shareholders' satisfaction. Thus, managers may focus on making organizational goals and thereby value of the firm with dedicated mechanisms.

Our research goes with the theoretical perspective of agency theory and tests the association between board characteristics and performance in the Indian context to know whether the monitoring role played by board leads to better performance also. A huge literature exists on this association but the sample chosen in existing literature comprises of listed companies, however there have been limited industry-specific studies in this area. The automobile industry has been chosen for this study keeping in view its contribution in the economic growth of the country.

The following sections comprise the paper: Section 2 summarizes the conceptual and empirical literature in this field; Section 3 provides the methodology for sample selection, data collection and empirical model construction. Section 4 gives us the results for the estimation analysis, followed by conclusion, implications, shortcomings and scope for upcoming research in the last segment.

2. Review of literature

This section reviews the literature for the board variables such as size of the board, independence of board, dual role of CEO, number of board meetings, promoter's shareholding. Numerous meta-analyses and review articles, (Arora and Singh, 2021), have addressed the

linkages among governance variables and performance of the firm. The past studies have been discussed further which are related to these variables.

2.1 Size of the board

The agency theory opines that larger boards are related to greater scrutinizing and better governing of the company. Thus, it has been a widely used board parameter in the corporate governance literature. The studies such as Boussenna (2020); Ali and Ayoko (2020) claims that the board size varies all over the world. However, academic scholars have made attempts to know the optimal board size also (Arora, 2020). The literature such as Arora and Sharma (2016), Jackling and Johl (2009) and Sanda, Mikailu and Garba (2005) confirmed direct association among size of the board and performance of Indian firms. In comparison, Mishra, Randoy and Jensen (2001) argued that boards with less members could take timely choices. Therefore, board size had a positive but insignificantly affects the firm's performance (Mollah Farooque & Karim 2012). Yermack (1996) observed that firm value was inversely linked with the board members' numbers. Garg (2007) discovered that firms listed in India that boards with more members may lead to declining firm performance due to slow harmonization and decision-making complications. Moreover, boards with a smaller number of members may not significantly impact the firm's value (Carter, Simkins & Simpson, 2003). Additionally, studies such as Bhagat and Black (2002); Boshnal (2021) established that the number of members in board has no bearing on the company's performance. Since a larger board may lead to diverse viewpoints, thought-processes and perspectives, a positive relationship between the two is anticipated.

H₀₁ There is no significant impact of the board size (BS) on the ROA.

H₀₂ There is no significant impact of the board size (BS) on the ROE.

2.2 Board independence

Studies such as Fama and Jensen (1983); Pearce and Zhara (1992) discovered that an adequate number of independent directors aided in better performance. Board members are accountable for developing all types of firm strategies that impact the firm performance (Vairavan & Zhang, 2020). Additionally, Yameen Farhan and Tabash (2019); Di Biase and Onorato (2021) discovered in their research that board structure and composition are the main elements of board characteristics and influence the market performance of companies positively. Bouteska (2020) revealed that the proportion of independent directors is a critical aspect in determining the accomplishment of a corporation. On the contrary, Musleh (2019) stated that higher number of independent directors increases the firm's costs. More independent directors increased the value of the firm (Sarkar & Sarkar, 2009). The firm performance was found to be inversely connected to the independence of the board (Yermack, 1996).

On the other side, many researchers discovered no correlation between the two (see, Klein, (1998); Bhagat & Black, (2002); Chaghadari (2011)). Sanda et al. (2005) and Ehikioya (2009) confirmed no association among these variables. Leng (2004) also found a weak association between the two. Based on the theoretical perspective that independent directors bring in greater monitoring to the board, it is expected that it would impact firm performance positively.

H₀₃ There is no significant impact of the number of independent directors in Board (BIND) on the ROA.

H₀₄ There is no significant impact of the number of independent directors in Board (BIND) on the ROE.

2.3 Number of board meetings

The past literature such as Chrisman (2019), Arora and Sharma (2015), and Vafeas (1999) have asserted that board meetings are an effective governance mechanism in a company boardroom and the effectiveness of board operations enhances with increment in the frequency board meetings. Additionally, Datta (2018) confirmed a direct correlation between board meeting frequency and performance of the firm. Moreover, Jackling and Johl (2009); Ebun and Emmanuel (2019) determined that there is an adverse correlation between the two. Coleman (2007) discovered a direct correlation between market performance measurements and increased board meeting occurrences. In comparison, Tang (2017) and Boshnak (2021) found no association between firm performance and board meetings attendance, consequently inconsistent findings have been observed. The board meetings are expected to expedite the decision-making through meaningful exchange of ideas and diverse perspectives which could impact firm performance positively. Some board meetings benefit the shareholders; at the same time, these meetings have costs associated with them in terms of time and sitting fees etc. It is expected that the meetings to influence performance positively.

H₀₅ There is no significant impact of the board meetings (BM) on the ROA

H₀₆ There is no significant impact of the board meetings (BM) on the ROE.

