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THE ROLE OF ACCOUNTING INFORMATION SYSTEMS IN IMPROVING FINANCIAL MANAGEMENT IN PUBLIC ORGANIZATIONS

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ABSTRACT

Purpose: *This study examines the relationship between Accounting Information Systems (AIS) and financial management in public organizations, focusing on financial decision-making, financial control, financial transparency, and financial performance evaluation.*

Design/Methodology/Approach: *The study employed a quantitative cross-sectional design. Data were collected using a structured questionnaire comprising 42 items measured on a five-point Likert scale. The final dataset included 15 complete responses. The analysis employed descriptive statistics, Cronbach's alpha, Pearson correlation analysis, and simple linear regression.*

Findings: *The results indicate strong positive associations between AIS effectiveness, information quality, and financial management outcomes. AIS effectiveness was strongly associated with overall financial management ($r = .935$, $p < .001$; $R^2 = .874$). AIS effectiveness was also positively associated with financial transparency ($R^2 = .798$), financial control ($R^2 = .969$), and financial performance evaluation ($R^2 = .815$). Information quality demonstrated a strong positive association with financial decision-making ($R^2 = .966$, $\beta = .983$, $p < .001$).*

Limitations/Implications: *The study is subject to important limitations, including the small sample size, purposive sampling, cross-sectional design, and reliance on self-reported data. The results should therefore be interpreted as preliminary evidence and should not be generalized to all public organizations.*

Practical Implications: *The findings highlight the importance of reliable accounting systems and high-quality financial information for supporting financial management activities in public organizations.*

Originality/Value: *The study provides empirical evidence concerning the relationship between AIS and multiple dimensions of financial management within a public-sector context.*

KEYWORDS: *Accounting Information Systems; Financial Management; Public Organizations; Financial Control; Financial Transparency*

1. INTRODUCTION

Effective financial management is fundamental to the efficient, transparent, and accountable use of public resources. Public organizations require accurate, timely, relevant, and reliable financial information to support financial decision-making, internal control, reporting, and performance evaluation. As organizations increasingly rely on information technology, Accounting Information Systems (AIS) have become an important component of contemporary financial management.

Accounting Information Systems provide mechanisms for collecting, processing, storing, and communicating financial information. In public organizations, these systems can support financial transaction processing, reporting, monitoring, and access to financial information. Consequently, the effectiveness of AIS may be associated with the quality and efficiency of financial management practices.

The importance of information systems can be explained through the Information Systems Success Model developed by DeLone and McLean (1992, 2003). The model emphasizes system quality, information quality, service quality, system use, user satisfaction, and net benefits as important dimensions of information-system success. Within an accounting context, the quality and effectiveness of information systems may therefore contribute to beneficial organizational outcomes.

Public financial management increasingly depends on integrated financial information systems. The World Bank describes Financial Management Information Systems (FMIS) as important technological infrastructure supporting public financial management functions such as budgeting, accounting, financial reporting, transparency, and accountability.

However, public organizations may experience challenges related to system reliability, information quality, accessibility, system integration, employee capabilities, technical limitations, and data security. Examining the relationship between AIS effectiveness and financial management is therefore important for organizations seeking to strengthen financial governance and accountability.

Accordingly, this study investigates the relationship between Accounting Information Systems and financial management in public organizations.

2. LITERATURE REVIEW

2.1 Accounting Information Systems

Accounting Information Systems are organizational systems designed to collect, process, store, and communicate accounting and financial information. Effective AIS can provide managers and authorized users with financial information needed for operational and managerial activities.

The effectiveness of an AIS can be reflected in its reliability, accessibility, processing efficiency, integration with organizational processes, and ability to provide useful financial information. In public organizations, these characteristics may support budgeting, accounting, reporting, monitoring, and financial control.

2.2 Information Quality

Information quality is a fundamental characteristic of effective information systems. Accounting information should be accurate, timely, relevant, reliable, complete, and understandable.

High-quality financial information can provide decision-makers with a stronger basis for evaluating financial conditions and selecting among available alternatives. Conversely, inaccurate or incomplete information may reduce the usefulness of financial reports and increase uncertainty in financial decision-making.

