The role of Auditor's remuneration and Audit committee's impact on the Firm Performance

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Abstract

The present study on the manufacturing and services firms of NSE 500 Index, India, examines the impact of audit committee characteristics and auditor's remuneration on the firm performance as measured by accounting (ROA and ROE) and market measure (Tobin's Q) of firm performance. Audit committee size has a positive impact on firm performance (as measured by Tobin's Q), but it was not observed with ROA and ROE, and, on the other hand, had a negative significant impact on firm performance (as measured by ROA and ROE). Auditor remuneration also had a significant negative impact on overall firm performance.



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The percentage of grey, independent, and executive directors did not have any significant impact on firm performance overall, implying that although auditors' independence is crucial, as per the Companies Act (2013), it eventually seems to hamper firm performance, as auditors' independence plays a fair role and earnings management practices are reduced to a minimum. Moreover, the auditor's remuneration also has a significant negative impact on firm performance, stating that the auditor's remuneration and, in turn, usually independent auditors are critical in the valuation of the firm, which supports firm performance in the long run. However, non-audit fees did not have any significant impact on firm performance, and audit committee meetings had a positive significant impact on firm performance in the long run.

Keywords

Audit Committee, Firm Performance, Nifty 500 Index, Auditor Remuneration, Audit Fees, Auditor Fees

1. Introduction

Despite several checks and balances (corporate governance regulations and processes), business executives have been known to use earnings management as a strategy to deceive investors by providing inflated numbers (Miko & Kamardin, 2016). According to a study on corporate governance codes published by the SEC, specifically codes 2003 and 2011, audit committee and audit quality will lessen account manipulation through discretionary accruals in both the pre- and post-code 2011 periods compared to earnings management.

However, the emergence of corporate governance measures, especially audit committees, helps improve the financial reporting of institutions (Rahim et. al., 2015). The main function of the audit committee is to ensure accounting, reporting, and auditing processes to keep communications transparent and with integrity to shareholders and other stakeholders. Moreover, ethical conduct, including its ethical and cultural dimensions, could be the best way to prevent corporate scandals. It is also suggested in some Islamic countries, such as Malaysia, to embed Shariah corporate governance, which emphasizes the responsibility to God, shareholders, and stakeholders, as each individual is accountable to God, shareholders, and stakeholders. This would eradicate the misconduct behavior of greed and selfishness. However, some studies view corporate governance, accountability, and accountability mechanisms from different angles. For instance, Brennan and Solomon (2008) identified six different dimensions: theoretical framework, mechanisms of accountability, methodological approach and techniques applied, sectors and context as one size does not fit all, and globalization and time horizon keep in mind the pace at which different industries are growing. These dimensions are formulated to analyze the corporate governance framework within the accounting and finance fields.

This study makes numerous contributions to the literature. First, we examine audit committee features and audit fees. We then classify the data based on audit and non-audit fees. In addition, ordinary least squares (OLS), fixed effects (FEM), and Random Effects (REM) regression models were used. Finally, Generalized Methods of Moments (GMM), a more robust regression model, was used as well. The current study, which focuses on the manufacturing and service companies that make up India's NSE 500 Index, examines the effects of audit committee characteristics and auditor compensation on the success of the company, as determined by accounting (ROA and ROE) and market measure (Tobin's Q) of firm performance.

Auditor remuneration also had a significant negative impact on overall firm performance. The percentage of grey, independent, and executive directors did not have any significant impact on firm performance overall, implying that although auditors' independence is crucial, as per the Companies Act (2013), it eventually seems to hamper firm performance, as auditors' independence plays a fair role and earnings management practices are reduced to

a minimum. Moreover, the auditor's remuneration also has a significant negative impact on firm performance, stating that the auditor's remuneration and, in turn, usually independent auditors are critical in the valuation of the firm, which supports firm performance in the long run. However, non-audit fees did not have any significant impact on firm performance, and audit committee meetings had a positive significant impact on firm performance in the long run.

The rest of the sections include a literature review followed by a literature review, research questions, and hypothesis development, which eventually adheres to the research data and methodology. Based on the research methodology, further empirical analysis was carried out, and discussions and conclusions are suggested.

2. Literature Review

The Sarbanes-Oxley Act of 2002 allows publicly traded businesses to establish an audit committee consisting of a financial expert and entirely independent members. The audit committee is responsible for ensuring professionalism, which should improve the level of corporate governance. In addition to its core monitoring role, the audit committee oversees financial reporting, conducts internal and external audits, and improves corporate performance. This study divides audit committee composition into three categories: classic variables, resources, and new variables (Velte, 2017). This was done by analyzing 117 empirical studies, including archival, experimental, and multivariate surveys with multivariate statistics.

New variables include diversity, tenure, multiple directorships, overlapping directorships, stock compensation, and ownership; classic variables include those that have been included in previous studies. Resources included financial expertise, independence, meeting frequency, and size. Members of executive management should not serve on the audit committee; instead, each member must be financially independent of management. Furthermore, the Securities and Exchange Commission must establish regulations under the Sarbanes-Oxley Act Section 407, which requires corporations to have a financial expert and to provide an explanation for any instances in which they do not. In the Indian context, these rules and customs are mandatory. Parallel to this, Section 404(b) mandates that the external auditor evaluate the efficacy and efficiency of the internal control system in relation to the financial reporting carried out.

According to prior research (Farrell, 1973; Jensen & Meckling, 1976; Velte, 2017), an audit committee is economically necessary to address principal agent theory. This should help lessen conflicts of interest and asymmetric knowledge between management and investors. The audit committee members' incentive-based remuneration strategy works well in mitigating conflicts of interest between management and investors. The length of service, social connections, frequency of meetings, and size of the audit committee may all have a significant influence on how well the committee consults on internal and external audits, as well as the financial reporting process. There are conflicts of interest between shareholders and managers because audit committee remuneration schemes vary widely internationally, and there is no agreement on this point of view. Thus, agency theory provides a negative management image, while stewardship theory proposes that audit committee members are good stewards who should engage in a close relationship with management as well as internal and external auditors.

Following the creation of the Sarbanes-Oxley Act (SOX), several nations implemented audit committee laws and recommendations. This allowed the SOX, 2002 to be recognized as a worldwide catalyst for audit committee regulations and recommendations. Over half (65 out of 117) of the evaluated studies in the systematic literature review emphasized the influence of the audit committee's influence on financial reporting. The remaining investigations have concentrated on firm performance (14), internal audit quality (18), and external audit quality (20).

In the context of the audit committee, company performance received the least attention between 2007 and 2015. Furthermore, the absolute values of the residuals for a given year can be used to gauge accounting or audit quality at the company-year level. The majority of the negative significance of earnings misstatements is connected with positive earnings quality, as demonstrated by audit committee financial knowledge, and there is currently no cross-jurisdictional enforcement system in place in Europe due to earnings misstatements. Audit fees are positive-ly impacted by the independence of the audit committee and positively impacted by ethnic diversity.

To increase shareholder value through CSR initiatives, audit committee members should also possess strong CSR experience. Numerous interdependencies, including stock ownership and compensation, directorships, overlapping memberships, and social links, can be used to characterize the economic effects of the audit committee on corporate governance and business performance. Lean auditing proposes that the audit committee relieves internal and external auditors, which would reduce the amount of audit resources if the relationship is substitutive. Conversely, if the audit committee is subordinate and complementary to the auditor, it would require an expansion of internal audit activities.