2.4 CEO-duality

When an individual occupies two positions such as CEO and chairman of the firm, CEO-duality indicates a board leadership structure. Studies such as Mathur, Khandelwal, Tiwari and Chebolu (2020); Khan, Nemati and Iftikhar (2011); Dehaene, De Vuyst and Ooghe (2001) have claimed that when the same person has both positions, the accounting firm's performance improves. Tang (2017) asserts that the presence of CEO-duality enables CEOs to make more strategic judgments. However, the past studies, Arora (2012); Guo and Kga (2012); Kyere and Ausloos (2021); Boshnak (2021) have discovered that the absence of CEO duality had no substantial effect on the firm's value. In contrast Kao Hodgkinson and Jaafar (2019) asserted adverse effect of absence of CEO duality on performance. Additionally, when the same individual holds both posts, it results in increased agency expenses and a conflict of interest among stakeholders (Brickley, Coles & Jarrell, 1997). The agency theorists reaffirm Fama and Jensen (1983) assertion that presence of dual role had negative effect on the firm's performance. According to Elsayed (2007), the dual position of the CEO has a varying effect on business performance across industries. It is anticipated that when both the positions would be held by an individual, it will add on to the agency costs and would contribute negatively towards firm performance.

H₀₇ There is no significant impact of the CEO duality (CEO) on the ROA.

H₀₈ There is no significant impact of the CEO duality (CEO) on the ROE.

2.5 Audit committee independence

The number of independent directors in the audit committee is another parameter of corporate governance which is taken into consideration. The audit committee's presence has a substantial impact; moreover, the independent directors in the audit committee would have a favorable response in the capital market (Boussenna 2020, Masmoudi, 2021). Additionally, Kam, Chan and Li (2008); Oussii and Klibi (2020) have proved that independent directors in the board contribute to the value enhancement of the firm. The independent members in the audit committee leads to additional monitoring of the executives as well as auditors. Ghosh (2007) also claimed that independent and external auditors served as a monitoring method for investors. It has been observed that firms with a diverse board structure achieved superior firm

performance (Laing & Weir, 1999; Tornyeva & Wereko, 2012). The audit committee instills confidence in investors about the financial reporting of the company. In their study, Arniati, Puspita, Amin and Pirzada (2019) and Rahman, Meah and Chaudhory (2019) also emphasized the importance of an independent audit committee in enhancing the quality of financial statements. In comparison, Ben Barka and Legendre (2017); Kamaludin Ibrahim and Sundarasan (2020) discovered a non-significant and negative association among these. Additionally, the chairman's membership on this committee had no effect on the firms' revenues (Leng, 2004). The additional monitoring and scrutiny will also affect firm performance positively.

H₀₉ There is no significant impact of the number of independent directors in audit committee (ACIND) on the ROA.

H₀₁₀ There is no significant impact of the number of independent directors in audit committee (ACIND) on the ROE.

2.6 Promoter's shareholding

In a past study, Saidat, Bani-Khalid, Al-Haddad and Marashdeh (2020) asserted that ownership concentration has a negative impact on company performance, but Boshnak (2021) asserts that ownership concentration has a direct connection with the performance of the firm. Moreover, public and director ownership is inversely related to corporate value (Dwivedi & Jain, 2005). For Islamic banks, Haddad, El Ammari and Bouri (2020) confirmed the positive correlation between these variables. Additionally, other research has demonstrated a significant direct connection among ownership structure and performance (Zeitun & Gang, 2007; McConnell & Servaes, 1990) while inverse correlation was found by Mishra and Kapil (2017).

H₀₁₁ There is no significant impact of the percentage of promoters' shareholding (PSH) on the ROA.

H₀₁₂ There is no significant impact of the percentage of promoters' shareholding (PSH) on the ROE.

A model has been framed for the present study in Figure 1. The board size, independence, meetings, promoter's shareholding, independent directors in the audit committee, and CEO duality have been chosen as corporate governance variables. The Return on Assets (ROA) and Return on Equity (ROE) are used as financial performance measures, while firm size and age are used as control variables. The governance factors have been chosen based on corporate governance theories such as stewardship, resource reliance, and agency theory. Our study's primary contribution is to determine whether the independent directors in this committee has an impact on performance or not.

The necessity for current research can be encapsulated as follows: given the ongoing reforms on corporate governance in an emerging economy such as India, it is essential to know how board characteristics impact firm performance. Many studies have been conducted on listed companies, but there has been a lack of industry-specific studies covering small and medium companies. The automobile industry provides tremendous employment to about 29 million jobs at different levels, and it is very vital for the economic growth of the country (Annual Survey of Industries, 2019-2020¹). The automobile industry is the backbone of the manufacturing sector. It has shown drastic growth in the last two decades, thus contributing extensively towards the growth of the economy.

