

Adoption of Accounting Information Systems on Firm Performance and the Moderating Role of Good Corporate Governance

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Abstract : This research analyzes the relationship between accounting information system usage and firm performance in manufacturing companies, while considering corporate governance as a moderating factor. The study is based on 240 manufacturing firms listed on the Indonesia Stock Exchange during 2020–2023, with performance measured by Return on Assets (ROA). A quantitative approach is applied using secondary data from financial reports. The analysis employs regression and interaction testing. The findings indicate that greater use of accounting information systems improves firm performance, and this effect becomes stronger when supported by effective corporate governance. These results confirm that organizational performance is shaped by both technological implementation and governance quality.

Keywords: Accounting Information System; Good Corporate Governance; Manufacturing Companies; Indonesia Stock Exchange

Introduction

The rapid development of information technology has driven contemporary firms to implement computerized accounting information systems in order to enhance the efficiency of data management and the quality of managerial decision-making. Within the manufacturing industry, the demand for timely, accurate, and well-integrated information becomes increasingly important as production activities grow more complex. Nevertheless, the adoption of Accounting Information Systems (AIS) is not yet optimal across all companies. Initial observations indicate that only approximately 40–50% of manufacturing firms have implemented technology-based systems such as ERP, SAP, or Oracle, while many others continue to rely on conventional manual procedures. These disparities in system adoption contribute to differences in the reliability of financial information and may ultimately influence overall firm performance. (Praditya & Utomo, n.d.)

The period from 2020 to 2023 constitutes a pivotal phase in which firms were compelled to accelerate digital transformation as a consequence of the COVID-19 pandemic (Lawal et al., 2022). Despite this necessity, many organizations have not yet successfully transitioned to fully integrated systems, which has contributed to inconsistencies in financial performance across manufacturing firms. In addition, Good Corporate Governance (GCG) plays a vital role in shaping the effectiveness of AIS implementation (Grande et al., 2011)). Organizations supported by strong governance frameworks tend to demonstrate a greater capacity to invest in technological innovation, uphold transparency, and exercise effective managerial oversight compared to those operating under weaker governance structures.

Prior studies have reported mixed findings on the relationship between AIS and firm performance. (Esmeray, 2016) found that AIS contributes positively to performance by enhancing recording and reporting effectiveness, whereas other research indicates that its impact becomes insignificant in the absence of adequate human resources, infrastructure, and governance. Such inconsistencies suggest the presence of a research gap, implying that the effect of AIS on performance is not solely direct but may depend on additional factors, including the moderating role of GCG (Coelho et al., 2024).

This study focuses on manufacturing firms listed on the Indonesia Stock Exchange between 2020 and 2023 to explore how the use of accounting information systems affects corporate performance when supported by good corporate governance as a moderating factor. The results are intended to provide deeper insight into the role of combining technological systems with effective governance practices in strengthening overall company outcomes.

Grand Theory

Agency Theory

According to Jensen and Meckling (1976), Agency Theory explains how interactions between company owners and management can generate conflicts when their interests are not aligned. In this research context, Good Corporate Governance (GCG) is positioned as an oversight framework that helps minimize such conflicts by promoting ethical conduct, accountability, transparency, independence, and responsibility. Strong governance structures motivate management to prioritize shareholder objectives, particularly when making strategic decisions concerning the use of Accounting Information Systems (AIS). When AIS is implemented effectively, financial disclosures become more transparent, information gaps are reduced, and cooperation between owners and management is strengthened. As a result, GCG enhances the impact of AIS adoption on overall firm performance (Koeswanto & Widyaningdyah, 2012).

Hypothesis

The Effect of Accounting Information System Adoption and Implementation on Company Performance

The adoption of Accounting Information Systems (AIS) represents a strategic approach for firms to manage financial data more effectively through computerized platforms such as ERP, SAP, Oracle, and Accurate (Perdana, 2020). Implementing AIS enhances operational efficiency, improves the accuracy of financial records, and increases reporting transparency, thereby supporting higher-quality managerial decisions and contributing to improved financial indicators, including ROA, ROE, and EPS. From the perspective of Agency Theory, AIS plays a role in minimizing agency problems and information asymmetry by providing timely and reliable financial information. Consistent with prior studies, the use of AIS has been associated with stronger operational performance and increased profitability. Accordingly, a higher level of AIS adoption is expected to generate greater improvements in overall firm performance (Huu Nguyen et al., 2024).

