

MEDIATING EFFECT OF GOOD CORPORATE GOVERNANCE ON THE RELATIONSHIP BETWEEN ACCOUNTING INFORMATION SYSTEM QUALITY, INTERNAL AUDIT EFFECTIVENESS, AND FIRM PERFORMANCE: EVIDENCE FROM PAKISTAN

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Abstract

This paper explores the mediating impact of good corporate governance (GCG) in the association among accounting information system (AIS) quality, internal audit effectiveness (IAE), financial literacy management (FLM), organizational culture (OC), and firm performance (FP) in the emerging economy of Pakistan. Quantitative cross-sectional survey design was used, and 350 respondents were asked to provide information at different levels of organizations in Pakistani firms. The relationship hypotheses were tested by multiple regression analysis. The findings indicate that AIS, IA, FLM, and OC as a group capture 56.4% of the variability in FP (adjusted $R^2 = 0.559$, and significant, positive direct effects). The mediated model showed that GCG became a great mediator, and the direct effect indicates that AIS is indirectly affecting FP through better governance practices. It accounts for 58.6% variance in FP (adjusted $R^2 = 0.580$, $F(5, 344) = 97.4$, $p < 0.000$). The findings show that good governance structures are needed to transform the organizational resources and technology systems to deliver actual performance outcomes. The research adds empirical value to a new market environment and has practical implications for managers, auditors, and policymakers who may wish to maximize organizational performance with the help of integrated governance systems, human capital formation, and technology.

INTRODUCTION:

AIS are mechanisms designed to help in the administration and regulation of issues pertaining to the economic and financial aspects of businesses when incorporated into the sphere of information technology (IT). They assist organizations in monitoring and controlling financial anomalies and bankruptcies by diagnosing and systematically defining them to enhance productivity and risk management control [1].

One of the most significant technologies in the organization is AIS, which has transformed the way the organization collects, manages, stores, and disseminates information [2]. The relationship between CGC and FP has been a burning issue for a long time, and yet there is no hint on the fact of this relationship. Research has various conclusions, carried out in other countries and circumstances. There are various conclusions explained by models and

theories [3]. The amount of past research regarding corporate governance has principally been carried out in developed countries that follow the Western culture [4]. FP is an important indicator of the economic health of a firm. It is a concept in which the financial resources available to the firm are used efficiently and effectively to achieve its goals. If a firm demonstrates strong performance, it means that it will create greater opportunities for future growth [5]. The development of IAE within the AIS helps protect corporate assets from loss and misuse and ensures that the organization's financial data remains accurate [6]. It further stressed that companies ought to consider the human aspects of usability before adoption. The integration and performance of AIS will depend on the successful application and implementation of other factors to facilitate its operation [7]. [8] noted that the technological and competitive environment of IAE has become increasingly important for empirical research across different fields. The IIA has also acknowledged the consulting role of internal auditors in corporate governance. The International Accounting Standards Committee (IASC) was the body that was charged with the responsibility of making the International Accounting Standards (IAS) and managing its standards [9]. The impact of GCG on the financial reporting quality of banks in Iraq, specifically considering the mediating role of IFRS adoption [10]. The reason why the private banks depend on good financial reporting is that it gives accurate, complete, and current information on the financial performance and status of the institution [11].

[12] presented with the aim of testing the correlation between enterprise risk management, CG, and quality. The performance of IAE was examined as a mediating factor within organizations. The study identified that corporate governance in Jordan faces symptoms of legal risks in the health sector.

Existing studies have examined the direct effects of Accounting Information Systems (AIS) quality and Internal Audit (IA) effectiveness on firm performance. However,

there is a lack of integrated research that explains how these factors jointly influence performance through Good Corporate Governance (GCG). In particular, empirical evidence on the mediating role of GCG between AIS, IA, and firm performance is limited, especially in developing countries. Moreover, prior studies have often ignored important organizational factors such as management's financial literacy, organizational culture, IT infrastructure, strategic planning, and risk management, or have examined them in isolation. Therefore, a comprehensive model that combines these elements to explain firm performance is still missing in the literature..

Organizational performance is a key concern for firms operating in competitive and dynamic environments. Although Accounting Information Systems (AIS) and Internal Audit (IA) are widely recognized as important tools for improving efficiency, control, and decision-making, many organizations still fail to achieve the expected performance outcomes. This indicates that the effectiveness of AIS and IA depends on the presence of strong governance structures. GCG plays a vital role in ensuring transparency, accountability, and the effective use of accounting and AI [13]. However, existing studies have mainly examined AIS, IA, and firm performance in isolation or through direct relationships. Therefore, this study is important as it develops an integrated model that examines the combined effect of AIS quality, IA effectiveness, and GCG on organizational performance. The findings will be useful for managers, auditors, and policymakers by highlighting how governance and information systems together can improve organizational performance in developing economies

The primary objective of the study is to analyze the relationship between the quality of AIS and IA effectiveness on firm performance, with GCG serving as a mediating variable. Specifically, the study aims to test the impact of AIS quality on firm performance and examine how IA effectiveness influences firm performance. It also seeks to

determine how AIS quality affects GCG and how IA effectiveness influences GCG.