For the benefit of the shareholders, the audit committee should be large and independent; nevertheless, a director with experience in accounting may not be required. Compared with financially engaged directors, financially educated directors appear to support company hedging for the benefit of shareholders. Therefore, the presence of university-educated board members is a significant factor in determining the degree of hedging (Dionne & Triki, 2005). According to Buckley and Van Der Nat (2003), the lack of financial competence among board members and independent directors on derivatives was the primary cause of Enron's collapse. The NYSE's listed company handbook stipulates in Section 303A.07 that every member of the audit committee must possess financial competence or be in a reasonable period. However, a clear definition of a financially knowledgeable audit committee is debatable till present time.

Internal audit has a crucial role for audit committees, and a well-functioning internal audit function can be a valuable resource for the committee as it performs its obligations, making the committee more effective and efficient overall (Yasin & Nelson, 2012). Financially savvy audit committees are crucial since they demonstrate the reliability of financial statements and the caliber of earnings that are disclosed. Expert director audit committees will be more productive and will likely invest more in the internal audit function with a larger external audit charge, guaranteeing higher-quality audits. The updated Malaysian Civil Code of 2007 specifies the makeup of audit committees, the frequency of meetings, and the requirement that audit committee members participate in ongoing training to maintain awareness of recent and relevant financial and other related developments.

Internal auditors' ability to contribute to external audits is made possible by their objectivity, technical proficiency, and high-caliber job output. Many studies have examined the relationship between external audit fees and corporate governance mechanisms; however, comparatively few have examined the relationship between internal audit function and audit committee characteristics when using external audit fees as a stand-in for audit quality. The audit quality of developed nations such as the US, the UK, and Australia has been the subject of numerous studies (Engel et al., 2010; Krishnan & Visvanathan, 2011; Carcello et al., 2006; Defond et al., 2005). In contrast, prior research in Malaysia has examined financial expertise based on MCCG requirements, which stipulate that at least one audit committee member must be a member of the Malaysian Institute of Accountants (MIA) (Nelson, 2010; Carcello et. al., 2002; Carcello et. al., 2006; Kim et. al., 2017). Moreover, besides accounting affiliation and academic qualifications, direct experience may enhance the knowledge and performance of audit committee members (Kor, 2003; DeZoort et. al., 2002). Diligence of audit committees has been measured through audit committee meetings annually and how often they meet annually, that is, the frequency of audit committee meetings. Increments in the audit committee frequency are positively associated with higher audit quality and higher audit fees, as they are informed of the current auditing issues and the members are more diligent in fulfilling their duties.

Questions arising from the concept of audit committee is, what the AC is, what it does, how it does, etc., should be answered first. An audit committee can be described as a board sub-committee of (predominantly) non-executive directors concerned with audit, internal control, and financial reporting matters (Spira, 1998). Audit committees have been formed for the credibility of financial reporting, particularly in relation to auditor independence. Early studies based on a survey of Times Top 1000 companies in October 1985 suggest that audit committees should be formed to prevent imminent financial collapse, the influence of one individual who had experience of audit committees elsewhere, and the following of fashion stimulated by the articles in the professional press. In one of the studies (Collier, 1993), 12 reasons were established for the establishment of an audit committee:

- 1. Ethical business conduct.
- 2. Improving the Function and Efficacy of Non-executive Directors
- 3. Supporting directors in carrying out their financial reporting responsibilities.
- 4. Maintaining and strengthening internal auditors' independence.
- 5. Helping auditors report significant flaws in the management structure or control environment.
- 6. Increasing communication between the board and internal auditors
- 7. Enhancing communication between the board and outside auditors
- 8. Boosting public trust in the independence and veracity of financial statements.
- 9. Supporting management in carrying out duties to stop fraud and other irregularities and mistakes.
- 10. Increasing the trustworthiness and objectivity of financial statements in investment analysis.
- 11. Offering a forum for arbitration between management and auditors.
- 12. Possibility of legislative pressure.

For instance, the Treadway report (1987) emphasized the AC's primary role in the prevention of fraudulent financial reporting and the reduction of illegal activity (Spira, 1998). Studies also show that the appointment of Big Eight Auditing firms offers a combination of protective measures reflecting a response to increased director's liability, but this did not necessarily suggest it as an explicitly articulated purpose but rather inferred it as implicit in the company behavior (Spira, 1998; Eichenseher & Shields, 1985). Based on the literature review and suggested measures, the following research questions were examined:

Q1: Do companies in India follow the audit committee requirements as per the Companies Act, 2013 in India?

- Q2. What impact do auditors and their remuneration have on firm performance in India?
- Q3. What impacts does the presence of audit committee and its characteristics on Indian performance?

To address these questions, the following hypothesis was examined:

- H_{ul} : Auditor remuneration does not significantly impact a firm's performance.
- H_{02}^{-1} : Audit committee characteristics do not significantly impact firm performance.

3. Data and Research Methodology

The National Stock Exchange (NSE) of India's NSE 500 Index served as the study sample. The maximum free-float market capitalization of 96.1%, as of March 29, 2019, was the sample selected for the study. Therefore, market capitalization is used to determine the size of the sample selected for this study. Of the 500 listed companies, 152 have been placed in a separate category based on the type of ownership: these are companies under Central or State

Central or State government control, or they are in the financial sector (banking or financial services) and have different governing mechanisms than private companies (Haldar & Rao, 2011).

These companies are required to comply with various legal and social norms. The manufacturing and service sectors comprised the remaining 348 private enterprises. Of the 348 businesses, 94 were in the service industry, and 254 were in the manufacturing sector. For the NSE 500 Index sample, a panel dataset including all corporate governance and company performance characteristics was arranged between 2012 and 2020. The dataset comprises annual data from 348 companies. The data were winsorized at the 1% and 99% levels, respectively, and the analysis was conducted using the program EViews 11 Student Version. The variable descriptions and their evaluations, which were collected from the Prowess IQ database, are shown in Table 1.

S.R. No.	Variable	Description
1	ATS	Advertising Expenditure/ Total Sales
2	BMF	Board Meeting Frequency
3	LOGOA	Log of Organizational Age
4	LOGTA	Log of Total Assets
5	NACM	Number of Audit Committee Meetings
6	PAC	Presence of Audit Committee
7	PCAC	Presence of Chairperson in Audit Committee
8	RDTS	Research & Development Expenditure/ Total Sales
9	ROA	Return on Assets
10	ROE	Return on Equity
11	TOBINSQ	Equity market Value (Market Cap)/Equity Book Value
12	BS	Board Size
13	PGD	Percentage of Grey Directors
14	PINED	Percentage of Independent Directors
15	PNIED	Percentage of Non-Independent Directors
16	AUDITFEES	Audit Fees
17	AUDITORFEES	Auditor Fees
18	NONAUDITFEES	Non-Auditor Fees
19	MC	Market Capitalization
20	ACS	Audit Committee Size

3.1 Descriptive Statistics

The independent variables taken for Audit Committee Characteristics include Audit Committee Size (ACS) (DeZoort et. al., 2002), Number of Audit Committee Meetings (NACM) (DeZoort et. al., 2002) and Board Size (BS) (DeZoort et. al., 2002) and Board Meeting Frequency (BMF) (DeZoort et. al., 2002), Percentage of Grey Directors (PGD) (Buckley & Van Der Nat, 2003), percentage of independent non-executive directors (PINED) (Buckley & Van Der Nat, 2003), Percentage of Non-Independent Executive Directors (PNIED) (Buckley & Van Der Nat, 2003), Percentage of Non-Independent Executive Directors (PNIED) (Buckley & Van Der Nat, 2003), Percentage of Non-Independent Executive Directors (PNIED) (Buckley & Van Der Nat, 2003), Percentage of Non-Independent executive Directors (PNIED) (Buckley & Van Der Nat, 2003), Percentage of La, 2002). The independent variables for the auditor's remuneration include Audit Fees (AUDITFEES) (Engel et. al., 2010), Auditor Fees (AUDITORFEES) (Engel et. al., 2010), and Non-Audit Fees (NONAUDITFEES) (Engel et. al., 2010). Advertising Expenditure/ Total Sales (Collier, 1993), Research & Development Expenditure/ Total Sales (Collier, 1993), Log of Organizational Age (Collier, 1993), and Log of Market Capitalization (Collier, 1993) are taken as the controlling variables, while BS, BMF and Log of Total Assets are taken as the instrumental variables in the Generalized Method of Moments Estimation technique. The dependent variables includes both the accounting measure i.e. Return on Assets (ROA) (Engel et. al., 2010) and market measures of firm performance such as Tobin's Q (Engel et. al., 2010). The log of the data was used to make the data more symmetric.