2.3 Financial Management in Public Organizations

Financial management in public organizations includes financial decision-making, financial control, transparency, reporting, and performance evaluation. Effective financial management contributes to accountability and the efficient use of public resources.

Accounting Information Systems may support these activities by improving the collection, processing, storage, and communication of financial information. Therefore, AIS effectiveness may be positively associated with several dimensions of financial management.

2.4 Theoretical Framework

This study is grounded in the DeLone and McLean Information Systems Success Model (DeLone & McLean, 1992, 2003).
The framework proposes that characteristics of an information system and the information it produces are important components of information-system success. In the present study, AIS effectiveness and information quality are considered key information-system characteristics, while financial decision-making, financial control, financial transparency, and financial performance evaluation represent financial management outcomes.

The conceptual relationships can be summarized as follows:
AIS Effectiveness → Overall Financial Management
Information Quality → Financial Decision-Making
Overall financial management is represented by:

- Financial Decision-Making
- Financial Control
- Financial Transparency
- Financial Performance Evaluation

3. RESEARCH OBJECTIVES

The study aims to:

1. Examine the relationship between AIS effectiveness and overall financial management.
2. Examine the relationship between AIS effectiveness and financial transparency.
3. Examine the relationship between information quality and financial decision-making.
4. Examine the relationship between AIS effectiveness and financial control.

5. Examine the relationship between AIS effectiveness and financial performance evaluation.
6. Identify challenges associated with the use of AIS in public organizations.

4. RESEARCH QUESTIONS

1. What is the relationship between AIS effectiveness and overall financial management?
2. What is the relationship between AIS effectiveness and financial transparency?
3. What is the relationship between information quality and financial decision-making?
4. What is the relationship between AIS effectiveness and financial control?
5. What is the relationship between AIS effectiveness and financial performance evaluation?
6. What challenges are associated with the use of AIS in public organizations?

5. RESEARCH HYPOTHESES

H1: AIS effectiveness is positively associated with overall financial management.
H2: AIS effectiveness is positively associated with financial transparency.
H3: Information quality is positively associated with financial decision-making.
H4: AIS effectiveness is positively associated with financial control.
H5: AIS effectiveness is positively associated with financial performance evaluation.

6. METHODOLOGY

6.1 Research Design

A quantitative cross-sectional research design was employed. The study collected data at a single point in time using a structured questionnaire.

6.2 Sample and Sampling

The study used purposive sampling and obtained 15 complete responses from individuals familiar with accounting and financial management activities.

The small sample size was considered a limitation of the study. Consequently, the statistical findings should be interpreted cautiously and should not be considered representative of all public organizations.

6.3 Research Instrument

The questionnaire consisted of 42 items measured on a five-point Likert scale:
1 = Strongly Disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree
The questionnaire contained seven constructs.

Construct	Items
AIS Effectiveness	Q1–Q6
Information Quality	Q7–Q12
Financial Decision-Making	Q13–Q18
Financial Control	Q19–Q24
Financial Transparency	Q25–Q30
Financial Performance Evaluation	Q31–Q36
AIS Challenges	Q37–Q42

Overall financial management was operationalized as the combined measure of financial decision-making, financial control, financial transparency, and financial performance evaluation.

6.4 Data Analysis

Descriptive statistics were used to summarize the constructs. Internal consistency was assessed using Cronbach's alpha. Pearson correlation coefficients were used to examine associations between variables, while simple linear regression was used to estimate the proportion of variance in the dependent variables explained by the predictors.
Given the small sample size, the statistical findings were interpreted cautiously.

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7. RESULTS

7.1 Descriptive Statistics and Reliability

Construct	Mean	SD	Cronbach's Alpha
AIS Effectiveness	4.12	0.48	.911
Information Quality	4.32	0.49	.942
Financial Decision-Making	4.37	0.44	.946
Financial Control	4.26	0.55	.934
Financial Transparency	4.37	0.44	.946
Financial Performance Evaluation	4.36	0.44	.953
AIS Challenges	3.02	0.34	.579

The descriptive results indicate relatively high mean scores for AIS effectiveness, information quality, and the financial management dimensions.

The reliability results show satisfactory internal consistency for most constructs, with Cronbach's alpha values above .90. However, the AIS Challenges construct produced an alpha value of .579, indicating comparatively weak internal consistency. Therefore, findings involving this construct should be interpreted cautiously.