Literature Review:

[14] explained the impact of electronic accounting information on accounting information quality, with internal control as a moderating factor. It also examined accounting and accounting professionals from the perspective of control in the Kurdistan Region. The paper identified the existing gap that currently prevails in companies operating in the Kurdistan Region. The findings indicated that information technology has a positive effect on accounting information quality and that infrastructure also has a positive impact. [15] discussed the impact of AIS on the financial performance of Iraqi industrial firms by considering the moderating effect of internal control. Their analytical research contributed to the AIS literature, as they found that adequate accounting information systems are associated with positive financial performance, including improved accuracy, efficiency, reliability, and financial reporting quality. [16] established the impact of the internal control system in Jordan on the efficiency of AIS services and client satisfaction. The author provided insight into the significance of a strong internal control system in enhancing customer satisfaction with AIS services. The findings underlined the importance of the internal control system in strengthening the relationship between customer satisfaction and service quality. In the study of [8], the role of the internal control system in moderating the relationship between AIS service quality and customer satisfaction in Jordanian commercial banks. The authors integrated service quality perceptions (customers' views of AIS as a service) with governance perceptions (the role of the internal control system) and provided context-specific findings for the banking industry in Jordan. The study of [17] assumed the mediating role of the internal control system in the relationship between AIS and employee performance among Jordanian Islamic banks. The results

demonstrated that high-quality AIS leads to improved employee performance by ensuring reliability, compliance, and the proper utilization of system outputs. [18] investigated the impact of internal corporate governance mechanisms on the performance of the firms in the emerging market. [19] analyzed the key functions of AIS and internal control (IC) to improve the quality of financial statements (QFS). Built on the assumption and developed the hypothesis that IC is not only a factor in the performance of organizations, but also directly related to the effective performance of employees in their work in Jordanian SMEs [20].

[21] examined the empirical studies regarding the role played by the quality of AIS, the effectiveness of IA, and GCG in the firm's performance. [22] determined the impact of internal and external risk management on IA operations. They found that the extent of internal risk, external agency risk, and corporate governance is not significantly related to the internal audit function (IAF). [23] presented empirical evidence suggesting the influence of culture on ensuring audit quality and emphasized the importance of culture as one of the key variables in determining the success of auditing in a governmental organization. explore the literature about corporate governance and firm value by examining the internet financial reporting as a mediator [24]. [25] explained the interventional effect of the internal control systems on the correlation between the accounting information system and the performance of small businesses. [26] examined the importance of the quality of the AIS for the success of decision-making (DM) and non-financial performance (NFP) in an emerging economy. It further investigated the mediating role of NFP quality in the relationship between AIS quality, DM, and NFP. The research focused on 306 non-financial companies in Vietnam. Primary data were collected through a questionnaire survey administered to managers, chief accountants, heads of departments, and members of the board of directors. The partial least squares structural

equation modeling (PLS-SEM) method was adopted to test the proposed model. The results showed that AIS quality and NFP quality have significant effects on DM success and NFP. The findings also demonstrated that DM mediates the relationship between non-financial information quality and NFP. The study represents an initial attempt to use stakeholder theory, decision usefulness theory, and behavioral management theory to examine the relationships among AIS quality, non-financial information quality, DM, and NFP in Southeast Asia.

Methodology of Research:

This chapter shows the research design that was used to test the effects of AIS quality and IAE on FP, with the GCG as a mediating variable. The methodology gives a systematic way through which data is to be collected, analyzed, and interpreted in order to determine the validity and reliability of the data of the study. In this chapter, the research design, population and sample, data collection methods, variable measurement, and methods of data analysis are discussed.

Research Design

The research design used is a quantitative explanatory research design. Quantitative research makes the numerical measurement of variables and statistical methods of testing hypotheses possible. An explanatory design fits well since the research seeks to give knowledge of causal relationships between several independent variables, a mediating variable, and a dependent variable. The study is cross-sectional in design, implying that data would be taken at one point. The cross-sectional designs have been extensively adopted in management and accounting research works

on the grounds of their practicability and their capacity to capture organizational practices at a certain time. Despite the fact that longitudinal designs give a better causal inference, the cross-sectional design is appropriate for analyzing the current AIS practices, audit effectiveness, governance structures, and performance levels in Pakistani firms.

Sampling Method

The stratified random sampling technique was employed. The sampling frame consisted of manufacturing, banking, and service sector firms, which are registered with the Securities and Exchange Commission of Pakistan (SECP) in Lahore, Islamabad and Karachi. Companies were divided (small, medium, large) on the basis of the number of employees. In each stratum, 350 respondents were chosen based on various levels of the organization (managers, assistant managers, accountants, internal auditors). The word-of-mouth response was 72%.

Measurement Scale

To ensure the validity and reliability of the data gathered, this study used validated measurement scales employed in previous empirical studies. All the constructs were operationalized into multiple-item scales, and all items were measured according to a 5-point Likert scale between 1 = Strongly Disagree to 5 = Strongly Agree. The reason why the 5-point scale was selected is that it offers enough variation but does not fatigue the respondent, as would be seen with longer scales. The questionnaire was categorized into sections that identify each construct: AIS Quality, IAE, GCG, (FP), FLM, and OC. Questions were phrased in a positive manner to ensure uniformity and less bias in responding.