Table 2 presents the descriptive statistics of the data used in the study. Statistics show that the data are positively skewed and are obtained for a large number of observations. Second, most of the values lie within permissible limits, such as the percentage of grey, independent, and executive directors, as per the Companies Act, 2013. Moreover, board size, audit committee size, number of audit committee meetings, and board meeting frequency complied with norms, as stated in the Companies Act, 2013 for audit committees, board size, and board meeting frequency.

Table 2: Descriptive Statistics.

Variables	Mean	Median	Maximum	Minimum	Standard	Skewness	Kurtosis	No. of
					Deviation			Observations
ATS	1.906	0.746	28.201	0.001	3.116	3.451	19.106	1339
BMF	5.839	5.000	20.000	0.000	2.034	1.848	8.019	2361
LOGOA	1.433	1.462	2.072	0.000	0.357	-1.096	5.052	3076
LOGTA	23.508	24.180	30.087	11.513	3.188	-1.632	5.149	2399
NACM	5.028	4.000	21.000	2.000	1.665	2.870	16.133	2417
RDTS	2.150	0.368	341.457	0.000	12.337	21.300	537.881	1158
ROA	7.736	6.700	77.150	-142.700	8.955	-1.836	42.719	2629
ROE	15.904	15.110	3818.010	-1109.110	82.407	36.597	1766.672	2591
TOBINSQ	12.301	3.656	6012.570	0.159	146.252	35.175	1324.670	2513
BS	12.132	12.000	31.000	2.000	3.236	0.745	4.373	2386
PGD	28.240	27.270	100.000	0.000	16.660	0.800	4.537	2386
PINED	45.324	45.450	133.330	0.000	11.527	-0.421	6.593	2383
PNIED	26.462	26.090	83.330	0.000	13.719	0.314	2.669	2386
LOGAUDITFEES	15.182	6.300	614.300	0.000	38.284	8.159	15.182	1084
LOG	17.262	7 700	614 500	0.100	40.494	7 694	17.261	1084
AUDITORFEES	17.302	7.700	614.300	0.100	40.484	/.084	17.301	
NONAUDITFEES	2.240	0.900	120.000	0.000	5.871	11.223	181.291	1169
LOGMC	11.310	10.705	12.937	8.365	11.742	7.500	79.050	2368
ACS	4.385	4.000	11.000	2.000	1.189	1.346	6.192	2214

3.2 Correlation Matrix

Table 3 presents the Pearson Correlation Coefficient matrix for the variables explained above. A single correlation matrix table stating the probabilities was obtained for simplification. Audit fees show a high degree of correlation with auditor fees (around 0.992); hence, audit fees are further simplified into audit fees and non-audit fees. Most of the significant correlation values were within the permissible limits of 0.001-0.775 (Kumar & Singh, 2013), and many correlation values were insignificant.

4. Empirical Results

4.1 Ordinary Least squares (OLS), fixed effects model (FEM), random effects model (REM), and Generalized Method of Moments (GMM) Regression Estimates of the impact of Audit Committee Characteristics on the market measure of firm performance (Tobin's Q):

A regression of the following form and its nested versions is estimated and shown in Tables 4 and 5. Tobin's $Q_{ii} = \alpha + \beta_1 * Audit$ Committee Characteristicsit $+ \beta_2 * ATS_{ii} + \beta_3 * RDTS_{ii} + \beta_4 * LogOA_{ii} + \beta_5 * LogMC_{ii}$ + ε (Error term) -----(1)

 $Tobin's Q_{ii} = a + \beta_1 * LogAUDITFEES_{ii} + \beta_2 * ACS_{ii} + \beta_3 * NACM_{ii} + \beta_4 * PGD_{ii} + \beta_5 * PINED_{ii} + \beta_6 * PNIED_{ii} + \beta_7 * A/TS_{ii} + \beta_8 * LogOA_{ii} + \beta_9 * LogMC_{ii} + \varepsilon (Error term) -----(2)$ $Tobin's Q_{ii} = a + \beta_1 * LogAUDITORFEES_{ii} + \beta_2 * LogNONAUDITFEES_{ii} + \beta_3 * ACS_{ii} + \beta_4 * NACM_{ii} + \beta_5 * PGD_{ii} + \beta_6 * PINED_{ii} + \beta_7 * PNIED_{ii} + \beta_8 * A/TS_{ii} + \beta_9 * LogOA_{ii} + \beta_{10} * LogMC_{ii} + \varepsilon (Error term) -----(3)$

TOBIN SQ																1.000
ROE															1.000	0.858 4.413 0.003 ***
ROA														1.000	0.787 3.379 0.012 **	0.383 1.097 0.309
RDTS													1.000	-0.413 -1.200 0.269	-0.390 -1.119 0.300	-0.227 -0.617 0.557
PNIED												1.000	0.134 0.359 0.730	0.076 0.203 0.845	-0.373 -1.065 0.322	-0.520 -1.611 0.151
PINED											1.000	-0.554 -1.760 0.122	-0.529 -1.650 0.143	0.102 0.271 0.794	0.029 0.077 0.941	-0.140 -0.374 0.719
PGD										1.000	-0.299 -0.829 0.434	-0.626 -2.125 0.071 *	0.399 1.151 0.287	-0.224 -0.608 0.562	0.347 0.979 0.360	0.676 2.429 0.046 **
у 0901									1.000	0.689 2.513 0.040 **	-0.608 -2.028 0.082	-0.068 -0.180 0.862	0.921 6.246 0.000 ***	-0.489 -1.481 0.182	-0.223 -0.606 0.564	0.085 0.225 0.828
LOGN DITFE DITFE								1.000	0.471 1.412 0.201	0.503 1.538 0.168	-0.447 -1.320 0.228	-0.077 -0.204 0.844	0.370 1.055 0.327	0.164 0.440 0.673	0.368 1.047 0.330	0.355 1.004 0.349
C C C							1.000	0.184 0.494 0.636	-0.108 -0.288 0.782	0.085 0.225 0.828	-0.529 -1.648 0.143	0.308 0.856 0.420	-0.230 -0.625 0.552	0.637 2.186 0.065	0.670 2.391 0.048 **	0.605 2.008 0.085 *
LOGA UDITO RFEES						1.000	-0.697 -2.570 0.037 **	0.278 0.767 0.468	0.520 1.612 0.151	0.337 0.948 0.375	-0.092 -0.245 0.814	-0.182 -0.489 0.640	0.450 1.333 0.224	-0.817 -3.744 0.007 **	-0.573 -1.848 0.107	-0.293 -0.809 0.445
LOGA UDITF EES					1.000	0.992 126.84 0.000 ***	-0.697 -2.570 0.037 **	0.278 0.767 0.468	0.520 1.612 0.151	0.337 0.948 0.375	-0.092 -0.245 0.814	-0.182 -0.489 0.640	0.450 1.333 0.224	-0.817 -3.744 0.007 ***	-0.573 -1.848 0.107	-0.293 -0.809 0.445
BS				1.000	0.520 1.612 0.151	0.520 1.612 0.151	0.005 0.012 0.991	0.220 0.598 0.569	0.196 0.530 0.613	0.595 1.959 0.091 *	-0.205 -0.555 0.596	-0.365 -1.038 0.334	-0.109 -0.290 0.781	-0.354 -1.001 0.350	0.141 0.377 0.718	0.440 1.295 0.236
BMF			1.000	-0.377 -1.077 0.317	0.100 0.266 0.798	0.100 0.266 0.798	-0.118 -0.315 0.762	0.412 1.198 0.270	0.019 0.051 0.961	-0.247 -0.674 0.522	-0.080 -0.212 0.838	0.283 0.781 0.460	0.130 0.346 0.739	0.057 0.152 0.883	-0.104 -0.277 0.790	-0.188 -0.508 0.627
ATS		1.000	-0.230 -0.626 0.551	0.606 2.013 0.084 *	$\begin{array}{c} 0.104 \\ 0.277 \\ 0.790 \end{array}$	$\begin{array}{c} 0.104 \\ 0.277 \\ 0.790 \end{array}$	$\begin{array}{c} 0.332 \\ 0.932 \\ 0.383 \end{array}$	0.480 1.449 0.191	0.431 1.263 0.247	0.920 6.202 0.000 ***	-0.239 -0.650 0.536	-0.632 -2.157 0.068 *	0.080 0.212 0.839	-0.006 -0.016 0.988	0.595 1.958 0.091 *	0.889 5.144 0.001 ***
ACS	1.000	0.220 0.597 0.569	0.001 0.001 0.980	-0.213 -0.577 0.582	0.070 0.185 0.859	0.070 0.185 0.859	-0.384 -1.100 0.308	0.052 0.138 0.895	0.123 0.327 0.753	0.249 0.681 0.518	0.576 1.865 0.104	-0.673 -2.409 0.047 **	0.137 0.367 0.724	0.056 0.149 0.886	0.196 0.528 0.614	0.182 0.490 0.639
Variables (T- Statistics)	ACS	ATS	BMF	BS	LOGAU DITFEE S	LOGAU DITORF EES	LOGMC	LOGNO NAUDIT FEES	LOGOA	PGD	PINED	PNIED	RDTS	ROA	ROE	TOBINS Q