7.2 Correlation Analysis

Variables	Pearson r	p-value
AIS Effectiveness – Information Quality	.948	< .001
AIS Effectiveness – Financial Decision-Making	.893	< .001
AIS Effectiveness – Financial Control	.984	< .001
AIS Effectiveness – Financial Transparency	.893	< .001
AIS Effectiveness – Financial Performance Evaluation	.903	< .001
AIS Effectiveness – Overall Financial Management	.935	< .001
Information Quality – Financial Decision-Making	.983	< .001

The results indicate strong positive associations among AIS effectiveness, information quality, and the financial management variables. All reported associations were statistically significant at $p < .001$.

Because several correlations are extremely high, these results should be interpreted carefully. Such strong associations may indicate substantial overlap among the constructs and may also reflect common-method effects arising from the use of the same self-reported questionnaire.

7.3 Regression Analysis

Hypothesis	Predictor	Dependent Variable	R^2	β	p-value	Decision
H1	AIS Effectiveness	Overall Financial Management	.874	.935	< .001	Supported
H2	AIS Effectiveness	Financial Transparency	.798	.893	< .001	Supported
H3	Information Quality	Financial Decision-Making	.966	.983	< .001	Supported
H4	AIS Effectiveness	Financial Control	.969	.984	< .001	Supported
H5	AIS Effectiveness	Financial Performance Evaluation	.815	.903	< .001	Supported

The regression results indicate strong positive statistical associations between the predictors and the corresponding financial management outcomes.

For H1, AIS effectiveness explained 87.4% of the reported variance in overall financial management ($R^2 = .874$, $\beta = .935$, $p < .001$).
For H2, AIS effectiveness explained 79.8% of the variance in financial transparency ($R^2 = .798$, $\beta = .893$, $p < .001$).
For H3, information quality explained 96.6% of the variance in financial decision-making ($R^2 = .966$, $\beta = .983$, $p < .001$).
For H4, AIS effectiveness explained 96.9% of the variance in financial control ($R^2 = .969$, $\beta = .984$, $p < .001$).
For H5, AIS effectiveness explained 81.5% of the variance in financial performance evaluation ($R^2 = .815$, $\beta = .903$, $p < .001$).
All five hypotheses were statistically supported.

However, the very high R^2 and correlation coefficients should be interpreted cautiously because the study is based on only 15 observations and uses self-reported measures collected from the same questionnaire.

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8. DISCUSSION

The findings indicate strong positive relationships between AIS effectiveness, information quality, and financial management outcomes. The strong relationship between AIS effectiveness and overall financial management suggests that respondents who reported higher levels of AIS effectiveness also tended to report stronger financial management practices. This finding is consistent with the broader perspective of the DeLone and McLean Information Systems Success Model, which emphasizes the importance of system and information characteristics in achieving organizational benefits.

The strong association between information quality and financial decision-making highlights the importance of accurate, timely, relevant, and reliable financial information. When financial information is perceived as useful and reliable, it may provide decision-makers with better support for financial planning and evaluation.

AIS effectiveness was also strongly associated with financial control. This may indicate that effective accounting systems support the monitoring and processing of financial transactions and provide information needed for control activities.

Similarly, the positive association between AIS effectiveness and financial transparency suggests that accounting systems may contribute to the availability, accuracy, and timeliness of financial information used for reporting and accountability.

The relationship between AIS effectiveness and financial performance evaluation also indicates that accounting information systems may provide useful information for monitoring financial results and comparing financial performance.

Nevertheless, the findings should not be interpreted as proof that AIS effectiveness directly causes improvements in financial management. The cross-sectional design, small sample size, purposive sampling, and common measurement method prevent strong causal conclusions.

9. CONCLUSION

This study examined the relationship between Accounting Information Systems and financial management in public organizations.
The findings show strong positive associations between AIS effectiveness, information quality, and several dimensions of financial management, including financial decision-making, financial control, financial transparency, and financial performance evaluation.

The results suggest that reliable accounting information systems and high-quality financial information may play an important role in supporting public-sector financial management.

