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Accounting Information System and Employee Performance in Indonesian Banks

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ABSTRACT

The main goal of this research is to assess the impact of the internal control system (ICS) on the relationship between accounting information systems (AIS) and employee performance (EP) in Indonesian banks. The study targets employees of conventional banks in Indonesia, with a sample size of 131 respondents, which is about 70.22% of the total population of 133 participants from nine conventional bank branches. Data analysis shows a clear correlation between AIS components—information quality (IQ), system quality (SQ1), and service quality (SQ2)—and EP in these banks. Furthermore, the study finds a statistically significant relationship between AIS and EP, highlighting the strong connection between these variables. The contribution of this study lies in its exploration and empirical validation of the impact of internal control systems (ICS) on the relationship between accounting information systems (AIS) and employee performance (EP) in Indonesian banks. For bank management, the findings provide practical implications for improving employee performance by optimizing AIS and strengthening internal control systems.

Keywords: Accounting Information Systems, Employee Performance, Internal Control System, Information Quality (IQ), System Quality (SQ1), Service Quality (SQ2)

1. INTRODUCTION

Accounting Information Systems (AIS) play a crucial role in facilitating decision-making processes by overseeing, monitoring, and evaluating financial performance. With AIS in place, organizations are better equipped to provide timely information that aligns with the rapid changes in global market variables and economic conditions. Moreover, the use of AIS, including accounting software, reduces the time and effort required by financial analysts to stay abreast of developments and changes, enabling them to make informed decisions promptly.

In banking, every institution requires a robust Accounting Information System (AIS) to meticulously track incoming and outgoing funds, enabling them to achieve their objectives (Jarah and Iskandar, 2019). AIS serves as an IT-driven solution that aids in controlling an organization's economic and financial operations. However, significant technological advancements have enabled businesses to strategically utilize AIS (Alnajjar, 2017). Decision-makers can leverage relevant information derived from AIS to inform strategic decisions and formulate strategies that enhance bank performance. Additionally, AIS is utilized within banks to process data, optimizing employee performance based on assigned roles and responsibilities (Nugroho, 2019).

Given that many banks adopt these systems to enhance efficiency and competitiveness, maintaining the qualitative attributes of AIS is paramount. Practical AIS implementations ensure operational and performance objectives are achieved (Hla and Teru, 2015). AIS also supports the administration and oversight of economic and financial matters within banks. Previously, AIS primarily focused on recording, summarizing, and validating commercial financial transaction data (Soudani, 2012).

The components of AIS, including IQ, SQ, and SQ, impact EP in Indonesian banks, with Internal Control Systems (ICS) playing a mediating role in this relationship. Modern ICS serve as crucial mechanisms for continuous monitoring, managing, verifying, and reviewing processes. AIS enhances ICS by generating timely accounting and financial reports, thereby enhancing the effectiveness and efficiency of internal control processes. Moreover, AIS serves as a vital tool for bank ICS to efficiently fulfill its duties and

responsibilities, providing accounting information that aids in error detection and prevention.

AIS is commonly employed in banks to provide essential information for decision-making and support organizational and administrative coordination. Bani Ahmad's (2019) study underscores the significant positive impact of information quality and data relevance, which are critical factors driving the adoption of AIS in the banking sector. Moreover, maintaining effective ICS is essential for preserving the qualitative attributes of AIS (Albashabsheh et al., 2018). SIA, on the other hand, focuses on financial and non-financial data and information (Dandago and Rufai, 2014).

Furthermore, any bank's AIS must include mechanisms for tracking and managing data until users can produce accurate reports. Accountants play a crucial role in establishing and evaluating AIS controls and security standards (Jarah and AL Jarrah, 2022). Effective internal controls within banks enable management to rely on accurate information for conducting business operations. Conversely, weak internal controls hinder banks from achieving their goals (Neogy, 2014). Therefore, appropriate ICS implementation is crucial to supporting effective AIS operations (Nugroho, 2019).