Table 3¹: Pearson Correlation Coefficient Matrix:

 1 (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

Audit committee size, frequency of meetings, proportion of gray directors, proportion of independent non-executive directors, proportion of non-independent executive directors, audit fee logs, and audit fee logs are among the components of the audit committee. Additionally, the cross-section and period are represented by i and t, the error term by ε , and the intercept and coefficients of the variables under study by α and β , respectively.

Dependent Variable Tebin's O	Model 1 (T-Statistics) (Probability)	Model 2 (T-Statistics) (Probability)	Model 3 (T-Statistics) (Probability)	Model 4 (T-Statistics) (Probability)	Model 5 (T-Statistics) (Probability)	Model 6 (T-Statistics) (Probability)	Model 7 (T- Statistics) (Probability)	Model 8 (T- Statistics) (Probability)	Model 9 (T- Statistics) (Probability)	Model 10 (T- Statistics) (Probability)
LOCAUDITEEES	0.(2)	((······,,,,,, .	(((······ ·, , ,	1.00	1.050	0.002	0.551
LOGAUDITFEES	-0.621 (-0.813) (0.417)						-1.669 (-2.037) (0.043) **	-1.050 (-1.210) (0.227)	-0.892 (-1.410) (0.160)	0.551 (1.973) (0.054) *
ACS		1.502 (5.021)					1.040 (3.502)	1.597 (0.042)	0.316 (0.621)	0.279 (2.198)
		(0.000) ***					(0.001) ***	(0.980)	(0.535)	(0.032) **
NACM			-0.236 (-0.873) (0.383)				1.170 (1.962) (0.051) *	-0.229 (0.106) (0.166)	1.006 ((1.912) (0.234)	-0.125 (-1.119) (0.268)
PGD				0.041 (1.477) (0.140)			-0.265 (-1.831) (0.068) *	-0.223 (0.001) (0.853)	-1.348 (-0.829) (0.408)	0.042 (0.263) (0.794)
PINED					0.007 (0.182) (0.855)		-0.299 (-2.040) (0.042) **	-0.074 (0.001) (0.090) *	-1.553 (-0.849) (0.397)	0.020 (0.125) (0.901)
PNIED						-0.074 (-2.455) (0.014) **	-0.423 (-2.856) (0.005) ***	-0.280 (0.001) (0.164)	-1.388 (-0.846) (0.399)	0.066 (0.409) (0.684)
Lagged (-1)										-0.665 (-6.071) (0.000) ***
Lagged (-2)										-0.320 (-7.012) (0.000) ***
Lagged (-3)										-0.125 (-2.233) (0.030) ***
ATS	0.476 (1.796) (0.073) *	0.584 (4.759) (0.000) ***	0.635 (5.041) (0.000) ***	0.607 (4.905) (0.000) ***	0.593 (4.803) (0.000) ***	0.622 (5.035) (0.000) ***	0.269 (1.004) (0.316)	0.440 (1.399) (0.163)	0.227 (0.805) (0.422)	0.008 (0.093) (0.926)
RDTS	-0.076 (-0.691) (0.490)	0.004 (0.068) (0.946)	-0.024 (-0.361) (0.719)	-0.007 (-0.102) (0.919)	-0.017 (-0.262) (0.794)	0.004 (0.056) (0.955)	0.048 (0.437) (0.663)	0.054 (0.425) (0.671)	0.016 (0.215) (0.830)	-0.003 (-0.003) (0.997)
LOGOA	2.526 (2.516) (0.316)	1.697 (1.226) (0.221)	(1.720) (1.917) (0.232)	1.105 (0.791) (0.429)	1.274 (0.915) (0.360)	0.957 (0.686) (0.493)	1.340 (0.537) (0.592)	0.112 (0.028) (0.978)	1.990 (0.888) (0.376)	-4.751 (-0.906) (0.369)
LOGMC	3.334 (5.807) (0.000) ***	1.703 (6.795) (0.000) ***	2.065 (7.733) (0.000) ***	1.931 (7.723) (0.000) ***	2.026 (8.227) (0.000) ***	1.916 (7.793) (0.000) ***	1.988 (3.079) (0.002) ***	2.412 (3.753) (0.000) ***	1.441 (2.271) (0.024) **	1.798 (6.221) (0.000) ***
Intercept	-69.537 (-4.868) (0.000) ***	-46.339 (-7.211) (0.000) ***	-47.636 (-7.057) (0.000) ***	-45.511 (-7.047) (0.000) ***	-47.337 (-6.812) (0.000) ***	-41.906 (-6.296) (0.000) ***	-0.778 (-0.035) (0.972)	-30.752 (-1.654) (0.099) *	115.968 (0.653) (0.515)	117.676 (-2.787) (0.002) ***
Adjusted R Squared (%)	12.837	18.162	14.846	14.805	14.548	15.323	17.723	21.799	25.422	
Hausman Test Specification	No	Yes (0.332)	No	No						
Fixed Effect Model	No	No	No	No						
Random Effect Model	No	Yes	No	No						
Serial Correlation (AR1) (P-Value)	No	No	No	(0.038) **						
Serial Correlation (AR2) (P-Value)	No	No	No	(0.422)						
Sargan Test Value (P-Value)	No	No	No	0.42313 (42.313%)						
J-Statistic	No	No	No	10.189						
No. of Observations	315	617	610	632	633	632	304	304	243	67

Table 4²: OLS, FEM-REM and GMM Regression Estimates with Tobin's Q:

² (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

Tables 4 and 5 show the OLS, FEM-REM, and GMM regression estimates of the impact of audit committee characteristics on firm performance measured by Tobin's Q, and subsequently by ROE and ROA in further tables. Table 4 shows that both audit fees and audit committee size have a significant positive impact on firm performance, which is further observed in the more robust GMM technique. The percentage of grey, independent, and