Table 1: Measurement Scales for Study Constructs

Construct	Number of Items	Likert Scale
AIS	5	1-5
IAE	5	1-5
GCG	6	1-5
FP	5	1-5
FLM	4	1-5
OC	4	1-5

Missing Validity Tests

Table 2 shows reliability and validity, indicating that all the constructs are considered to satisfy the necessary statistical criteria. All variables (AIS, IA, GCG, FP, FLM, and OC) have a Cronbach alpha of more than 0.85, which means the variables have high internal consistency. On the same note, Composite Reliability (CR) indicates are within the range of 0.86 to 0.88, and this proves all constructs to be highly reliable. The ratio of Average Variance Extracted

(AVE) is greater than 0.50 in all the variables, which provides satisfactory convergent validity, i.e., the item of each construct explains more than half of its contributors. Besides this, the AVE square root is higher than the inter-construct correlations of all the variables, a fact that proves discriminant validity. In general, these findings represent that the measurement model can be defined as reliable and valid, and may be subject to further structural equation modeling analysis.

Table 2: Reliability and Validity Analysis

Construct	Cronbach's α	CR	AVE	$\sqrt{\text{AVE}}$	AVE > Correlations
AIS	0.86	0.88	0.60		Yes
IA	0.86	0.87	0.59		Yes
GCG	0.85	0.86	0.55		Yes
FP	0.85	0.87	0.58		Yes
FLM	0.85	0.86	0.56		Yes
OC	0.86	0.87	0.57		Yes

Theoretical Framework

This study is based on three complementary theories:

According to Agency Theory, the governance systems (including GCG) minimize the information asymmetry between the principal (shareholders) and the agent (managers). In our model, GCG is a mediator between AIS/internal audit and firm performance as it is necessary to maintain the information generated by AIS is utilized in a transparent and accountable way.

Resource-Based View (RBV) considers quality of AIS and internal audit effectiveness as strategic organizational resources and are valuable, rare, and hard to be duplicated. Nonetheless, RBV contends that resources cannot be sufficient on their own because they should be complemented by organizational capability such as governance. Therefore, GCG is the ability which converts AIS and audit resources to performance.

Institutional Theory explains that firms adopt governance practices to gain legitimacy in their external environment. The

presence of good GCG in the emerging economy of Pakistan is a good sign to the investors and regulators and thus enhances the performance of the firms.

Hypotheses development

H1(AIS \rightarrow FP) AIS quality has a significantly positive impact on the FP. According to RBV, AIS as a strategic resource.

H2(IAE \rightarrow FP) IAE has a significant impact on FP. Based on RBV and Agency Theory, internal audit as a monitoring and compliance resource.

H3(AIS \rightarrow GCG) AIS quality has a significantly positive impact on GCG. Based on the Agency Theory, information systems facilitate monitoring

H4(IAE \rightarrow GCG): IAE has a significant impact on GCG. According to Agency Theory, IAE governance supervision.

H5(GCG \rightarrow FP) GCG has a significant difference in the FP. According to Agency Theory and Institutional Theory, governance helps to decrease asymmetry and is a sign of legitimacy.

H6(FLM → FP): FLM has a significant impact on the FP. According to RBV, financial literacy as human capital resource.
 H7(OC → FP) → There is a positive and

significant influence of OC on FP. According to RBV, OC as non-imitable social resource.

Figure 1: Conceptual Model

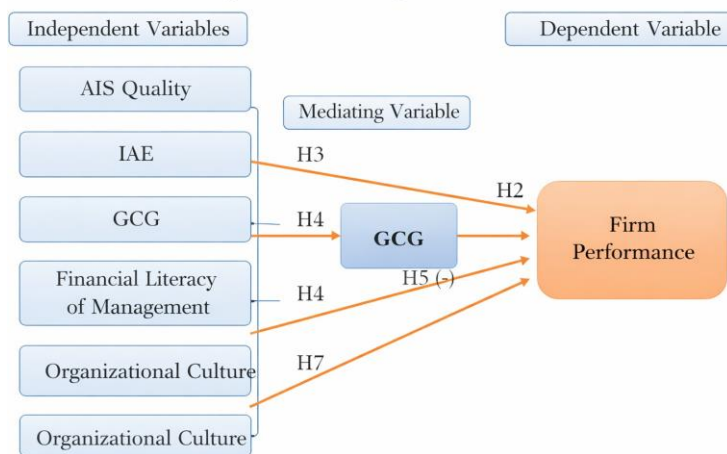


Figure 1: Conceptual Model operationalizes these theoretical relationships wherein the mediating mechanism is GCG, which connects AIS quality, internal audit effectiveness, financial literacy, and organizational culture to firm performance.

In Figure 1, the study’s conceptual framework is presented, depicting the hypothesized associations among the independent variables, the mediating variable, and the dependent variable. The model assumes that Firm Performance is the dependent variable and AIS Quality, IAE, Financial Literacy of Management, and Organizational Culture are the independent variables. GCG is an intervening variable between the related independent variables and firm performance.