H1: Adoption and Accounting Information System (AIS) have a positive impact on company performance.

The Role of Good Corporate Governance in Moderating the Effect of Adoption and Accounting Information Systems on Company Performance

Good Corporate Governance (GCG) functions as a framework that ensures corporate management is carried out in a transparent, accountable, responsible, independent, and fair manner (Musari et al., 2025), while also reinforcing the effectiveness of Accounting Information System (AIS) implementation. Through supervision by the board of commissioners, audit committee, and institutional owners, GCG helps ensure that information produced by AIS remains reliable and free from manipulation, thereby increasing its contribution to operational efficiency and financial performance. From an agency perspective, GCG mitigates potential conflicts of interest, whereas AIS supports accountability through the provision of timely financial data. Prior studies further indicate that GCG enhances the impact of AIS adoption on firm performance. Consequently, GCG serves as a moderating factor that strengthens information credibility, reporting efficiency, and overall corporate profitability.

H2: Good Corporate Governance (GCG) moderates the influence of Adoption and Accounting Information System (AIS) on Company Performance

Method

This study employs a quantitative research design involving manufacturing companies listed on the Indonesia Stock Exchange from 2020 to 2023. A total of 107 firms were identified as the population, and the final sample was determined through purposive selection based on the availability of audited financial statements. The analysis relies on secondary information obtained from corporate annual reports, financial statement disclosures, and official IDX records.

Data were processed using descriptive analysis and classical assumption testing, with particular attention to the normality requirement. Hypothesis testing was performed through simple regression and moderated regression techniques using SPSS to examine the effect of AIS on ROA and the moderating role of GCG. The significance of relationships was evaluated using t-statistics, while the explanatory power of the model was assessed through the coefficient of determination (R^2).

Table 1. Operational Variable

Variable	Operational Variables	
	Indicator	Reference
Adoption and Accounting Information System	Dummy Variable (0/1) Companies that have adopted AIS by mentioning one of the main criteria are given a score of 1, while companies that have not mentioned AIS adoption are given a score of 0.	(Eko Prasetyo et al., 2024)
Firm Performance	$ROA = \text{Net Profit}/\text{Total Assets} \times 100\%$	(Andika & Astini, n.d.)
Good Corporate Governance	1. Institutional Ownership 2. Managerial Ownership 3. Board of Commissioners 4. Audit Committee	(Pujiati Lilik et al., 2023)

Result and Discussion

Descriptive Statistical Test

Table 2. Results of Descriptive Statistical Tests

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.0453	.1185	.0911	.03551	240
Residual	-.04853	.05147	.00000	.01792	240
Std. Predicted Value	-1.288	.773	.000	1.000	240
Std. Residual	-2.703	2.867	.000	.998	240

The descriptive statistical analysis provides an overview of the regression model's predicted and residual values. The predicted values vary between 0.0453 and 0.1185, with a mean of 0.0911, reflecting relatively stable performance predictions with minimal fluctuation. Residual values range from -0.04853 to 0.05147 and have an average of 0.00000, suggesting that the model produces unbiased estimates of the observed data. The narrow dispersion of residuals further indicates a low degree of estimation error. In addition, both standardized predicted values and standardized residuals fall within acceptable limits (± 3), confirming the absence of extreme outliers or irregular distribution patterns. These findings demonstrate that the regression model exhibits strong predictive reliability and satisfies the assumption of normally distributed residuals.

Classical Assumption Test

The purpose of the classical assumption testing is to verify that the dataset satisfies the required conditions of a proper regression model, ensuring that the analytical results are dependable and appropriate for supporting decision-making.

a.) Normality Test

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
N	240
Normal Parameters ^{a,b}	
Mean	0.0000000
Std. Deviation	0.00509853
Most Extreme Differences	
Absolute	0.042
Positive	0.031
Negative	-0.042
Test Statistic	0.042
Asymp. Sig. (2-tailed)	0.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

The results of the Kolmogorov–Smirnov test produce a significance value of 0.200, exceeding the 0.05 threshold, which confirms that the regression residuals follow a normal distribution. This conclusion is reinforced by the mean residual of 0.000 and the very small standard deviation, indicating no meaningful deviation from normality. Therefore, the normality assumption required for the regression model is satisfied.