Table 5 [°]	OLS.	FEM-REM a	and GMM	Regression	Estimates	with Tobin's	0:
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Dependent	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Variable Tobin's O	(T-Statistics) (Probability)								
	(,)	(,))	(,))	(,))	(,))	(,))	(,))	(,))	(,))
LOCAUDITORFFES	0.621	1.668	1.050	0.562	0.551	1	1	1	1
LOGAODITORIELS	(0.765)	(-2.037)	(-1.210)	(-1.375)	(1.973)				
LOCNONAUDITEEES	(-0.813)	(0.043) **	(0.227)	(0.171)	(0.054) *	0.(2)	1.421	0.052	0.011
LOGNONAUDITFEES						-0.621	-1.421 (-1.804)	0.052	-0.011 (-0.074)
						(0.406)	(0.073) *	(0.942)	(0.942)
ACS		1.040	1.602	-0.018	0.279		1.210	1.665	0.105
		(3.502)	(5.908)	(-0.227)	(2.198)		(3.466)	(5.220)	(1.286)
NACM		1.170	0.221	-0.072	-0.125		0.986	0.132	-0.121
		(1.962)	(0.428)	(-0.629)	(-1.119)		(1.466)	(0.229)	(-0.887)
PCD		(0.051) *	(0.669)	(0.530)	(0.268)		(0.144)	(0.819)	(0.377)
100		(-1.831)	(-2.437)	(-0.462)	(0.263)		(-0.104)	(-0.672)	(-0.785)
		(0.068) *	(0.015) **	(0.645)	(0.794)		(0.917)	(0.502)	(0.434)
PINED		-0.299	-0.128	0.047	0.020		-0.082	0.044	0.108
		(0.042) **	(0.192)	(0.292)	(0.901)		(0.671)	(0.715)	(0.004) ***
PNIED		-0.423	-0.331	0.022	0.066		-0.225	-0.210	0.038
		(-2.856)	(-3.300)	(0.743)	(0.409) (0.684)		(-1.128)	(-1.652)	(1.529)
Lagged (-1)		(0.003)	(0.001)	(0.459)	-0.665		(0.200)	(0.099)	(0.129)
					(-6.071)				
Langed (2)					(0.000) ***				
Laggeu (-2)					(-7.012)				
					(0.000) ***				
Lagged (-3)					-0.125				
					(0.030) ***				
ATS	0.476	0.269	0.440	0.082	0.008	0.463	0.363	0.529	-0.174
	(1.796)	(1.004)	(1.399)	(0.701)	(0.093)	(1.457)	(1.125)	(1.412)	(-1.021)
RDTS	-0.076	0.048	0.054	0.078	-0.003	-0.091	0.046	0.083	0.079
	(-0.691)	(0.437)	(0.425)	(2.356)	(-0.003)	(-0.766)	(0.384)	(0.594)	(3.332)
	(0.490)	(0.663)	(0.671)	(0.020) **	(0.997)	(0.444)	(0.701)	(0.553)	(0.001) ***
LOGOA	2.525	1.340	0.112	1.027	-4.751	0.622	-1.811	0.102	0.064
	(1.004)	(0.537)	(0.028)	(0.735)	(-0.906)	(0.197)	(-0.571)	(0.022)	(0.070)
LOGMC	3 334	(0.592)	2 412	(0.464)	(0.369)	(0.845)	2 075	2 150	(0.944)
	(5.807)	(3.079)	(3.753)	(6.916)	(6.221)	(5.290)	(2.797)	(3.136)	(7.025)
Intercent	(0.000) ***	((0.002) ***	(0.000) ***	(0.000) ***	(0.000) ***	(0.000) ***	(0.006) ***	(0.002) ***	(0.000) ***
intercept	(-4.868)	(-0.035)	(-1.654)	(-1.987)	(-3.413)	(-4.427)	(-1.033)	(-2.706)	(-3.454)
	(0.000) ***	(0.972)	(0.099) *	(0.043) **	(0.000) ***	(0.000) ***	(0.303)	(0.007) ***	(0.000) ***
Adjusted R Squared (%)	12.837	17.723	21.799	22.767	25.675	10.874	16.082	19.023	23.344
Hausman Test Specification	No	No	Yes (0.332)	No	No	No	No	Yes (0.408)	No
Fixed Effect Model	No								
Random Effect Model	No	No	Yes	No	No	No	No	Yes	No
Serial Correlation (AR1) (P- Value)	No	No	No	No	(0.0384) **	No	No	No	No
Serial Correlation (AR2) (P- Value)	No	No	No	No	(0.422)	No	No	No	No
Sargan Test Value (P-Value)	No	No	No	No	0.42399	No	No	No	No
					(42.399%)				
J-Statistic	No	No	No	No	10.189	No	No	No	No
No. of Observations	315	304	304	157	67	257	249	249	120

³ (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

executive directors has a significant negative impact on firm performance, as observed in OLS and FEM-REM, but not in GMM. Only the number of meetings remained insignificant.

Table 5 displays the divergent outcomes of GMM compared to FEM-REM and OLS. According to OLS and FEM-REM, the independence of directors and auditor fees has a negative and significant impact on firm performance. However, in the GMM, we found that these factors also positively affect a firm's performance. The size of the audit committee significantly improved the firm's performance over the course, as shown by the OLS, FEM-REM, and Systems GMM findings. The Arellano Bond Estimator Test and Sargan Test P (significance) values have validated the GMM estimations, and both fall within the acceptable ranges because AR (1) is significant, while AR (2) is not. Similarly, the Sargan Test P value is more than or equal to 0.25 or 25%). The controlling variables including advertising expenditure/ total sales and market capitalization have a positive significant impact on the firm performance while research and development expenditure and organizational age have mixed impact on the firm performance.

4.2 Ordinary Least squares (OLS), fixed effects model (FEM), random effects model (REM), and Generalized Method of Moments (GMM) Regression Estimates of the impact of Audit Committee Characteristics on firm performance (ROA):

A regression of the following form and its nested versions is estimated and shown in Tables 6 and 7.

 $\begin{aligned} &ROA_{ii} = \alpha + \beta_1 *Audit \ Committee \ Characteristics_{ii} + \beta_2 *ATSit + \beta_3 *RDTSit + \beta 4 *LogOA_{ii} + \beta_5 *LogMC_{ii} + \\ &\varepsilon \ (Error \ term) \ -----(4) \\ &ROA_{ii} = \alpha + \beta_1 *LogAUDITFEES_{ii} + \beta_2 *ACS_{ii} + \beta_3 *NACM_{ii} + \beta_4 *PGD_{ii} + \beta_5 *PINED_{ii} + \beta_6 *PNIED_{ii} + \beta_7 * \\ &A/TS_{ii} + \beta_8 *LogOA_{ii} + \beta_9 *LogMC_{ii} + \varepsilon \ (Error \ term) \ -----(5) \\ &ROA_{ii} = \alpha + \beta_1 *LogAUDITORFEES_{ii} + \beta_2 *LogNONAUDITFEES_{ii} + \beta_3 *ACS_{ii} + \beta_4 *NACM \ it + \beta_5 *PGD_{ii} + \beta_6 *PNIED_{ii} + \beta_6 *PNIED_{ii}$

The OLS, FEM-REM, and GMM regression estimates of the influence of audit committee features' influence on ROA-measured firm performance are displayed in Tables 6 and 7. Table 6 demonstrates that audit fees have a negative and considerable impact on business performance, as shown by the robust techniques difference and systems GMM. Although the GMM did not corroborate this, the size of the audit committee had a detrimental effect on the company's performance. Additionally, as shown in System GMM, audit committee sessions significantly improve firm performance. The proportion of executive, independent, and grey directors had no discernible effect on the company's success.