The conceptual model illustrates the existence of direct and indirect relationships, which give a detailed outline of how accounting systems, audit effectiveness, governance mechanisms, managerial capability, and cultural factors as a whole affect the performance of firms. This paradigm is consistent with other previous empirical studies, such as [14], which highlighted the combined nature of governance and internal control systems in enhancing organizational performance.

Identification of variables

Regression analysis is a statistical technique for estimating the relationship among variables that have a causal relationship. The main

focus of univariate regression is to analyze the relationship between a dependent variable and one independent variable and formulate the linear regression equation between the dependent and independent variables. Regression models with one dependent variable and more than one independent variable are called multiple linear regression. MLR is a statistical analysis that can be employed to test the linear relationship between one dependent variable and two or more independent variables. It enables the researcher to determine how the interaction of changes in many predictors can influence an outcome variable, but it eliminates the influence of other variables in the model [27]. To examine the direct effects of the independent variables on firm performance, Multiple Linear Regression is employed. Model 1 is specified as follows:

Direct effects on FP
 $FP = \beta_0 + \beta_1(AIS) + \beta_2(IA) + \beta_3(FLM) + \beta_4(OC) + \epsilon$
 Effect on Mediator(GCG)
 $GCG = \beta_0 + \beta_1(AIS) + \beta_2(IA) + \beta_3(FLM) + \beta_4(OC) + \epsilon$
 Mediated Model
 $FP = \beta_0 + \beta_1(AIS) + \beta_2(IA) + \beta_3(FLM)$

$+ \beta_4(OC) + \beta_5(GCG) + \varepsilon$
 Where
FP : Firm Performance (Dependent Variable)
AIS : Accounting Information System (Independent Variable) **IAE** : Internal Audit Effectiveness (Independent Variable)
FLM : Financial Literacy Management (Independent Variable) **OC** : Organizational Culture (Independent (3) Variable)
GCG : Good Corporate Governance (Mediating Variable)
 $\beta_1, \beta_2, \dots, \beta_8$: Partial Regression Coefficients
 ε : Error Term

Results and Discussion:

Background information of the respondents

Table 3: Gender-wise Distribution of the sample

Category	Frequency	Percentage (%)	Cumulative (%)
Male	106	30.20	30.20
Female	238	67.81	98.01
Prefer not to say	6	1.71	99.72
Total	350	100.00	100.00

In Table 3, the majority of the respondents are female (67.81%), followed by the male respondents (30.20%), and a very small percentage (1.71%) of respondents chose not to specify their gender. The sample shows that the respondents are dominated by females.

Table 4: Position-wise Distribution of the sample

Category	Frequency	Percentage (%)	Cumulative (%)
Manager	55	15.67	15.67
Assistant Manager	54	15.38	31.05
Accountant	43	12.25	43.30
Internal Auditor	40	11.40	54.70
Other	158	45.01	99.71
Total	350	100.00	100.00

Table 4 shows the distribution of the Respondents Position-wise. Frequencies of the categories Percentage, Frequency, Cumulative Frequency Manager 55, 15.67, 15.67 Assistant Manager 54, 15.38, 31.05 Accountant 43, 12.25, 43.30 Internal Auditor 40, 11.40, 54.70 Other 158, 45.01, 99.71 Total 350, 100.00, 100.00.

Table 5: Experience-wise Distribution of the sample

Category	Frequency	Percentage (%)	Cumulative (%)
Less than 1 year	91	25.93	25.93
1-3 years	58	16.52	42.45
4-6 years	139	39.60	82.05
More than 6 years	62	17.66	99.71
Total	350	100.00	100.00

Table 5 shows that respondents with varied work experience-wise distributions have varied work experience levels. The highest number of respondents comprises of the ones who have 4-6 years of experience (39.60%), meaning that a considerable percentage of the sample has a medium exposure to the profession. The second-largest group (25.93%) is represented by respondents with less than 1 year of experience, which implies the existence of rather young employees in the sample. The group with over 6 years of experience (17.66%)

is the senior or highly experienced section, and the least represented group amongst the early-career professionals is a group with 1 to 3 years of experience (16.52). The cumulative percentages indicate that most of the respondents have between 3 and 6 years of experience; with only about 42% having up to three years of experience and more than 82% having up to 6 years of experience, which is an indication of moderate

experience of the majority of the respondents and not complete novice or highly senior. This distribution indicates that the sample represents the proportionate mix of the initial, mid-level, and experienced professionals, considering that it increases the generalizability and trustworthiness of findings concerning the organizational practices, perceptions, and performance results.