Research by Napitupulu (2020) indicates that managerial competence significantly influences the quality of financial reporting and internal controls in banks. Susanto (2016) highlights the substantial impact of internal controls on financial reporting. Maharani and Damayanthi's (2020) findings underscore how internal controls and organizational culture influence AIS and earnings quality (EP). Organizational culture's impact on EP is significant, while business culture also plays a crucial role in enhancing internal controls. Bramasto and Adiwiguna (2020) found that while the adoption of accounting systems slightly impacts EP, internal controls significantly contribute to enhancing EP.

Alnajjar's (2017) research emphasizes that top management support and accounting managers' understanding significantly impact the quality of financial reporting in organizations. Alzoubi (2011) found that integrating AIS into Enterprise Resource Planning (ERP) systems improves internal controls and accounting outputs. SQ, IQ, and SQ are crucial factors in AIS success in improving organizational performance, as noted by Ali et al. (2016). Syah et al. (2019) affirm that AIS implementation positively impacts

EP. Additionally, Olufunmilayo and Hannah (2018) assert that ICS significantly influence EP in small manufacturing businesses.

2. LITERATURE REVIEW

2.1. The theory of planned behavior

The TPB posits that a person's intention to engage in a behavior is the immediate determinant of volitional behavior. Attitudes and subjective norms are theorized to influence behavior through intentions. Attitude represents an individual's overall affective and instrumental evaluation of behavior. Subjective norms gauge social pressures influencing whether individuals perform or abstain from behaviors. Additionally, the TPB extends its predictive power to behaviors not entirely under volitional control by incorporating perceived control over behavior as an additional predictor of intention and subsequent behavior (Darsono et al., 2020).

2.2. Information Quality (IQ)

Information Quality (IQ) pertains to the excellence of output generated by an AIS, crucial for banks aiming to enhance performance, gain competitive advantage, or thrive in the contemporary business landscape (Ali et al., 2016). IQ refers to the system's capability to furnish users with timely, accurate, precise, and comprehensive data essential for effective decision-making (Jarah et al., 2023). The dimensions used in measuring information quality, as outlined by Setyo and Rahmawati (2015), include relevance, timeliness, accuracy, completeness, and conciseness. Thus, to address this research issue, the hypothesis proposed is:

H1: Information Quality (IQ) significantly impacts Employee Performance (EP).

2.3. System Quality (SQ1)

System Quality (SQ) evaluates the technical excellence of a system, encompassing overall AIS processing quality involving software and data components. SQ correlates with system reliability, user interface consistency, and usability (Gorla et al., 2010). It has the potential to affect usage patterns, user satisfaction, individual performance, and overall bank performance (Ali et al., 2016). SQ assesses the technical efficiency of the system, including aspects like user interface consistency, ease of use, absence of programming errors, and the

maintenance and support provided by the bank's IT department, all contributing to enhanced system operational efficiency and effectiveness (Jarah et al., 2023). Therefore, to address this research inquiry, the hypothesis proposed is:

H2: System Quality (SQ1) significantly influences Employee Performance (EP).

2.4. Service Quality (SQ2)

From a service quality perspective, organizations aim to deliver high-quality service to customers, employing various processes to achieve this goal. This concept extends to information systems (IS), which function as service providers in meeting an organization's information needs (Bani Ahmad, 2019). Service quality is assessed by comparing perceived service with actual service received (Bani Ahmad, 2019). Zeithaml (2000) identifies key factors influencing expected service, including past experiences, personal needs, word-of-mouth communication, and interactions between service providers and users. System quality, information quality, service quality, and user satisfaction significantly influence the evaluation of information system success factors. Service quality in AIS delivery to the banking industry is comprehensively measured through reliability, responsiveness, dependability, usability, enhanced customer attention, and improved relationships (Masili, Lumnauw, & Tielung, 2022). Therefore, to address this research problem, the hypothesis proposed is:

H3: Service Quality (SQ2) significantly affects Employee Performance (EP).