Table 7 further demonstrates that, as shown in the GMM, both auditors and non-audit fees have a significant negative impact on the firm's performance. The size of the audit committee significantly and negatively impacted the performance of the company. Audit committee meetings significantly improved the functioning of the company. Furthermore, there was no discernible effect of the proportion of executive, independent, and grey directors on the company's success. The Arellano Bond Estimator Test and Sargan Test P (significance) values have validated the GMM estimations, and both fall within the acceptable ranges because AR (1) is significant, while AR (2) is not. Similarly, the Sargan Test P value (> 0.25 or 25%) is over range.

While R&D spending and organizational age have a mixed effect on firm performance, as previously discovered, controlling variables, such as advertising expenditure/total sales and market capitalization, have a substantial positive impact on company performance. Furthermore, when the Difference GMM was operating in ROA estimation systems, GMM could not be operated at even five lag levels. This shows that, in relation to Systems GMM, the audit committee characteristics model is not consistent with the accounting measure of business success as determined by ROA.

Dependent Variable ROA	Model 1 (T-Statistics) (Probability)	Model 2 (T-Statistics) (Probability)	Model 3 (T-Statistics) (Probability)	Model 4 (T-Statistics) (Probability)	Model 5 (T-Statistics) (Probability)	Model 6 (T-Statistics) (Probability)	Model 7 (T- Statistics) (Probability)	Model 8 (T- Statistics) (Probability)	Model 9 (T- Statistics) (Probability)
LOGAUDITFEES	-2.634 (-7.866) (0.000) ***						-2.866 (-8.439) (0.000) ***	-1.045 (-2.139) (0.034) **	-2.866 (-8.439) (0.000) ***
ACS		-0.739 (-3.467) (0.001) ***					-0.501 (-1.769) (0.078) *	0.015 (0.060) (0.497)	-0.501 (-1.769) (1.981)
NACM			-0.430 (-2.290) (0.022) **				0.520 (1.981) (0.049) **	0.194 (0.680) (0.497)	(0.520) (1.981) (0.049) **
PGD				-0.038 (-1.800) (0.072) *			-0.067 (-1.023) (0.307)	0.005 (0.107) (0.915)	-0.067 (-1.023) (0.307)
PINED					-0.005 (-0.165) (0.869)		0.007 (0.111) (0.912)	0.018 (0.367) (0.714)	0.007 (0.111) (0.912)
PNIED						0.045 (2.020) (0.044) **	-0.021 (-0.317) (0.751)	(0.017) (0.339) (0.735)	-0.021 (-0.317) (0.751)
ATS	0.444 (3.585) (0.000) ***	0.664 (7.615) (0.000) ***	0.619 ((7.144) (0.000) ***	0.684 (7.538) (0.000) ***	0.696 (7.681) (0.000) ***	0.678 (7.458) (0.000) ***	0.410 (3.350) (0.001) ***	-0.287 (-1.081) (0.281)	0.410 (3.350) (0.001) ***
RDTS	0.094 (1.833) (0.068) *	0.127 (2.751) (0.006) ***	0.130 (2.832) (0.005) ***	0.129 (2.666) (0.008) ***	0.138 (2.868) (0.004) ***	0.126 (.2596) (0.009) ***	0.083 (1.670) (0.096) *	-0.202 (-1.751) (0.082)	0.083 (1.670) (0.096) *
LOGOA	-2.492 (-2.128) (0.034) **	-2.163 (-2.224) (0.027) **	-1.707 (-1.748) (0.081) *	-2.037 (-2.018) (0.044) **	-2.186 (-2.172) (0.030) **	-1.987 (-1.968) (0.049) **	-2.239 (-1.965) (0.051) *	-22.438 (-4.207) (0.000) ***	-2.239 (-1.965) (0.050) *
LOGMC	3.241 (12.052) (0.000) ***	1.809 (9.990) (0.000) ***	1.880 (10.071) (0.000) ***	1.783 (9.536) (0.000) ***	1.697 (9.224) (0.000) ***	1.766 (9.589) (0.000) ***	3.503 (12.884) (0.000) ***	2.240 (6.002) (0.0000 ***	3.503 (12.884) (0.000) ***
Intercept	-25.769 (-3.866) (0.000) ***	-30.921 (-6.698) (0.000) ***	-34.590 (-7.370) (0.000) ***	-32.860 (-6.850) (0.000) ***	-31.302 (-6.070) (0.000) ***	-34.702 (-6.967) (0.000) ***	-27.294 (-2.840) (0.005) ***	4.906 (0.462) (0.645)	-27.294 (-2.840) (0.005) ***
Adjusted R Squared (%)	39.553	23.155	23.624	22.086	21.706	22.187	42.939	81.324	42.939
Hausman Test Specification	No	Yes (0.000) ***	No						
Fixed Effect Model	No	Yes	No						
Random Effect Model	No	No	No						
No. of Observations	316	626	617	646	647	646	306	306	306

Table 6^{\cdot}: OLS, FEM-REM and GMM Regression Estimates with ROA:

⁴ (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

4.3 Ordinary Least squares (OLS), fixed effects model (FEM), random effects model (REM), and Generalized Method of Moments (GMM) Regression Estimates of the impact of Audit Committee Characteristics on firm performance (ROE):

A regression of the following form and its nested versions is estimated and shown in Tables 8 and 9.

 $\begin{aligned} & \textbf{ROE}_{ii} = \alpha + \beta_1 \text{*Audit Committee Characteristics}_{ii} + \beta_2 \text{*ATS}_{ii} + \beta_3 \text{*RDTS}_{ii} + \beta_4 \text{*LogOA}_{ii} + \beta_5 \text{*LogMC}_{ii} + \varepsilon \\ & (Error term) \text{-----}(1) \\ & \textbf{ROE}_{ii} = \alpha + \beta_1 \text{*LogAUDITFEES}_{ii} + \beta_2 \text{*ACS}_{ii} + \beta_3 \text{*NACM}_{ii} + \beta_4 \text{*PGD it} + \beta_5 \text{*PINED}_{ii} + \beta_6 \text{*PNIED}_{ii} + \beta_7 \\ & \textbf{*A/TS}_{ii} + \beta_8 \text{*LogOA}_{ii} + \beta_9 \text{*LogMC}_{ii} + \varepsilon (Error term) \text{-----}(5) \end{aligned}$