¹ <http://mospi.nic.in/annual-survey-industries>

Board Variables

Dependent Variables

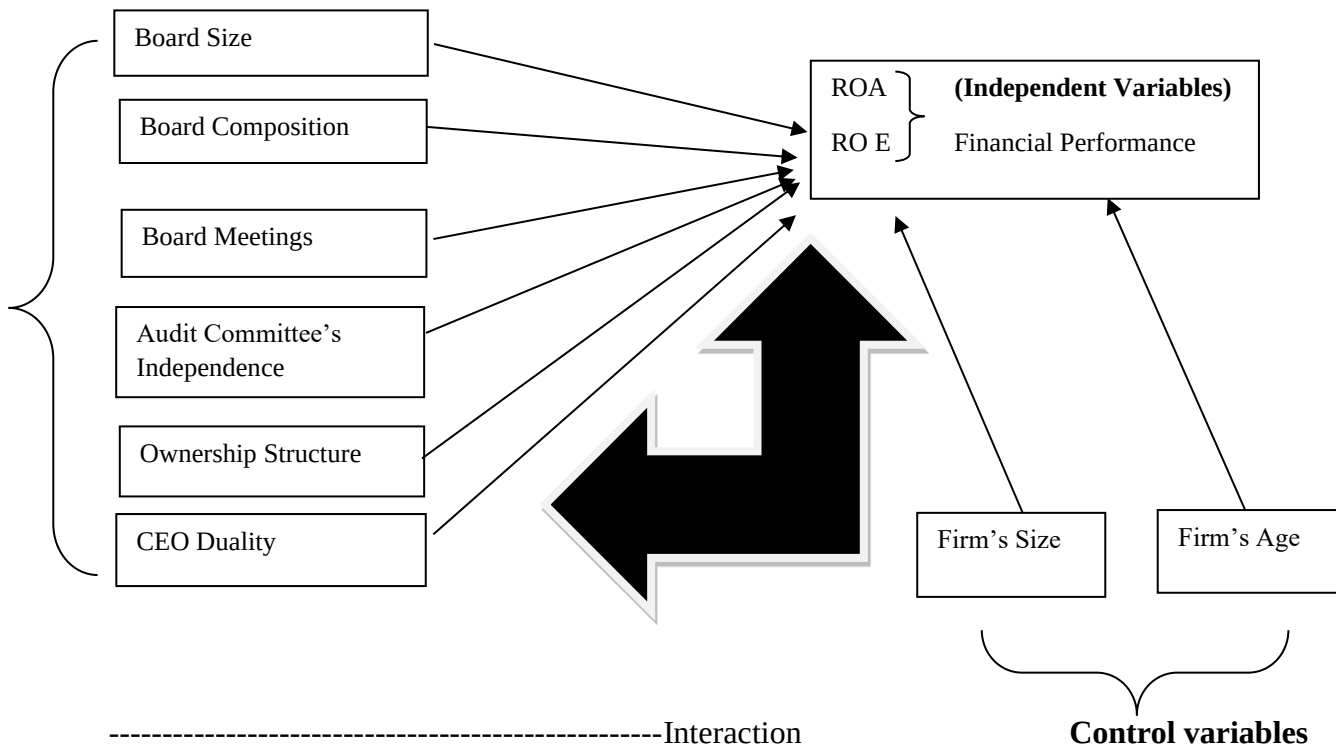


Figure 1. Conceptual model proposed for the present study

The study may provide a base that helps investors invest their savings in a firm by analysing the governance system confirmed by this study. The share of this industry in Gross Domestic Product (GDP) is almost 7.1 per cent, and the share in export is 4.3 per cent (Economic Survey, 2019-2020). It provides a large number of employments, around 29 million jobs at different levels, and it is very vital for the economic growth of the country (Annual Survey of Industries, 2019-2020). At the international level, India ranks amongst the top ten countries in the different categories of the automobile sector.

It should be noted that 100 per cent of foreign direct investment (FDI) in automobile sectors leads to investment growth that means more investment opportunities will be available for the investors through FDI. Agrawal et al. (2017) supported the same that FDI in India specifically in automobile sector has opened up new outlooks for the development of the same.

Therefore, FDI in this industry leads to the economic growth of the country. In this industry, a 25.5 per cent jump in FDI is found from 2018 to 2019 (Economic Survey, 2019-2020²).

² <https://www.indiabudget.gov.in/budget2020-21/economicsurvey/index.php>

3. Research methodology

Our study's primary objective is to examine the effect of board characteristics on a company's financial performance. The sample of the study is chosen as all the listed firms of the Indian automobile industry. Secondary data was used for this study, and the data of listed automobile companies have been gathered from the ProwessIQ database. This database contains corporate governance and financial data for a large set of listed and unlisted companies. The period has been selected for 15 years from 2004-05 onwards, and the sample firms have been chosen from the automobile industry. All the listed companies from automobile sector on ProwessIQ database have been taken as our sample; comprising 480 firm-year observations for a period of 15 years. The automobile industry is one of the biggest industries in the manufacturing sector of India. It has been selected keeping in view its contribution to the employment, economic growth and development of the country.

3.1 Independent variables

The independent variables included in this study are board size (BS), CEO-duality (CEOD), independent directors on board (BIND), independent directors in audit committee (ACIND), promoter's shareholding (PSH) and frequency of board meetings (BM).

3.2 Dependent variables

The performance of the firm can be measured through market-based and accounting-based measures. For market-based criteria, the company's market performance and future prospected earnings are included. On the other hand, in accounting-based criteria, historical cost and past performance are incorporated. Return on Assets (ROA) and Return on Equity (ROE) has been widely used by many researchers (Soni and Arora, 2016; Mishra and Kapil, 2017; Saidat, Silva & Seaman, 2019; Arora, 2022) to analyse the firm's accounting performance.

3.3 Control variables

The firm age and firm size have been taken as the control variables. The studies such as Basuony Mohamed and Al-Baidhani (2014) have mentioned that firm age is essential for firm performance. In addition to this, Muda, Shaharuddin and Embaya (2013) and Alshehri (2016) stated that old firms benefit from their long experience and reputation.

The firm size is also an essential factor measured by the natural logarithm of total assets. Further, Bertay Demirgüç-Kunt and Huizinga (2013) stated that the firm age significantly and positively affects financial performance. In contrast, Srairi (2009) and Skinner and Sloan (2002) mentioned that size and performance have an inverse association. Ulussever (2018) also found a negative and significant impact on the size and financial performance. A complete list of variables is given in Table 1.