Table 6: Departmental-wise Distribution of the sample

Category	Frequency	Percentage (%)	Cumulative (%)
Finance	62	17.66	17.66
Accounts	73	20.80	38.46
Audit	28	7.98	46.44
Administration	72	20.51	66.95
Other	115	32.76	99.71
Total	350	100.00	100.00

In Table 6, the departmental distribution of respondents shows a fairly diverse representation across organizational units. The largest proportion of respondents belongs to the Other category (32.76%), indicating that a significant number of employees work in departments outside the main predefined categories, which could include specialized or support functions. Accounts (20.80%) and Administration (20.51%) are the next most represented departments, reflecting strong participation from these core organizational functions. The Finance department accounts for 17.66% of respondents, showing a moderate representation of employees involved in financial management tasks. The Audit

department has the smallest share (7.98%), suggesting a limited presence of internal control or compliance staff within the sample. The cumulative percentages indicate that about 46% of respondents belong to Finance, Accounts, or Audit, while nearly 67% belong to the four main departments (Finance, Accounts, Audit, Administration). Overall, the data reflect a well-rounded sample with both core and peripheral departmental representation, providing a comprehensive view of employees across different functional areas, which strengthens the reliability of the study's findings related to organizational processes and perceptions.

Summary statistic

Table 7: Descriptive Statistics of Study Variables

Variable	Min	1st Qu.	Median	Mean	3rd Qu.	Max
Gender	2.000	2.000	3.000	2.714	3.000	4.000
Position	2.000	3.000	5.000	4.549	6.000	6.000
Experience	2.000	2.000	4.000	3.491	4.000	5.000
Department	2.000	3.000	5.000	4.300	6.000	6.000
AIS	2.000	2.833	3.500	3.480	4.000	10.667
IA	2.000	2.800	3.400	3.499	4.200	6.000
GCG	2.000	2.800	3.400	3.407	4.000	6.000
FP	2.000	2.600	3.400	3.392	4.000	6.000
FLM	2.000	2.500	3.500	3.399	4.000	6.000
OC	2.000	2.500	3.500	3.434	4.250	6.000

Table 7 presented that descriptive statistics revealed all study variables to be within a reasonable and consistent range, indicating stable data distribution. Gender has a mean of 2.714, which indicates a moderate dominance of one category. Position and Department indicate relatively higher mean values (4.549 and 4.300), and this means that the majority of respondents belong to middle and high levels in organizational hierarchy and departmental classification. The experience has a mean of 3.491, which is moderate work experience for the respondents. The core study variables, AIS, IA, GCG, FP, FLM, and OC, have mean levels ranging from 3.392 to 3.499, suggesting an overall moderate to high level of perception in these constructs. The medians are close to the means, which indicates approximately

symmetric distributions. Moreover, the rather narrow inter-quartile ranges signal low variability, whereas the maximum values of up to 6 indicate the existence of strong positive perceptions among some respondents. Overall, the given results point to balanced, reliable, and consistent responses that can be applied for further statistical interpretation

Results of correlation

The correlation matrix shows the Pearson correlation coefficients of the study variables, such as AIS, IAE, GCG, FP, FLM, and OC. This matrix gives an idea regarding the direction and strength of the linear relationships among the variables that will be used to give a preliminary check on associations and possible multicollinearity before further investigation.

Table 8: Correlation Matrix (1)

	AIS	IA	GCG	FP	FLM	OC
AIS	1.000	0.621	0.503	0.492	0.502	0.440
IA	0.621	1.000	0.544	0.535	0.465	0.490
GCG	0.503	0.544	1.000	0.610	0.556	0.553
FP	0.492	0.535	0.610	1.000	0.675	0.617
FLM	0.502	0.465	0.556	0.675	1.000	0.584
OC	0.440	0.490	0.553	0.617	0.584	1.000

Table 8 indicates that all the study variables are positively correlated. The AIS is intermediate in its correlation with IA ($r = 0.621$), GCG ($r = 0.503$), where the higher the quality of AIS, the greater the effectiveness of internal audit and the corporate governance. FP correlates strongly with FLM ($r = 0.675$) and moderately with OC ($r = 0.617$) and GCG ($r = 0.610$), meaning that the performance of firms is closely associated with financial literacy, corporate culture, and governance behaviors. IA has a

moderate correlation with GCG ($r = 0.544$) and FP ($r = 0.535$), indicating that it has a positive relationship with governance and performance. On the whole, the correlation analysis proves that these variables are related to one another positively in accordance with the theoretical premise that positive results of the improved AIS, internal audit, governance, financial literacy, and organizational culture may be combined to enhance the performance of firms.

Table 9: P-values for the Correlation Matrix (2)

	AIS	IA	GCG	FP	FLM	OC
AIS	0.000	1.51e-37	5.14e-23	4.01e-22	5.14e-23	5.01e-18
IA	1.08e-38	0.000	1.78e-27	1.88e-26	7.12e-20	5.14e-22
GCG	8.57e-24	2.22e-28	0.000	5.19e-36	9.56e-29	1.83e-28
FP	1.00e-22	2.68e-27	4.32e-37	0.000	8.77e-47	6.44e-37
FLM	9.11e-24	3.56e-20	9.56e-30	5.85e-48	0.000	2.65e-32
OC	5.01e-18	1.71e-22	2.03e-29	4.96e-38	2.41e-33	0.000

The p-values matrix is found in Table 9 and shown that the correlation between the study variables is statistically significant. The p-values reported are much lower than the standard conventional value of 0.05 (in reality, all are practically equal to 0), indicating that all the correlations of the matrix are significant. It proved that the existence of positive correlations between such variables as AIS, IA, GCG, FP, FLM, and OC should not have materialized by accident. Differently put, there is a significant correlation between the advancement of one variable (e.g., AIS or IA) and advances in other variables such as FP, GCG, or OC. These findings justify the validity of the correlation results and provide an excellent ground for previous studies, such as regression or structural modeling.