2.5. Accounting Information System (AIS)

An Accounting Information System (AIS) is an information system that transforms business transaction data into valuable information for its users. Typically focused on financial data, AIS generates financial information crucial for decision-making within organizations. AIS functions as a subsystem of the management information system, tasked with collecting, recording, storing, and processing data in routine accounting transactions to produce relevant accounting and financial information for management (Nugroho, 2019). Key indicators used to measure AIS effectiveness include data collection, data processing, data control and security, data management, and information provision (Wijaya and Priono, 2022). Therefore, to address this research problem, the hypothesis proposed is:

H4: The Accounting Information System (AIS) significantly impacts Employee Performance (EP).

2.6. Employee Performance (EP)

A quality workforce is essential for achieving organizational goals effectively. Employees, with their talents, energy, and creativity, are crucial resources that drive a company's success. However, they also have diverse needs that motivate their actions, including their work performance (Taradipa, 2017). Employee performance is vital for organizational success, as it can elevate a small, unknown business to a leading position in its industry (Olufunmilayo and Hannah, 2018).

Employees are integral to an organization, adding value to its systems and often determining its profitability. Their performance serves as a critical indicator for organizational achievement (Aboazoum, Nimram, & Musadieq, 2015). Organizations actively seek to attract, retain, and utilize competent employees to gain a competitive edge. Various indicators gauge employee performance, including the quality of work, quantity, timeliness, effectiveness, and independence (Safitri, 2022).

3. RESEARCH METHOD

3.1. Study Population

The study involved employees currently working in Indonesian conventional banks, with a sample size of 133 respondents selected from a total population of 150 employees across various branches of Indonesian conventional banks. Data collection was conducted through a questionnaire distributed using a simple random sampling method, employing a quantitative research approach. The collected data was analyzed using SPSS version 26.

Table 2. Respondent Profile

Information	
Gender	Male
	Female
Qualification	Senior High School
	D3 (Associate)
	S1 (Bachelor)

Experience	Less than 5 years
	From 6 years to less than 10 years
	From 11 years to less than 15 years

Source : Processed data, 2023

Based on the literature review above, the researcher developed a research model as shown in Figure 1.

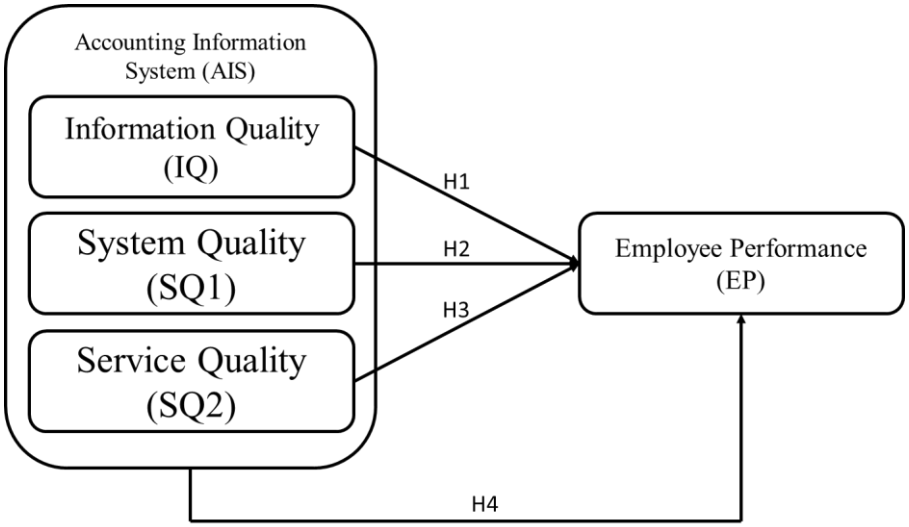

Figure 1. Research Model

4. RESULT AND DISCUSSION

4.1. Normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		133
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.55774957
Most Extreme Differences	Absolute	.127
	Positive	.122
	Negative	-.127
Test Statistic		.127
Asymp. Sig. (2-tailed)		.088[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the Kolmogorov-Smirnov test, it is known that the value of asym. Sig. (2-tailed) of 0.088 > 0.05. So, it can be concluded that the data is normally distributed.