Table 1: Description of variables used in the estimation

<i>Variables</i>	<i>Full form</i>	<i>Definition</i>
Explanatory variables		
BS	Board size	Number of board members
BIND	Board independence	Number of independent directors on board
BM	Number of board meetings	Number of board meetings during the year
CEOD	CEO-duality	Dummy variable which takes the value of 1 when CEO doubles as the chairman, else 0
ACIND	Audit committee independence	Number of independent directors in audit committee
PSH	Promoter's shareholding	Percentage of shares held by promoters in a company
Dependent variables		
ROE	Return on equity	Profit after tax / Shareholders' funds
ROA	Return on assets	Profit after tax / Book value of assets
Control variables		
AGE	Firm Age	Number of years since the incorporation of the firm
SIZE	Firm Size	Natural logarithm of total assets

The following model has been built to investigate the impact of board characteristics on ROA and ROE:

$$\begin{aligned} \text{ROA}_{it} = & \alpha_i + \beta_1 * \text{BS}_{it} + \beta_2 * \text{BIND}_{it} + \beta_3 * \text{BM}_{it} + \beta_4 * \text{CEOD}_{it} + \beta_5 * \text{ACIND}_{it} + \beta_6 \\ & * \text{PSH}_{it} + \beta_7 * \text{AGE}_{it} + \beta_8 * \text{SIZE}_{it} + \hat{\epsilon}_t + \epsilon_{it} \end{aligned}$$

- (1)

$$\begin{aligned} \text{ROE}_{it} = & \alpha_i + \beta_1 * \text{BS}_{it} + \beta_2 * \text{BIND}_{it} + \beta_3 * \text{BM}_{it} + \beta_4 * \text{CEOD}_{it} + \beta_5 * \text{ACIND}_{it} + \beta_6 \\ & * \text{PSH}_{it} + \beta_7 * \text{AGE}_{it} + \beta_8 * \text{SIZE}_{it} + \hat{\epsilon}_t + \epsilon_{it} \end{aligned}$$

- (2)

where, ROA and ROE are the firm performance measures; BS, BIND, BM, CEOD, ACIND and PSH are board characteristics; i - firm, t - year and ϵ - error term. Where α_i represents the firm fixed effect, $\beta_1, \beta_2, \beta_3, \dots, \beta_8$ are regression coefficients of independent variables and $\hat{\epsilon}_t$ represents the year fixed effects .

For panel data estimation, the two widely used statistical models are fixed effect and random effect methods. Guided by the Hausman test and F-test (see Table 6), the fixed effects method has been found appropriate for estimation. The study has used the fixed-effects model to test the impact of six board characteristics on different firm performance measures. This model would overcome the possibilities of endogeneity bias in the results. The following section offers the results of our study along with the discussion.

4. Results and discussion

The estimation results have been reported in this section which includes descriptive statistics, correlation and variation inflation factor (VIF) results, autocorrelation and heteroscedasticity test results along with the regression results.

Table 2: Descriptive statistics for the explanatory variables of the study

Variables	Standard						
	Mean	Median	Maximum	Minimum	Deviation	Skewness	Kurtosis
BS	10.83	10	23	4	4.11	0.41	2.46
BIND	4.73	4	13	0	2.12	0.81	3.99
BM	5.38	5	14	3	1.78	2.073	8.40
CEOD	0.39	0	1	0	0.49	0.43	1.19
ACIND	3.04	3	7	0	1.02	0.28	4.49
PSH	52.50	51.77	98.88	17.45	18.35	0.68	3.28

ROA	3.99151	4.4518	102.774	-60.4642	14.0461	-0.1589	12.6708
ROE	22.6032	16.4988	9290.91	-4030.19	562.385	9.61202	204.078

Table 2 shows the descriptive statistics for all the governance variables and dependent variables. It shows that the board size ranges between 4 and 23 members and the average board size is 11 members. The number of independence directors' lies between 0 and 13 members while independent members in audit committee lies between 0 and 7 members. On an average, independent members in board are 5 while in audit committee only 3 members are independent. For our sample, most of the firms had conducted about 5 meetings on an average annually. The firms of our sample have promoter's shareholding ranging from 17% to 99% while on an average 53% promoters' shareholding was found in this industry. In our sample, firms have high range of return on assets and return on equity during the selected study period.

We studied the relationship between ROE and ROA for the selected period such as 0.031 which states that the shareholders' fund to total assets ratio for the selected sample is 31% that presents the assets financed by the shareholder's fund.

Table 3: Correlation matrix amongst the variables

Variables	PSH	BM	BS	BIND	ACIND	SIZE	AGE
PSH	1						
BM	-0.17	1					
BS	-0.25	-0.11	1				
BIND	-0.38	-0.01	0.63	1			
ACIND	-0.22	-0.12	0.37	0.60	1		
SIZE	-0.20	0.04	0.54	0.47	0.26	1	
AGE	-0.16	0.06	-0.06	0.05	0.15	-0.07	1

The multicollinearity has been checked between the variables using Pearson's correlation matrix and variance inflation factors (VIF) in Table 3 and 4 respectively. The table 3 depicts all Pearson' correlation values showing that there is no multicollinearity between the independent variables. We have used another test also for the validation of the multicollinearity results i.e., VIF test. Table 4 gives the results for VIF showing that all centred VIF values for independent variables is less than 2, indicating no issues of multicollinearity amongst the data.