Results of Regression

The multiple regression findings are shown in Table 10 that AIS, IAE, FLM, and OC combine to explain 56.4% of the variation in FP with an adjusted R-squared = 0.559, and the model as a whole is statistically significant ($F(4, 345) = 111.4, p < 0.000$).

IA ($\beta = 0.174, p < 0.000$), FLM ($\beta = 0.377, p < 0.000$), and OC ($\beta = 0.245, p < 0.000$) have a significant positive impact on FP and AIS ($\beta = 0.057, p = 0.000$) has a lesser though positive contribution. These results indicate that greater internal audit effectiveness, enhanced financial literacy management, and positive organizational culture are strong drivers of firm performance, and even accounting information system has a positive impact. The model-obtained regression equation is:

$$\widehat{FP} = \beta_0 + 0.174 IA + 0.377 FLM + 0.245 OC + 0.057 AIS$$

Table 10: Multiple regression results (1)

Predictor	Estimate (β)	Std. Error	t-value	p-value
Intercept	0.465	0.149	3.119	0.000
AIS	0.057	0.046	1.245	0.000
IA	0.174	0.047	3.730	0.000
FLM	0.377	0.043	8.727	0.000
OC	0.245	0.043	5.748	0.000

Model Summary:

$$R^2 = 0.564, \text{ Adjusted } R^2 = 0.559, F(4, 345) = 111.4, p < 0.000$$

$$GCG = 0.729 + 0.121(AIS) + 0.221(IA) + 0.217(FLM) + 0.217(OC)$$

It is clearly seen in the multiple regression analysis in Table 11 that AIS, IAE, FLM, and OC were significant factors in explaining the variable GCG with adjusted $R^2 = 0.453$ and a very significant value of the $F(4, 345) = 73.35, p < 0.001$. One-on-one, each of the predictors shows a positive and statistically significant influence on GCG. The positive impacts of IA ($\beta = 0.221, p < 0.001$), FLM ($\beta = 0.217, p < 0.001$), and OC ($\beta = 0.217, p < 0.001$), are significant, which shows that the advances in internal audit practice, financial literacy program, and organizational culture correlate with the level of corporate governance. AIS ($\beta = 0.121, p = 0.015$) is also positively contributing, but it

is not as strong as the other contributors, indicating that an improved accounting information system supports GCG. All the predictors have important coefficients, which also suggests that all factors are individually able to improve the quality of governance of the firm, supporting the importance of internal control, financial management, and organizational culture as valuable determinants of effective corporate governance. On balance, the findings confirm the theoretical framework with the point that all these organizational and managerial mechanisms empower GCG, which may affect the performance of the firm in future studies.

Table 11: Multiple regression (2)

Predictor	Estimate (β)	Std. Error	t-value	p-value
Intercept	0.729	0.162	4.511	0.000
AIS	0.121	0.049	2.456	0.000
IA	0.221	0.050	4.376	0.000
FLM	0.217	0.047	4.638	0.000
OC	0.217	0.046	4.689	0.000

Model Summary: $R^2 = 0.460$, Adjusted $R^2 = 0.453$, $F(4,345) = 73.35$, $p < 0.000$

The results of mediated regression, shown in Table 12, indicated that the combination of AIS, IA, FLM, OC, and GCG would contribute to 58.6 percent of the variance on the Firm Performance (FP), and the adjusted model is significant ($F(5, 344) = 97.4$, $p < 0.000$), whose predictive power is excellent. One after another, IA ($\beta = 0.127$, $p < 0.000$), FLM ($\beta = 0.332$, $p < 0.001$), OC ($\beta = 0.200$, $p < 0.000$), and GCG ($\beta = 0.209$, $p < 0.000$) have significant, positive influences on FP, which means that the increase in the effectiveness of internal audit, financial literacy management, organizational culture and

corporate governance directly impact the performance of firms. Contrarily, the smaller and non-significant impact of AIS ($\beta = 0.031$, $p = 0.485$) is observed, which might imply that its impact on FP is indirect to a large extent, and possibly mediated by GCG. On the whole, these results prove that direct and mediated relationships are essential: good practices of organizations and culture, together with effective governance, all play a crucial role in increasing firm performance, and it can be stated that corporate governance is an essential mediating factor in the interrelation of organizational variables and performance outcomes.

$$FP = 0.312 + 0.031(AIS) + 0.127(IA) + 0.332(FLM) + 0.200(OC) + 0.209(GCG)$$

Table 12: Multiple regression results (3)

Predictor	Estimate (β)	Std. Error	t-value	p-value
Intercept	0.312	0.150	2.089	0.000
AIS	0.031	0.045	0.700	0.485
IA	0.127	0.047	2.732	0.000
FLM	0.332	0.043	7.635	0.000
OC	0.200	0.043	4.657	0.000
GCG	0.209	0.048	4.316	0.000