Simple Linear Regression Test

The results show that AIS has a significant positive effect on firm performance ($t = 30.578$; $p = 0.000$). The coefficient of 0.073 indicates that greater AIS usage improves company outcomes, while the R^2 value of 0.797 demonstrates that AIS explains most of the variation in performance. These findings confirm the important role of AIS in enhancing manufacturing firm performance.

Partial Test (t)

Table 4. Partial Test Results (t)

Model	Coefficients ^a			t	Sig.
	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta		
1	(Constant)	.045	.002	23.954	.000
	AIS	.073	.002	.893	30.578

Referring to the Coefficients output, the Accounting Information System (AIS) variable produces a t-statistic of 30.578 with a significance value of 0.000, which is below the 0.05 threshold, confirming a statistically significant effect on firm performance. The regression coefficient of 0.073 implies that higher levels of AIS implementation are associated with improved company performance. Meanwhile, the constant value of 0.045 reflects the baseline level of performance when AIS adoption is absent. Collectively, the t-test results demonstrate that AIS constitutes a key determinant in enhancing corporate performance.

Coefficient of Determination Test (R^2)

Table 5. Uji Koefisien Determinasi (R^2)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.982 ^a	.965	.964	.00751

The coefficient of determination results for the moderation model indicate an R^2 value of 0.965, suggesting that AIS together with the AIS \times GCG interaction explains 96.5% of the variability in firm performance. The Adjusted R^2 of 0.964 is nearly identical, confirming a strong model fit without indications of overfitting. Furthermore, the Standard Error of the Estimate of 0.00751 reflects a very low level of prediction error. These findings demonstrate that the inclusion of GCG as a moderating variable substantially enhances the model's explanatory power regarding company performance. (Fitri et al., 2012).

Moderated Regression Analysis (MRA)

Table 6. Moderated Regression Analysis Result (MRA)

Model		Coefficients ^a		Standardized Coefficients Beta	t	Sig.
		Unstandardized Coefficients B	Std. Error			
1	(Constant)	.045	.001		57.302	.000
	AIS	-.113	.006	-1.382	-20.054	.000
	XZ	.239	.007	2.311	33.540	.000

coefficient of 0.239 shows that stronger GCG implementation enhances the impact of AIS on company performance.

Prior to the inclusion of the moderating variable, the simple regression results confirmed that AIS had a positive and significant effect on firm performance. This outcome is consistent with the descriptive analysis, which revealed stable prediction values and relatively small residuals, indicating that AIS adoption enhances operational efficiency, recording precision, and the reliability of financial reporting. These improvements contribute to stronger corporate performance, as reflected in higher profitability ratios. The findings are also in line with Agency Theory (Jensen & Meckling, 1976) which emphasizes that high-quality information systems reduce information asymmetry between management as agents and shareholders as principals, ultimately leading to better company performance.

Following the inclusion of GCG and the AIS × GCG interaction in the model, the AIS coefficient became negative while remaining statistically significant. This shift suggests that the influence of AIS on firm performance is not autonomous but is strongly contingent upon the quality of corporate governance. In the absence of robust GCG, the implementation of AIS may yield suboptimal outcomes and potentially weaken managerial oversight and control. The moderation results confirm that GCG functions as a control mechanism to ensure the effective use of AIS in line with shareholder interests. Consistent with prior studies (Grande et al., 2011; Koeswanto & Widyaningdyah, 2012), the findings demonstrate that strong corporate governance reinforces the impact of AIS on firm performance, indicating that the integration of accounting technology and good governance is essential for improving the performance of manufacturing companies.

Conclusion

This study provides empirical support that the adoption of Accounting Information Systems (AIS) significantly enhances the performance of manufacturing firms listed on the Indonesia Stock Exchange during the 2020–2023 period. The regression results show that AIS improves information accuracy, operational efficiency, and financial reporting reliability. In addition, the Moderated Regression Analysis confirms that Good Corporate Governance (GCG) strengthens the impact of AIS on firm performance, indicating that companies with strong governance structures are more effective in leveraging AIS to support accountability, managerial decision-making, and financial outcomes.

These results highlight the need to integrate technological adoption with strong corporate governance to achieve optimal organizational performance. Practically, firms

should complement investments in accounting systems with improved governance mechanisms to ensure transparency and effective supervision. Theoretically, the study reinforces Agency Theory by demonstrating how AIS and GCG together reduce information asymmetry and enhance performance. Future studies may broaden the model by incorporating additional performance measures, examining other sectors, or applying longitudinal approaches to improve the generalizability of the results.

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