Table 4: Variance Inflation Factor (VIF) results

Variables	Coefficient		
	Variance	Uncentered VIF	Centered VIF
Constant	65.719	144.01	NA
BS	0.054	15.97	1.905
BIND	0.236	13.88	1.921
BM	0.158	11.11	1.098
CEOD	2.337	2.023	1.224
ACIND	0.685	15.46	1.556
PSH	0.002	12.32	1.337
AGE	13.830	79.91	1.088
SIZE	0.835	28.73	1.492

After testing for multicollinearity, we measure autocorrelation using Durbin-Watson test; the results of which are reported in Table 5. The Durbin-Watson statistic tests for autocorrelation in the residuals of the regression model output. Our Durbin-Watson statistical value is approaching 2, indicating no signs for autocorrelation.

Table 5: Results for the Durbin-Watson tests

Results	ROA	ROE
Durbin-Watson statistical value	1.956*	1.974*

The White-test was used to check the presence of heteroskedasticity in the data and we test our null hypothesis that homoskedasticity exists. For both the firm performance measures, we found that probability value is more than 0.05, checked at 5% level of significance. Thus, the null hypothesis is accepted and we can submit that the data does not suffer from the issue of heteroskedasticity.

Further, the results of the fixed-effects model testing the impact of corporate governance variables on ROA and ROE are presented (Table 6 and Table 7), followed by discussion of the findings. Coefficient value, standard error and p-values are detailed in these table. The fixed-effects model was selected as a result of the Hausman test being performed. It shows the impact of board variables on ROA and ROE using the fixed-effects method, as shown in columns (1) to (2). We can observe positive association between BS and both performance metrics in the results, despite the fact that the coefficient is small. It lends support to the notion of bigger board size which enhances performance. The variable, ACIND, has a positive relationship with ROE, indicating that high number of independent directors in the audit committee results in a higher return on equity (ROE). The percentage of promoters' shares in a company is inversely proportional to its return on equity. Pant and Pattanayak (2007) found positive relationship between promoters' shares and business performance, however, Kumar and Singh (2008) discovered no such relationship (2012). Firm age is found to be positively associated with both financial performance measures (ROA and ROE). Contrary to our expectations, the size of a company has a negative impact on both measures, ROA and ROE.

Table 6: Estimation results for the impact of board characteristics on firm performance (ROA) measures using fixed effects method

	Coefficient	Standard Error	t-value	P> t
Constant	-2.080	2.249	-0.93	0.356
BS	0.009	.0306	0.30	0.765
BIND	-.0267	.0419	-0.64	0.524
BM	-0.020	.0475	-0.41	0.684
CEOD	0.226	.263	0.86	0.391
ACIND	-0.045	.079	-0.57	0.567
PSH	.0007	.012	0.06	0.950
SIZE	-1.260	.278	-4.53	0.000***
AGE	5.578	1.640	3.40	0.001***

F – statistic 2.96*

P- value of Hausman test 0.0002

*Note: *, **, and *** gives level of significance at 10%, 5% and 1% respectively*

Table 7: Estimation results for the impact of board characteristics on firm performance (ROE) measures using fixed effects method

	Coefficient	Standard Error	t-value	P> t
Constant	5.367	1.349	3.98	0.000
BS	-.027	.0289	-0.95	0.343
BIND	.004	.0463	0.09	0.924
BM	-.007	.0459	-0.16	0.876
CEOD	.119	.233	0.51	0.611
ACIND	.293	.080	3.66	0.000***
PSH	-.011	.007	-1.63	0.103*
SIZE	-.260	.144	-1.80	0.072*
AGE	-.849	.686	-1.24	0.217

*Note: *, **, and *** gives level of significance at 10%, 5% and 1% respectively*

The outcomes of the study reveal that the number of independent directors in audit committee has a statistically significant positive relation with performance. Increasing the number of independent directors on the audit committee, as demonstrated by this case study, has the potential to improve the financial performance of the organization. Additionally, it was discovered that the promoters' ownership had a negative impact on the company's accounting performance. The independence of the audit committee is critical in this model, which indicates that the number of independent directors on the audit committee has an impact on the financial performance measured in terms of return on equity (ROE). The firm size, i.e., the value of the firm's assets, is also proven to have an impact on financial performance.

ACIND has a significant relationship with ROE, indicating that the independence level in the audit committee has a favorable effect on financial performance (ROE). Additionally, it can be observed that the promoter ownership negatively affects financial performance. Consistent with agency theory, the findings suggest that board independence has an effect on corporate performance. The CEO-duality coefficient is discovered to be positive, but insignificant at the desired levels of significance. It is consistent with the findings of Jackling and Johl (2009) that the CEO's dual job has no impact on the performance of organizations, particularly Indian firms. The board size has an insignificant impact on firm performance, for instance, Yameen et al. (2019) revealed the same results. In contrast, Ahmed Sheikh, Wang and Khan (2013) mentioned that size of the board is directly linked to ROA. The percentage of

shareholding by promoters also influences ROE negatively. The firm size, measured by the log of assets, significantly affects the firm performance.