Model Summary: $R^2 = 0.586$, Adjusted $R^2 = 0.580$, $F(5,344) = 97.4$, $p < 0.000$

Table 13: Mediation Testing Results (Baron & Kenny with 5,000 Bootstrap Samples)

Path	Direct (c)	Indirect ($a \times b$)	Total	95% CI	Type
AIS \rightarrow GCG \rightarrow FP	0.031 (p=0.485)	0.025*	0.056	[0.012, 0.041]	Full
IAE \rightarrow GCG \rightarrow FP	0.127*	0.046*	0.173*	[0.022, 0.072]	Partial

According to the outcomes of the mediation Table 13, GCG can be considered a significant contributor to the relationship between AIS, IAE, and the FP. However, when it came to the case we studied, AIS had a

direct impact on FP, which is negligible ($p = 0.485$), whereas the indirect impact via GCG is significant, and its confidence interval does not include 0, which means complete mediation. This means that AIS

affects the performance of firms only in the case of proper governance practices. However, in the case of IAE, the direct and indirect effects on FP are substantial, which means that it is partially mediated. This implies that IAE improves the performance of firms directly and indirectly through GCG. On the whole, the results indicate that GCG is an important process by which AIS and IAE help to enhance the performance of firms, whereby the mediating role of the AIS relationship is stronger.

Conclusion

This study aims to clarify the relationship between AIS quality, IAE, FLM, OC, and FP, with GCG acting as a mediating variable. The results are strong indications that the interaction among organizational systems, human aspects, and governance practices is a key elements that help to improve the performance of firms operating in emerging economies, especially Pakistan. The findings of multiple regression computation show that IA, FLM, OC, and GCG have large and positive impacts on FP, and the direct impact of AIS on FP was not statistically significant in the mediated model. This implies that although AIS is an important organizational resource, its effects on performance are primarily indirect as they are realized through enhanced governance practices. This implies that strong governance frameworks are important in order to transform organizational resources and processes into measurable performance outputs, as the mediating contribution of GCG was significant. That is, companies that integrate efficient IAE, financial literacy, and a positive organizational culture with appropriate GCG processes are more efficient in their operations and finances. Moreover, the research establishes that organizational culture and financial literacy play a critical role in determining the effectiveness of governance and the performance of firms. Companies that invest in the creation of a supportive culture and supporting managerial financial literacy will be in a better position to incorporate governance practices that provide transparency,

accountability, and informed judgment. The favorable impacts of IA underscore the fact that internal control systems not only enhance the governance framework but also directly impact the performance of firms by decreasing inefficiencies and risks.

The theoretical implications of the research include the blending of AIS, IA, FLM, and OC into the governance system to deduce the differences in the performance of firms. The empirical follow-up research confirms the significance of the combination of these factors to explain 58.6% of the variance in firm performance. In practice, the outcomes have practical implications for managers, auditors, and policy-makers: it is possible to make a significant contribution to organizational performance by improving the mechanisms of governance and human capital formation, as well as through technological resources. The research confirms that good corporate governance, organizational culture, financial literacy, and internal audits have a great impact on the performance of the firm based on their synergies with technological systems such as AIS. To determine sustainable performance, organizations should strive to integrate technology, human resources, and practices of governance. Future studies can be done to investigate other moderating and mediating factors, including risk management, leadership styles, or digital transformation initiatives, as possible ways to refine the picture of what drives FP in dynamic and competitive markets.

REFERENCES

- Mohammad Oudat. Accounting information system and financial sustainability of commercial and Islamic banks: A review of the literature. *Available at SSRN 5147108*, 2021.
- Yohanes Priadi Wibisono and Djoko Budiyo Setyohadi. Accounting information system for nonprofit organization based on PSAK 45 standards. In *2nd International Conferences on Information Technology, Information Systems and Electrical Engineering*, pages 136–139,