Dependent Variable ROA	Model 1 (T-Statistics) (Probability)	Model 2 (T-Statistics) (Probability)	Model 3 (T-Statistics) (Probability)	Model 4 (T-Statistics) (Probability)	Model 5 (T-Statistics) (Probability)	Model 6 (T-Statistics) (Probability)	Model 7 (T-Statistics) (Probability)	Model 8 (T-Statistics) (Probability)
LOGAUDITORFEES	-2.768 (-7.832) (0.000) ***	-3.028 (-8.381) (0.000) ***	-1.067 (-2.049) (0.042) **	-3.028 (-8.381) (0.000) ***				
LOGNONAUDITFEES					-1.472 (-4.817) (0.000) ***	-1.301 (-4.144) (0.000) ***	-0.330 (-0.876) (0.383)	-2.830 (-5.456) (0.000) ***
ACS		-0.508 (-1.790) (0.075) *	0.017 (0.072) (0.943)	-0.508 (-1.790) (0.075) *		-0.285 (-0.975) (0.331)	-0.129 (-0.486) (0.628)	-0.398 (-1.286) ((0.200)
NACM		0.590 (2.224) (0.027) **	0.192 (0.670) (0.504)	0.590 (2.224) (0.027) **		0.220 (0.823) (0.411)	0.209 (0.692) (0.490)	0.543 ((1.844) (0.067) *
PGD		-0.080 (-1.203) (0.230)	0.003 (0.059) (0.953)	-0.079 (-1.203) (0.230)		-0.052 (-0.658) (0.512)	-0.031 (-0.581) (0.562)	-0.092 (-1.098) (0.273)
PINED		-0.013 (-0.197) (0.844)	0.014 (0.283) (0.778)	-0.013 (-0.197) (0.844)		-0.041 (-0.526) (0.600)	0.020 (0.355) (0.723)	-0.084 (-1.025) (0.306)
PNIED		-0.036 (-0.536) (0.593)	0.014 (0.272) (0.786)	-0.036 (-0.536) (0.593)		-0.004 (-0.050) (0.960)	-0.010 (-0.168) (0.867)	-0.066 (-0.767) (0.444)
ATS	0.449 (3.621) (0.000) ***	0.408 (3.322) (0.001) ***	-0.285 (-1.071) (0.285)	0.408 (3.322) (0.001) ***	0.469 (3.609) (0.000) ***	0.437 (3.343) (0.001) ***	-0.301 (-1.009) (0.315)	0.413 (2.997) (0.003) ***
RDTS	0.093 (1.818) (0.070 *	0.083 (1.672) (0.096) *	-0.201 (-1.739) (0.084) *	0.083 (1.672) (0.096) *	0.085 (1.741) (0.083) *	0.071 (1.487) (0.138)	-0.187 (-1.565) (0.120)	0.058 (1.159) (0.248)
LOGOA	-2.319 (-1.978) (0.049) **	-2.088 (-1.831) (0.068) *	-22.310 (-4.176) (0.000) ***	-2.088 (-1.831) (0.068) *	-1.005 (-0.777) (0.438)	-0.478 (-0.379) (0.705)	-13.853 (-1.884) (0.061) *	0.022 (0.017) (0.987)
LOGMC	3.256 (12.053) (0.000) ***	3.510 (12.867) (0.000) ***	2.187 ((5.954) (0.000) ***	3.510 (12.867) (0.000) ***	2.275 (8.265) (0.000) ***	2.415 (8.448) (0.000) ***	1.600 (3.910) (0.000) ***	2.827 (8.861) (0.000) ***
Intercept	-23.677 (-3.494) (0.001) ***	-23.072 (-2.358) (0.019) **	6.925 (0.621) (0.536)	-23.072 (-2.358) (0.019) **	-24.346 (-3.649) (0.000) ***	-27.858 (-2.733) (0.007) ***	-1.739 (-0.145) (0.885)	-12.889 (-1.142) (0.255)
Adjusted R Squared (%)	39.465	42.785	81.290	42.785	28.077	28.479	74.114	21.257
Hausman Test Specification	No	No	Yes (0.000) ***	No	No	No	Yes (0.002) ***	No
Fixed Effect Model	No	No	Yes	No	No	No	Yes	No
Random Effect Model	No							
No. of Observations	316	306	306	306	258	251	251	249

Table 7⁵: OLS, FEM-REM and GMM Regression Estimates with ROA:

 5 (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

 $\begin{aligned} \textbf{ROE}_{it} &= \alpha + \beta_1 * LogAUDITORFEES_{it} + \beta_2 * LogNONAUDITFEES_{it} + \beta_3 * ACS_{it} + \beta_4 * NACM_{it} + \beta_5 * PGD_{it} + \beta_6 \\ * PINED_{it} + \beta_7 * PNIED_{it} + \beta_8 * A/TS_{it} + \beta_9 * LogOA_{it} + \beta_{10} * LogMC_{it} + \varepsilon (Error term) - ----(6) \end{aligned}$

The OLS, FEM-REM, and GMM regression estimates of the influence of audit committee features' influence on ROE-measured firm performance are displayed in Tables 8 and 9. Table 8 demonstrates that audit fees significantly impacted the firm's performance negatively, as seen with GMM. Furthermore, although it was not noted with GMM, the size of the audit committee significantly affected the performance of the company. Similarly, although inconsistent with the GMM, audit committee meetings also had a significant positive impact on firm performance. As previous results showed, the proportion of independent, grey, and grey directors had no discernible effect on firm performance.

Dependent Variable	Model 1 (T-Statistics)	Model 2 (T-Statistics)	Model 3 (T-Statistics)	Model 4 (T-Statistics)	Model 5 (T-Statistics)	Model 6 (T-Statistics)	Model 7 (T-Statistics)	Model 8 (T-Statistics)	Model 9 (T-Statistics)
ROE	(Probability)								
LOGAUDITFEES	-17.614	ĺ	ĺ	İ	ĺ	İ	-19.691	-10.052	-20.735
	(-4.533)						(-4.861)	(-1.018)	(-4.311)
1.05	(0.000) ***	2.955					(0.000) ***	(0.310)	(0.000) ***
ACS		-2.855					-6.13/	(0.138)	-5.238
		(0.072) *					((0.074) *	(0.133)	(0.138)
NACM			0.222				6.586	-0.346	5.651
			(0.157)				(2.068)	(-0.062)	(1.648)
			(0.875)				(0.034) **	(0.951)	(0.100)
PGD				-0.111			-0.841	-0.395	-0.720
				(0.452)			(-1.038)	(-0.440)	(-0.919)
PINED				(0.452)	-0.264		-0.882	-0.318	-0.847
					(-1.380)		(-1.092)	(-0.327)	(-1.048)
					(0.168)		(0.276)	(0.744)	(0.295)
PNIED						0.270	-0.546	-0.095	-0.430
						(1.719)	(-0.672)	(-0.097)	(-0.531)
ATS	1.420	2.074	1.062	1.071	2.004	(0.086) *	(0.502)	(0.923)	(0.596)
AIS	(1.015)	(3.178)	(2.976)	(3.052)	(3.118)	(2.947)	(0.774)	(0.148)	(0.754)
	(0.311)	(0.002) ***	(0.003) ***	(0.002) ***	(0.002) ***	(0.003) ***	(0.439)	(0.883)	(0.452)
RDTS	-0.082	0.137	0.184	0.151	0.174	0.104	-0.186	-0.134	-0.195
	(-0.141)	(0.399)	(0.532)	(0.447)	(0.519)	(0.305)	(-0.311)	(-0.059)	(-0.304)
	(0.883)	(0.690)	(0.595)	(0.655)	(0.604)	(0.760)	(0.756)	(0.953)	(0.762)
LOGOA	11.629	8.407	9.051	9.148	8.518	9.796	11.492	-168.658	11.800
	(0.8/2) (0.384)	(1.464)	(1.208)	(1.263)	(1.183)	(1.355)	(0.835)	(-1.5/3)	(0.706)
LOGMC	10 848	4 211	3 755	3.931	3 420	4 070	12 549	10.096	12 393
Louine	(3.540)	(3.138)	(.2666)	(.2987)	(2.648)	(3.143)	(3.812)	(1.367)	(3.298)
	(0.001) ***	(0.002) ***	(0.008) ***	(0.003) ***	(0.008) ***	(0.002) ***	(0.000) ***	(0.173)	(0.001) ***
Intercept	4.372	-94.820	-98.373	-98.623	-75.399	-112.989	69.351	217.500	81.433
	(0.058)	(-2.754)	(-2.761)	(-2.901)	(-2.066)	(-3.212)	(0.598)	(1.041)	(0.663)
Addition of a D D D D D D D D D D D D D D D D D D	(0.954)	(0.006) ***	(0.006) ***	(0.004) ***	(0.039) **	(0.001) ***	(0.550)	(0.299)	(0.508)
Adjusted R Squared (%)	7.354	3.400	2.977	3.075	3.281	3.441	8.559	20.315	6.470
Hausman Test	No	Ves	No						
Specification	110	110	110	110		110	110	(0.489)	
Fixed Effect Model	No								
Random Effect Model	No	Yes	No						
No. of Observations	313	616	607	634	635	634	303	303	303
1.0. 51 Obset vations	515	010	007	0.54	055	0.54	565	505	505
1	1			I	I	I	I	1	1

Table 8⁶: OLS, FEM-REM and GMM Regression Estimates with ROE:

 6 (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

Similarly, in Table 9, auditor fees had a significant negative impact on firm performance, as observed with GMM. Audit committee size also has a significant negative impact on firm performance, as confirmed by the GMM. However, audit committee meetings had a positive impact on firm performance, and it is also consistent with GMM, which also states that audit committee meetings prove fruitful for shareholders as well as auditors. The GMM estimates have been verified by the Arellano Bond Estimator Test and the Sargan Test P (significance) values, which are under the limits, as AR (1) is significant and AR (2) is insignificant. Similarly, the Sargan Test P value lies above the range (> 0.25 or 25%).