Table 8 summarized the results of all hypothesis framed during reviewing the existed study. Few hypothesis are accepted few are rejected detailed as below:

Table 8 Summary of the Hypothesis results

Hypothesis	Accepted/ Rejected Decision	Relationship- positive /negative	Significant/ Insignificant
H ₀₁	Accept	Positive	Insignificant
H ₀₂	Accept	Negative	Insignificant
H ₀₃	Accept	Negative	Insignificant
H ₀₄	Accept	Positive	Insignificant
H ₀₅	Accept	Negative	Insignificant
H ₀₆	Accept	Negative	Insignificant
H ₀₇	Accept	Positive	Insignificant
H ₀₈	Accept	Positive	Insignificant
H ₀₉	Accept	Negative	Insignificant
H ₀₁₀	Accept	Positive	Insignificant
H ₀₁₁	Accept	Positive	Insignificant
H ₀₁₂	Reject	Negative	Significant

5. Conclusion

The purpose of this study is to determine the effect of board characteristics on financial performance. The dataset was constructed using a panel data framework, and the fixed effects approach was utilized to analyze the impact of selected board variables. The fixed effects method has helped in overcoming the issues of inconsistent and biased coefficients as well as the problem of endogeneity can be controlled to a great extent. The study's theoretical framework will aid to comprehend the relationships between various corporate governance variables. The study's findings corroborate with agency theory: the independence level of audit committee has a considerable effect on financial performance. Our results indicate that the independence directors in the audit committee have a favorable effect on ROE. It implies that

audit committee is effective in auditing and enhancing the firm performance, especially when the committee is independent. By including more independent directors in audit committee, shareholders might gain protection by minimizing the likelihood of financial statements manipulation. The advocates of agency theory propose that enhancing the participation of independent directors in the organization mitigates agency concerns. Resource dependency theory does not support the results regarding board size and meetings, as the results are insignificant.

The findings have implications for a variety of stakeholders, including academics, management, and policymakers. This study is critical for both domestic and foreign investors, as the automobile sector is also drawing substantial FDI in the country. Automobile companies are expanding their operations, which may result in a rise in firm performance, as company size is directly connected with the performance of the firm. Additionally, the automobile sector has huge growth potential for contributing significantly to the Indian economy. Thus, the findings of this study promote the firms to emphasize on significant governance variables to improve their performance.

Further, Kakabadse et al. (2001) said that variables such as the country's financial system and accounting standards, the type of industry promote corporate success. Also, there are a variety of factors such as the country's cultural, legal, and regulatory frameworks which might have an influence on corporate governance systems (Barbu and Bocean, 2007). According to Kamaludin (2020), the discrepancies in results are related to the fact that institutional arrangements and ownership patterns of enterprises vary among countries. Future researchers may incorporate these factors into their analyses based on their availability and applicability in the Indian setting. Furthermore, the study includes two control variables: firm size and age; introducing other control factors may improve the model's validity. In future research, variables such as leverage, marketing expenditure, and employee count can be added to the list of control variables. Our study examined the relationship among board characteristics and company's performance using fixed effects model; future research may attempt to estimate this relationship using dynamic panel data estimation models such as system generalized moments or Arellano-Bond panel data estimation to overcome endogeneity and simultaneity bias.

The study argues that increasing the proportion of independent directors on the audit committee and the board of directors could benefit the firm's performance. The empirical findings support the notion that directors in the boardroom must be the combination of executive and independent directors, hence corroborating the agency theory. Additional independent directors on the audit committee may also serve as a safeguard for stakeholders, reducing the likelihood of financial statement fraud. Businesses in emerging economies may consider this while structuring their corporate boards composition. For instance, policymakers must bear in mind that increased participation of independent directors, particularly in the audit committee, may help mitigate agency issues and improve business performance.

References

- Agrawal, K., Patidar, N., Goen, A., & Bhojrajdaswani (2017). A Study on Foreign Direct Investment in Automobiles in India. *IMPACT: Journal of Modern Developments in General Management and Administration (IMPACT: JMDGMA)*, 1(2), 1-18.
- Ahmed Sheikh, N. Wang, Z., & Khan, S. (2013). The impact of internal attributes of corporate governance on firm performance: Evidence from Pakistan. *International Journal of Commerce and Management*, 231(1), 38-55.
- Al-Homaidi, E. A., Al-Matari, E. M., Tabash, M. I., Khaled, A. S., & Senan, N.A.M. (2021). The influence of corporate governance characteristics on profitability of Indian firms: An empirical investigation of firms listed on Bombay Stock Exchange. *Investment Management and Financial Innovations*, 18(1), 114-125.
- Ali, M., & Ayoko, O. B. (2020). The impact of board size on board demographic faultlines, *Corporate Governance*, 20(7), 1205-1222.
- Alshehri, A. F. (2016). An examination of the relationship between the size, age and financial performance in Islamic banks: Evidence from around the world. *Journal of Islamic Economics, Banking, and Finance*, 12(4), 155-179.
- Arniati, T. Puspita, D. A. Amin, A., & Pirzada, K. (2019). The implementation of good corporate governance model and auditor independence in earnings' quality improvement. *Entrepreneurship and Sustainability Issues*, 7(1), 188-200.
- Arora, A. (2020). Empirical evidence on optimal board size for Indian listed companies. *International Journal of Corporate Governance*, 11(3), 341-353.
- Arora, A. (2022). Female leadership and firm value in an emerging economy: A panel data framework, *Vision*.
- Arora, A., & Sharma, C. (2015). Impact of firm performance on board characteristics: Empirical evidence from India. *IIM Kozhikode Society & Management Review*, 4(1), 53-70.
- Arora, A., & Sharma, C. (2016). Corporate governance and firm performance in developing countries: Evidence from India. *Corporate Governance*, 16(2), 420-436.
- Arora, A., & Singh, A. (2021). Board characteristics and financial performance: A comprehensive literature review. *Corporate Ownership & Control*, 19(1), 188-198.
- Arora, A., (2012). Corporate governance and firm performance of Indian pharmaceutical sector, *Asian Profile*, 40(6), 537-550.
- Assidi, S. (2020). The effect of voluntary disclosures and corporate governance on firm value: A study of listed firms in France. *International Journal of Disclosure and Governance*, 17(2), 168-179.
- Barbu, C. M., & Bocean, C. G. (2007). Corporate governance and firm performance. *Management & Marketing-Craiova*, 1, 125-131.
- Barka, H. B., & Legendre, F. (2017). Effect of the board of directors and the audit committee on firm performance: A panel data analysis. *Journal of Management and Governance*, 21(3), 737-755.
- Basuony, M. A., Mohamed, E. K. A., & Al-Baidhani, A. M. (2014). The effect of corporate governance on bank financial performance: Evidence from Arabian Peninsula. *Corporate Ownership and Control*, 11(2), 178-191.