4.2. Multicollinearity Test

Coefficients[a]

Unstandardized Coefficients	Standardized Coefficients			Collinearity Statistics

Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	6.058	1.776		3.412	0.001		
	X1	0.177	0.077	0.165	2.299	0.023	0.881	1.135
	X2	0.414	0.097	0.317	4.284	0.000	0.826	1.210
	X3	0.176	0.088	0.171	2.009	0.046	0.621	1.610
	X4	0.201	0.076	0.212	2.629	0.010	0.691	1.446

a. Dependent Variable: Y

Based on the results of the multicollinearity test, it is known that the Tolerance value for each independent variable is >0.01. Meanwhile, the VIF value for each independent variable is <10. So, it can be concluded that the data does not experience symptoms of multicollinearity.

4.3. Heteroscedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.804	1.626		1.109	.269
	x1	.047	.049	.099	.955	.342
	x2	.167	.052	.293	3.190	.072
	x3	.055	.048	.115	1.147	.254
	x4	-.156	.045	-.366	-3.442	.121

a. Dependent Variable: Y

Based on the results of the heteroscedasticity test, it is known that the Gejser test results produce a value of Sig. 0.342 > 0.05 for the Information Quality variable (X1), Sig. 0.072 > 0.05 for the Quality System variable (X2), Sig. 0.254 > 0.05 for the Service Quality variable (X3), and Sig. 0.121 > 0.05 for the Accounting Information System (X4) variable. So, it can be concluded that the data is distributed randomly and is not homogeneous.

4.4. F Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	182.786	4	45.696	12.646	.000[b]
	Residual	462.523	128	3.613		
	Total	645.308	132			

a. Dependent Variable: y

b. Predictors: (Constant), x4, x2, x3, x1

Based on the results of the F test, it is known that the F Statistics value is 12,646 with a significance of 0.000<0.05. Based on this, it can be concluded that the independent variables together have a significant effect on the dependent variable.

4.5. T Test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.196	2.978		1.073	.285
	x1	.299	.090	.322	3.341	.001
	x2	.148	.096	.132	1.549	.124
	x3	.331	.087	.351	3.782	.001
	x4	-.116	.083	-.138	-1.400	.024

a. Dependent Variable: y

Based on the results of the T test, it can be concluded the following:

a. Independent variable Information Quality (X1) with Unstandardize B 0.299 and Sig. 0.001 < 0.05 means that the independent variable Information Quality (X1) has a positive and significant effect on the dependent variable Employee Performance (Y). So, when If there is a 1 point increase in the Information Quality variable (X1), then the Employee Performance variable (Y) will increase by 0.299 points.
b. Quality System Independent Variable (X2) with Unstandardize B 0.148 and Sig. 0.124 > 0.05 can be interpreted as meaning that the independent variable Quality System (X2) does not have a positive and significant effect on the dependent variable Employee Performance (Y). So, when there is an increase of 1 point in the Quality System variable (X2), the Employee Performance variable (Y) will increase by 0.148 points.
c. Independent Variable Service Quality (X3) with Unstandardize B 0.331 and Sig. 0.001 < 0.05 means that the independent variable Service Quality (X3) has a positive and significant effect on the dependent variable Employee Performance (Y). So, when there is a 1 point increase in the Service Quality variable (X3), the Employee Performance variable (Y) will increase by 0.331 points.
d. Independent Variable Accounting Information System (X4) with Unstandardize B -0.116 and Sig. 0.024 < 0.05 means that the independent variable Accounting Information System (X4) has a negative and significant effect on the dependent variable Employee Performance (Y). So, when there is a 1 point decrease in the Accounting Information System (X4) variable, the Employee Performance (Y) variable will decrease by 0.116 points.