Dependent Variable	Model 1 (T-Statistics)	Model 2 (T-Statistics)	Model 3 (T-Statistics)	Model 4 (T-Statistics)	Model 5 (T-Statistics)	Model 6 (T-Statistics)	Model 7 (T-Statistics)	Model 8 (T-Statistics)
ROA	(Probability)							
LOGAUDITORFEES	-17.827	-20.437	-21.534	-20.437			Ì	
	(-4.346)	(-4.578)	(-4.206)	(-4.578)				
	(0.000) ***	(0.000) ***	(0.000) ***	(0.000) ***				
LOGNONAUDITFEES					-0.897	-0.697	-0.687	-0.697
					(0.187)	(0.335)	(-0.808)	(-0.966)
ACS		-6.175	-5.346	-6.175	(0.137)	0.500	-0.016	0.500
		(-1.803)	(-1.490)	(-1.803)		(0.745)	(-0.027)	(0.745)
		(0.072) *	(0.137)	(0.072) *		(0.457)	(0.979)	(0.457)
NACM		6.978	6.033	6.978		0.343	-0.779	0.343
		(2.170)	(1.746)	(2.170)		(0.559)	(-1.143)	(0.559)
BOB		(0.031) **	((0.082) *	(0.031) **		(0.577)	(0.255)	(0.577)
PGD		-0.917	-0.785	-0.917		-0.069	0.006	-0.068
		(0.251)	(0.317)	(0.251)		(0.706)	(0.961)	(0.706)
PINED		-1.025	-0.971	-1.025		-0.125	-0.033	-0.125
		(-1.267)	(-1.202)	(-1.267)		(-0.705)	(-0.260)	(-0.705)
		(0.206)	(0.230)	(0.206)		(0.482)	(0.795)	(0.482)
PNIED		-0.604	-0.520	-0.640		-0.063	0.027	-0.063
		(-0.785)	(-0.641)	(-0.785)		(-0.339)	(0.201)	(-0.340)
ATC	1.402	(0.433)	(0.522)	(0.433)	1.267	(0.735)	(0.841)	(0.735)
AIS	(1.058)	(0.767)	1.243	(0.767)	(4 725)	(2.842)	-0.304	(2.842)
	(0.291)	(0.759)	(0.450)	(0.444)	(0,000) ***	(0.000) ***	(0.456)	(0.000) ***
RDTS	-0.082	-0.184	-0.184	-0.184	-0.034	-0.024	-0.465	-0.024
	(-0.139)	(-0.307)	(-0.285)	(-0.307)	(-0.315)	(0.219)	(-1.727)	(-0.219)
	(0.893)	(0.759)	(0.776)	(0.759)	(0.753)	(0.827)	(0.086) *	(0.827)
LOGOA	12.612	12.455	12.405	12.455	-0.932	-0.731	-38.288	-0.731
	(0.942)	(0.903)	(0.742)	(0.903)	(-0.324)	(-0.252)	(-2.306)	(-0.252)
LOCMC	(0.347)	(0.367)	(0.439)	(0.367)	2 530	2.834	0.238	2 284
LOGMC	(3.478)	(3.782)	(3 246)	(3.782)	(4 140)	(3.475)	(-0.258)	(3.475)
	(0.000) ***	(0.000) ***	(0.001) ***	(0.000) ***	(0.000) ***	((0.001) ***	(0.797)	(0.001) ***
Intercept	13.105	95.188	111.087	95.188	-30.431	-21.768	103.774	-21.768
_	(0.169)	(0.806)	(0.886)	(0.806)	(-2.054)	(-0.938)	(3.836)	(-0.938)
	(0.866)	(0.421)	(0.377)	(0.421)	(0.041) **	(0.349)	(0.000) ***	(0.349)
Adjusted R Squared (%)	6.882	8.280	6.183	8.280	14.598	11.213	68.992	11.213
Hausman Test Specification	No	No	Yes (0.429)	No	No	No	Yes (0.000) ***	No
Final Effect Madel	N-	N-	(N-	N-	N-	V	N-
Fixed Effect Model	INO	INO	INO	NO	INO	NO	res	INO
Random Effect Model	No	No	Yes	No	No	No	No	No
No. of Observations	313	303	303	303	258	251	251	251

Table 9⁷: OLS, FEM-REM and GMM Regression Estimates with ROE:

 7 (*), (**) and (***) represents the significance at 10%, 5% and 1% respectively.

The study reveals that while R&D expenditure and organizational age have a mixed impact on firm performance, overall sales, market capitalization, and advertising expenditure have a positive and significant impact on firm performance. Furthermore, while Difference GMM was operating, Systems GMM could not be operated at even five lag levels in the ROE estimation. This suggests that the model of audit committee characteristics doesn't holds with the accounting measure of firm performance as measured by ROE with respect to Systems GMM.

5.0 Discussions and conclusions

As per the hypotheses stated above, this study investigates the impact of an auditor's remuneration and audit committee characteristics on firm performance. The hypotheses have been dealt with separately with OLS, FEM-REM, and more robust techniques such as GMM, implying the fitness of the model.

First, if we consider the auditor's remuneration, we observed that during the period 2012-2020 the auditor's remuneration had a significant negative impact on firm performance, which is inconsistent with earlier studies (Rahim et. al., 2015) as the implementation of policies as per the Companies Act, 2013, will take time in India to ensure sustainability. Second, although audit fees and auditor fees were found to be positively significant with firm performance (as measured by Tobin's Q), the results do not hold good overall because, although it may benefit the firm's share price, it hampers the returns of the firm, which negatively impacts the firm's overall performance. Second, the percentage of grey, independent, and executive directors has a negative significant impact on firm performance. We observe from the data that the amount the firm spends on auditing partners is huge. Second, if auditors do not present with shareholders or are not obliging the norms as per the Companies Act 2013, this could be detrimental to the firm, but this was not observed in the study. As we measured the audit committee size and audit committee meetings have a positive significant impact on firm performance. However, audit committee size has a significant negative impact on firm performance.

However, if the firms do not oblige, this is an issue and should be addressed with regulations including fines or penalties. Moreover, if firms oblige the norms of the Companies Act, 2013, with more updated norms in Companies Law Committee 2022, which permits ease in doing business, then the performance of the firms should increase as per standards as the firms pay huge amounts to the auditors. This is in contrast with the present study, as the auditor's remuneration had a significant negative impact on firm performance. This is mainly because some firms do not oblige the norms as there are missing data, and this is the initial stage for the implementation of the policies. Over a period of time, the performance of the firm will improve according to the Companies Act, 2013 standards, which will be sustainable. Moreover, it should be of prime importance that as firms pay huge amounts to auditors (in millions), they should ensure their financial statements and firm performance as well.

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