- Bertay, A. C. Demirgüç-Kunt, A., & Huizinga, H. (2013). Do we need big banks? Evidence on performance, strategy and market discipline. *Journal of Financial Intermediation*, 22(4), 532-558.
- Bhagat, S., & Black, B. (2002). The non-correlation between board independence and long-term firm performance. *Journal of Corporation Law*, 27(2), 231-274.
- Biase, P. D., & Onorato, G. (2021). Board characteristics and financial performance in the insurance industry: An international empirical survey. *Corporate Ownership & Control*, 18(3), 8-18.
- Boshnak, H. A., (2021). Corporate governance mechanisms and firm performance in Saudi Arabia, *International Journal of Financial Research*, 12(3), 446-465.
- 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.
- Bouteska, A. (2020). Do board characteristics affect bank performance? Evidence from the Eurozone. *Journal of Asset Management*, 21(6), 535-548.
- Brickley, J. A., Coles, J. L., & Jarrell, G. (1997). Leadership structure: Separating the CEO and Chairman of the board. *Journal of Corporate Finance*, 3, 189-220.
- Carter, D. A. Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *The Financial Review*, 38, 33-53.
- Chaghadari, M. F. (2011). Corporate governance and firm performance, *International Proceedings of Economics Development & Research*, 10, 484-489.
- Chaudhary, N., & Gakhar, K. (2018). Corporate governance and financial performance with a perspective on board size and frequency of board meetings: Empirical evidence from India. *Drishtikon: A Management Journal*, 9(1), 37.
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51(3), 371-406.
- Daily, C. M., & Dalton, D. R (1992). The relationship between governance structures and corporate performance in entrepreneurial firms. *Journal of Business Venturing*, 7(5), 375-386.
- Dalton D. R., Daily C. M., Ellstrand A. E., & Johnson J. L. (1998). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42(6), 674-686.
- Dehaene, A. De Vuyst, V., & Ooghe, H. (2001). Corporate performance and board structure in Belgian companies. *Long Range Planning*, 34(3), 383-398.
- Dwivedi, N., & Jain, A. K. (2005). Corporate governance and performance of Indian firms: The effect of board size and ownership. *Employee Responsibilities and Rights Journal*, 17(3), 161-172.
- Ehikioya, B. I. (2009). Corporate governance structure and firm performance in developing economies: Evidence from Nigeria. *Corporate Governance*, 9(3), 231-243.
- El Ammari, A. (2021). Ownership structure, dividend policy, and financial performance: A causality analysis. *Corporate Ownership & Control*, 18(3), 161-174.
- Elsayed, K. (2007). Does CEO duality really affect corporate performance? *Corporate Governance*, 15(6), 1203-1214.
- Fama, E., & Jensen, M. (1983). The separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.

- Garg, A. K. (2007). Influence of board size and independence on firm performance: A Study of Indian companies. *Vikalpa*, 32(3), 39-60.
- Ghosh, S. (2007). External auditing, Managerial monitoring and firm valuation: An empirical analysis for India. *International Journal of Auditing*, 11(1), 1-15.
- Guo, Z., & Kga, U. K. (2012). Corporate governance and firm performance of listed firms in Sri Lanka. *Procedia-Social and Behavioral Sciences*, 40, 664-667.
- Haddad, A., El Ammari, A., & Bouri, A. (2020). Impacts of ownership structure on the financial performance of conventional and Islamic banks in the agency theory context. *Corporate Ownership & Control*, 17(3), 46-70.
- Higgs (2003). Review of the role and effectiveness of non-executive directors. London: Department of Trade and Industry.
- Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's Top companies. *Corporate Governance: An International Review*, 17(4), 492–509.
- Kakabadse, A. K. Korac-Kakabadse, N., & Kouzmin, A. (2001). Board governance and company performance: Any correlations? *Corporate Governance*, 1(1), 24-30.
- Kam C. Chan, K.C., & Li, J. (2008). Audit committee and firm value: Evidence on outside top executives as expert-independent directors. *Corporate Governance*, 16(1), 16-31.
- Kamaludin, K., Ibrahim, I., & Sundarasan, S. (2020). Moderating effects of family business on audit committee diligence and firm performance: A middle-eastern perspective. *International Journal of Economics and Management*, 14(2), 173-188.
- Kao, M. F. Hodgkinson, L., & Jaafar, A. (2019). Ownership structure, board of directors and firm performance: Evidence from Taiwan. *Corporate Governance*, 19(1), 189-216.
- Khan, K., Nemati, A. R., & Iftikhar, M. (2011). Impact of corporate governance on firm performance: Evidence from the Tobacco Industry of Pakistan. *International Research Journal of Finance and Economics*, 61, 7-14.
- Klein, A. (1998). Firm performance and board committee structure. *Journal of Law and Economics*, 41(1), 275-304.
- Kumar, N., & Singh, J. P. (2012). Outside Directors, Corporate Governance and Firm Performance: Empirical Evidence from India. *Asian Journal of Finance and Accounting*, 4(2), 39.
- Kyere, M., & Ausloos, M. (2021). Corporate governance and firms' financial performance in the United Kingdom. *International Journal of Finance & Economics*, 26(2), 1871–1885.
- Laing, D., & Weir, C. M (1999). Governance structures, size and corporate performance in UK firms'. *Management Decision*, 37(5), 457-464.
- Leng, A. C. A. (2004). The impact of corporate governance practices on firms' financial performance: Evidence from Malaysian companies. *ASEAN Economic Bulletin*, 21(3), 308-318.
- Manasee, M. F. Al, Hindawi, R. M. Al, Dahiyat, M. A., & Sartawi, I. I. (2012). The impact of corporate governance on the performance of Jordanian banks. *European Journal of Scientific Research*, 67(3), 349-359.
- Masmoudi, S. M. (2021). The effect of audit committee characteristics on financial reporting quality: The moderating role of audit quality in the Netherlands. *Corporate Ownership & Control*, 18(3), 19-30.