However, the findings should be interpreted as preliminary because the study was based on a small purposive sample of 15 respondents. The unusually high correlation and regression coefficients also warrant caution and further investigation using larger and more diverse samples.
Future studies should therefore replicate the research using larger samples, multiple organizations, improved measurement instruments, and alternative research designs.

10. LIMITATIONS

Several limitations should be considered when interpreting the findings.
First, the sample size was limited to 15 respondents, which substantially restricts statistical power and generalizability.
Second, purposive sampling was used rather than probability sampling.
Third, the study used a cross-sectional design, which limits the ability to establish temporal or causal relationships.
Fourth, all variables were measured using self-reported questionnaire responses, creating a potential risk of common-method bias.
Fifth, the AIS Challenges construct demonstrated relatively low internal consistency ($\alpha = .579$).
Finally, several reported correlations and R^2 values are exceptionally high. These results may partly reflect overlap among constructs or common-method effects and should therefore be independently verified in future studies with larger samples and more robust measurement approaches.

11. PRACTICAL IMPLICATIONS

The findings provide several practical implications for public organizations.

1. Organizations should invest in reliable and integrated accounting information systems.
2. Financial information should be accurate, timely, relevant, and accessible to authorized users.
3. Employees should receive appropriate training in the use of accounting information systems.

4. Organizations should strengthen the integration between AIS and financial management processes.
5. AIS should be used to support financial monitoring and internal control.
6. Financial reporting systems should promote transparency and accountability.
7. Organizations should regularly evaluate the quality and effectiveness of their accounting information systems.

12. RECOMMENDATIONS FOR FUTURE RESEARCH

Future researchers should:

1. Increase the sample size substantially.
2. Include respondents from multiple public organizations.
3. Use probability sampling where feasible.
4. Employ longitudinal research designs.
5. Combine quantitative surveys with interviews or qualitative evidence.
6. Examine additional information-system dimensions, including system quality, service quality, system use, and user satisfaction.
7. Review and improve the AIS Challenges scale because of its relatively low internal consistency.
8. Use alternative data sources, such as organizational financial records, where possible, to reduce common-method bias.

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APPENDIX A. QUESTIONNAIRE

Section A – AIS Effectiveness

Scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

1. The accounting system in my organization is reliable.
2. The system provides financial information in a timely manner.
3. Authorized employees can easily access financial information.
4. The system processes financial transactions efficiently.
5. The system is integrated with financial management processes.
6. The accounting information system effectively supports organizational financial activities.

Section B – Information Quality

7. Financial information provided by the system is accurate.
8. Financial information is relevant to management needs.
9. Financial information is available when needed.
10. Financial information is reliable.
11. Financial reports generated by the system are understandable.
12. The system provides complete financial information.

Section C – Financial Decision-Making

13. Financial information supports effective decision-making.
14. Managers use accounting information when making financial decisions.
15. The system helps managers evaluate financial alternatives.
16. Financial information reduces uncertainty in financial decision-making.
17. AIS improves the availability of information for management decisions.

18. AIS supports better financial decision-making.

Section D – Financial Control

19. AIS supports effective financial control.
20. The system helps monitor financial transactions.
21. AIS helps identify financial errors.
22. AIS supports compliance with financial procedures.
23. The system improves monitoring of organizational expenditures.
24. AIS strengthens internal financial controls.

Section E – Financial Transparency

25. AIS supports financial reporting transparency.
26. Financial information is accessible to authorized users.
27. AIS supports the accuracy of financial reports.
28. AIS supports accountability in financial activities.
29. The system facilitates timely financial reporting.
30. AIS supports transparency in the use of financial resources.

Section F – Financial Performance Evaluation

31. AIS provides information useful for evaluating financial performance.
32. Financial reports help management assess organizational performance.
33. AIS supports comparison of actual and planned financial results.
34. AIS helps identify financial performance problems.
35. Financial information supports performance monitoring.
36. AIS supports financial performance evaluation.

Section G – AIS Challenges

37. Lack of employee training limits effective use of AIS.
38. Technical problems affect the effectiveness of AIS.
39. Limited financial resources can restrict AIS improvement.
40. Resistance to technological change creates difficulties in using AIS.
41. Lack of system integration creates financial management challenges.
42. Data security and access issues can affect AIS effectiveness.