4.6. Coefficient of Determination Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.532[a]	.783	.261	1.90091

a. Predictors: (Constant), x4, x2, x3, x1

Based on the Coefficient of Determination test, it is known that the Adjusted R-Square value is 0.783. This indicates that the dependent variable Employee Performance (Y) can be explained by the independent variables Information Quality (X1), Quality System (X2), Service Quality (X3), and Accounting Information System (X4) amounting to 78.3%. Meanwhile, the remaining 21.7% is explained by other variables outside this research.

The use of Accounting Information Systems (AIS) in the banking sector is widespread and significantly influences decision-making while facilitating organizational coordination and management. According to Bani Ahmad's (2022) study, AIS's primary advantage lies in its ability to provide high-quality information and data, which is pivotal in its adoption across the banking industry. AIS focuses on both financial and non-financial information, necessitating meticulous data tracking and management to ensure accurate reporting by users. Therefore, with a robust internal control system in place, bank management can confidently rely on this information for accurate business operations. Conversely, weak internal controls can hinder management from achieving its objectives (Neogy, 2014).

Alzoubi's (2011) research highlighted that integrating AIS into Enterprise Resource Planning (ERP) systems improved internal control and accounting performance within organizations. Ali et al. (2016) emphasized that System Quality (SQ), Information Quality (IQ), and Service Quality (SQ) are critical factors in AIS's success in enhancing organizational performance. Jarah et al. (2022b) found a significant statistical correlation between internal auditing and supply chain management. Ladan Shagari et al. (2017) also demonstrated that the quality of information and systems significantly impacts AIS effectiveness. Additionally, Syah et al. (2019) concluded that implementing AIS positively and significantly affects Employee Performance (EP).

5. CONCLUSION AND FURTHER SUGGESTIONS

The primary aim of this research is to explore the correlation between Accounting Information Systems (AIS) and Corporate Performance (CP) in conventional banks in Indonesia. This study focuses on how AIS contributes to enhancing Employee Performance (EP) in banks, particularly through improved internal control and decision-making capabilities facilitated by AIS.

The findings of this research indicate that AIS positively impacts EP by enabling managers to gather and leverage accounting information for better insights into bank performance. These results have implications for the advancement of Accounting Information Systems in conventional Indonesian banks. The study recommends that banks prioritize the adoption and enhancement of AIS to bolster their operational efficiency. It demonstrates that AIS can significantly boost EP by enhancing Information Quality, System Quality, and Service Quality.

This research contributes new insights into the relationship between AIS and EP while offering practical recommendations for the development of AIS in conventional banks in Indonesia. Implementing robust monitoring and control measures during AIS system development and deployment is crucial for its effective operation.

Collaborative efforts among banks are essential to design systems that meet control and security requirements, ensuring positive impacts on data integrity and security. Adequate resources and expertise must support AIS implementation to ensure its efficient operation, providing accurate, reliable, and secure data while safeguarding data confidentiality, validity, and availability.

Despite its significant contributions, this study acknowledges limitations that could affect result validity. Future research should encompass a broader range of banks to ensure a balanced implementation of the AIS model in Indonesian conventional banks. With a current focus on 133 respondents, there is potential for enhanced data accuracy through larger sample sizes in future studies. Exploring other aspects of IS audit, such as

dependency, relevance, and verification, could provide a more comprehensive understanding.

Future studies might employ additional statistical techniques or investigate non-linear correlations to uncover deeper insights into the AIS-EP relationship. Validating the study's recommendation for banks to engage in environmentally beneficial activities could further enhance understanding of AIS implementation in traditional Indonesian banks. Addressing study limitations is crucial for interpreting results, and future research should strive to mitigate these limitations to yield more comprehensive and reliable findings.

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