- Mathur, N., Khandelwal, P. Tiwari, S C., & Chebolu, R. M. (2020). Corporate governance, capital structure and financial performance: An analysis of Indian automobile Industry. *IUP Journal of Corporate Governance*, 19(2), 32-43.
- McConnell, J. J., & Henri, S. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27(2), 595-612.
- Mishra, C. Randoy T., & Jensen, J. (2001). The effect of founding family influence on firm value and corporate governance. *Journal of International Financial Management and Accounting*, 12(3), 235-259.
- Mishra, R., & Kapil, S. (2017). Effect of ownership structure and board structure on firm value: Evidence from India, *Corporate Governance*, 17(4), 700-726.
- Mollah, S. Farooque, O. Al., & Karim, A. K. M. W. (2012). Ownership structure, corporate governance and firm performance: Evidence from an African emerging market. *Studies in Economics and Finance*, 29(4), 301-319.
- Muda, M., Shaharuddin, A., & Embaya, A. (2013). Comparative analysis of profitability determinants of domestic and foreign Islamic banks in Malaysia. *International Journal of Economics and Financial Issues*, 3(3), 559-569.
- Musleh Alsartawi, A. (2019). Board independence, frequency of meetings and performance. *Journal of Islamic Marketing*, 10(1), 290-303.
- Oussii, A. A., & Klibi, M.F. (2020). The impact of audit committee financial expertise on de facto use of IFRS: does external auditor's size matter?, *Corporate Governance*, 20(7), 1243-1263.
- Pant, M., & Pattanayak, M. (2007). Insider ownership and firm value: Evidence from Indian corporate sector, *Economic and Political Weekly*, 42(16), 1459-1467.
- Pearce, J. A., & Zahra S. A. (1992). Board composition from a strategic contingency perspective. *Journal of Management Studies*, 29(4), 411-438.
- Petra, S. T. (2007). The effects of corporate governance on the informativeness of earnings. *Economics of Governance*, 8(2), 129-152.
- Rahman, M. M., Meah, M. R., & Chaudhory, N. U. (2019). The impact of audit characteristics on firm performance: An empirical study from an emerging economy. *The Journal of Asian Finance, Economics and Business*, 6(1), 59-69.
- Saidat, Z. Bani-Khalid, T. Al-Haddad, L., & Marshdeh, Z. (2020). Does family CEO enhance corporate performance? The case of Jordan. *Economics and Sociology*, 13(2), 43-52.
- Saidat, Z. Silva, M., & Seaman, C. (2019). The relationship between corporate governance and financial performance: Evidence from Jordanian family and non-family firms. *Journal of Family Business Management*, 9(1), 54-78.
- Sanda, A. Mikailu, A. S., & Garba, T. (2005). Corporate governance mechanisms and firm financial performance in Nigeria. *African Economic Research Consortium Research Paper*, 149, Nairobi.
- Sarkar, J., & Sarkar, S. (2009). Multiple board appointments and firm performance in emerging economies: Evidence from India. *Pacific-Basin Finance Journal*, 17(2), 271-293.
- Schauble, J. (2019). The impact of external and internal corporate governance mechanisms on agency costs. *Corporate Governance*, 19(1), 1-22.

Skinner, D. J., & Sloan, R. G. (2002). Earnings surprises, growth expectations and stock returns, or don't let an earnings torpedo sink your portfolio. *Review of Accounting Studies*, 7(2), 289-312.

Soni, T., & Arora, A. (2016), "Financial performance of socially responsible firms: A comparative study of MNCs and Non-MNCs", *LBS Journal of Management & Research*, Vol. 14(1), pp. 23-32.

Srairi, S. (2009). A comparison of the profitability of Islamic and conventional banks: The case of GCC countries. *Bankers, Markets and Investors*, 98(1), 16-27.

Tang, J. (2017). CEO duality and firm performance: The moderating roles of other executives and block holding outside directors. *European Management Journal*, 35(3), 362-372.

Tornyeva, K., & Wereko, T. (2012). Corporate governance and firm performance: Evidence from the insurance sector of Ghana. *European Journal of Business and Management*, 4(13), 1-19.

Ulussever, T. (2018). A comparative analysis of corporate governance and bank performance: Islamic banks with conventional banks. *Research Journal of Business and Management*, 5(1), 34-50.

Vairavan, A., & Zhang, G. P. (2020). Does a diverse board matter? A mediation analysis of board racial diversity and firm performance. *Corporate Governance*, 20(7), 1223-1241