- 2017.
- Imen Khanchel El Mehdi. Empirical evidence on corporate governance and corporate performance in Tunisia. *Corporate Governance: An International Review*, 15(6):1429-1441, 2007.
- Muhammad Zahid Rafique, Abdul Majeed Nadeem, Wanjun Xia, Majid Ikram, Hafiz Muhammad Shoaib, and Umer Shahzad. Does economic complexity matter for environmental sustainability? Using ecological footprint as an indicator. *Environment, development and sustainability*, 24(4):4623-4640, 2022.
- Bilal Latif, Muhammad Naeem Shahid, Mzu Haq, Hafiz Muhammad Waqas, and Arbab Arshad. Impact of corporate governance on firm performance: Evidence from sugar mills of Pakistan. *European Journal of Business and Management*, 5(1):51-59, 2013.
- Frederick L Jones and Dasaratha V Rama. Accounting information systems: a business process approach. *European Journal of Business and Management*, 4(3):43-60, 2003.
- M Lynne Markus and Jeffrey Pfeffer. Power and the design and implementation of accounting and control systems. *Accounting, Organizations and Society*, 8(2-3):205-218, 1983.
- Faiza Hashmi Waseem-Ul-Hameed, Mohsin Ali, and Muhammad Arif. Enterprise Risk Management (ERM) System: Implementation problem and role of audit effectiveness in Malaysian firms. *Asian Journal of Multidisciplinary Studies*, 5(11):34-39, 2017.
- JG Apochi and LO Mustapha. IFRS adoption and financial reporting quality in Nigeria: A conceptual approach. *European Journal of Accounting, Auditing and Finance Research*, 10(6):9-18, 2022.
- Mohammad Tariq Hasan and Azhar Abdul Rahman. Conceptual framework for IFRS adoption, audit quality and earnings management: The case of Bangladesh. *International Business and Accounting Research Journal*, 3(1):58-66, 2019.
- Emmanuel Mensah. The effect of IFRS adoption on financial reporting quality: evidence from listed manufacturing firms in Ghana. *Economic research- Ekonomska istraživanja*, 34(1):2890-2905, 2021.
- Fairouz Mohammed Mustafa and Munther Barakat Al-Nimer. The association between enterprise risk management and corporate governance quality: The mediating role of internal audit performance. *Journal of Advanced Research in Law and Economics*, 9(4 (34)):1387-1401, 2018.
- P. Yodmanee. The impact of organizational dynamic capabilities on competitive advantage and its effect on organizational performance. *International Journal of Interdisciplinary and Sustainability (IJIS)*, 1(1):1-16, 2025. January- June.
- Assist Lect Hadi Muhammed Ahmed, Assist Lect Shakhawan Saeed Sangawi, and Lect Barham Khalid Hassan. The impact of Electronic Accounting Information Systems on Accounting Information Quality with the moderating role of Internal Control: from the perspective of accountants and experts in the Kurdistan Region. *Journal of Accounting and Financial Studies (JAFS)*, 20(70):450-467, 2025.
- Abbas Jumaah Al-Waeli, Raad Naser Hanoon, Hayder Ali Ageeb, and Hayder Zghair Idan. Impact of accounting information system on financial performance with the moderating role of internal control in Iraqi industrial companies: An analytical study. *Jour of Adv Research in Dynamical & Control Systems*, 12(8):246-261, 2020.

- Mohammad Alibraheem, Ibrahim Siam, Khaleel Al-Daoud, Abdel Alkhazaali, Bayan Freihat, Ahmad Ahmad, Khaled Bataineh, and Mohammad Al Zoubi. The moderating role of internal control system on the relationship between service quality of accounting information system and customer satisfaction: a study of some selected customers from commercial banks in Jordan. *Uncertain Supply Chain Management*, 12(1), 2024.
- Baker Akram Falah Jarah, Nidal Zaqeeba, Mefleh Faisal Mefleh Al-Jarrah, Abdalla Mohammad Al Badarin, and Zeyad Almatarneh. The mediating effect of the internal control system on the relationship between the accounting information system and employee performance in Jordan Islamic banks. *Economies*, 11(3):77, 2023.
- Siti Nuryanah and Sardar Islam. Corporate Governance and Performance: Evidence from an Emerging Market. *Malaysian Accounting Review*, 10(1), 2011.
- Jamaluddin Majid, Memen Suwandi, Lince Bulutoding, et al. The Influence of Accounting Information Systems and Internal Control on the Quality of Financial Statements with Intellectual Intelligence as a Moderating Variable. *International Journal of Research Science and Management*, 7(3):1–19, 2020.
- Qasim Ahmad Alawaqleh. The effect of internal control on employee performance of small and medium-sized enterprises in Jordan: The role of accounting information system. *The Journal of Asian Finance, Economics and Business*, 8(3):855–863, 2021.
- Argo Putra Prima, Idhar Yahya, et al. Exploring the Impact of the Quality of Accounting Information Systems, Internal Audits, and Good Corporate Governance on Firm Performance: a Meta-Analysis. *International Journal of Economics and Finance Studies*, 15(4):125–144, 2023.
- Ahmad Subaki, Rachmawati Rachmawati, Wahyu Widarjo, and Djuminah Djuminah. Determinants of internal audit function on emerging markets: SEM-PLS approach. *JPPi (Jurnal Penelitian Pendidikan Indonesia)*, 8(3):812, 2022.
- Daw Hla. Impact of Organizational Culture on Improving Audit Quality Assurance in the Public Sector. *IOSR Journal of Business and Management*, 8(3):812, 2016.
- Indri Kartika, Heru Sulistyono, Maya Indriastuti, et al. Good corporate governance and firm value: the mediating role of internet financial reporting. *Management & Accounting Review (MAR)*, 22(2):123–147, 2023.
- VK Adase. Accounting Information System and Performance of Small Businesses: The Mediating Role of Internal Control (Doctoral dissertation, University of Cape Coast). *University of Cape Coast*, 22(2):123–147, 2021.
- Ngoc Tran Thanh Thuy. Effect of accounting information system quality on decision-making success and non-financial performance: does non-financial information quality matter? *Cogent business & management*, 12(1):2447913, 2025.
- Gülden Kaya Uyanık and Neşe Güler. A study on multiple linear regression analysis. *Procedia-Social and Behavioral Sciences*, 106:234–240, 2013.