

The Implementation of Technology-Based Accounting Information Systems to Enhance Organizational Performance at Universitas Muhammadiyah Palopo

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Abstract

This study aims to explore the implementation of an Accounting Information System (AIS) based on the latest technology to improve organizational performance at Universitas Muhammadiyah Palopo. This research employs a quantitative method and a case study approach, with data obtained from 120 respondents and analyzed using IBM SPSS 29. The results show that the application of technology in AIS significantly enhances operational efficiency, financial reporting accuracy, and managerial decision-making. F-tests and T-tests confirm that the independent variables (technology in AIS and information quality) have a significant simultaneous and partial impact on organizational performance. In conclusion, the implementation of technology-based AIS at this university improves efficiency, reduces human error, and supports strategic decision-making.

Keywords: Accounting Information System, Latest Technology, Organizational Performance, Operational Efficiency, Decision-Making

Abstrak

Penelitian ini mengeksplorasi penerapan sistem informasi akuntansi (SIA) berbasis teknologi terkini untuk meningkatkan kinerja organisasi di Universitas Muhammadiyah Palopo. Menggunakan metode kuantitatif dan pendekatan studi kasus, data dari 120 responden dianalisis menggunakan IBM SPSS 29. Hasilnya menunjukkan bahwa penerapan teknologi dalam SIA secara signifikan meningkatkan efisiensi operasional, akurasi pelaporan keuangan, dan pengambilan keputusan manajerial. Uji F dan uji T mengonfirmasi bahwa variabel independen (teknologi dalam SIA dan kualitas informasi) secara simultan dan parsial berpengaruh signifikan terhadap kinerja organisasi. Kesimpulannya, implementasi SIA berbasis teknologi di universitas ini meningkatkan efisiensi, mengurangi kesalahan manusia, dan mendukung pengambilan keputusan strategis.

Kata kunci: Sistem Informasi Akuntansi, Teknologi Terkini, Kinerja Organisasi, Efisiensi Operasional, Pengambilan Keputusan

Introduction

In the ongoing era of digital transformation and globalization, the use of information technology is important to improve operational efficiency and business effectiveness in many industries. A good information technology system should be able to increase organizational productivity (Anugrahayu & Meiriyani, 2024). Efficient Technology System The effect of accounting information is a description of a collection of resources organized to collect,

process, and store electronic data. Then convert it into useful information and provide formal reports that are needed in quality and time (Wiguna & Dharmadiaksa, 2020).

This study aims to identify and analyze the impact of technology-based Accounting Information System (AIS) implementation on improving organizational performance at Universitas Muhammadiyah Palopo. The main focus of this research is to highlight the effectiveness of AIS in improving the efficiency, productivity, and transparency of the university's operations. In addition, this study also aims to provide recommendations that can assist the university in improving or optimizing the use of technology-based AIS to achieve organizational goals more efficiently.

Research has usually focused previously on the effectiveness of information systems for employees in relation to their work performance but research linking the effectiveness of information systems for employees with overall employee work performance is scarce. effectiveness of information systems for employees in relation to their work performance. However, research linking the effectiveness of information systems for employees with overall employee work performance is scarce. There is some previous research on the relationship between modern technology and information systems that is still relatively unexplored, especially when it comes to qualitative research that examines some previous research carefully on phenomena that occur in a group of people in a particular environment (Setyowati et al., 2022).

According to (Mardini et al., 2022), research on the application of technology-based information systems in business and education is more numerous and more focused on the business or government sector. Specifically, Muhammadiyah Palopo University as a higher teacher is able to provide a different perspective on the application of modern technology in education. Research on the application of technology-based information systems in business and education is more numerous and more focused on the business or government sector. Specifically, Universitas Muhammadiyah Palopo as a higher teacher is able to provide a different perspective on the application of modern technology in education.

Even when many disagree there, research into higher education information systems has consistently been conducted in a solitary (closed) manner both in terms of technology and academics. Learning can make this contribution by integrating multi-disciplinary research by integrating multi-disciplinary research that is information technology, management, and knowledge.

The results of this study are expected to make a significant contribution in understanding the importance of technology-based AIS implementation in organizational performance in an educational environment such as Muhammadiyah Palopo University. The findings of this study are also expected to be the basis for strategic decision making for university leaders in improving operational efficiency and achieving overall organizational goals.

Literature Review

Accounting Information System

An Accounting Information System (AIS) is a crucial system in any organization as it is committed to collecting and organizing transaction data into a useful form for both internal

and external users (Hastuty HS et al., 2023). It is designed to support commerce and trade in the energy era (Al-Delawi & Ramo, 2020). This system evaluates the quality of consulting services and demonstrates that traditional consulting services provided by advisors will be surpassed by technological advancements (Azzari et al., 2020). This study emphasizes the importance of investing in business leadership development to deliver high-quality services in the new era.

Challenges include resistance to changes in the work environment, budget fluctuations, system resource limitations, and a lack of understanding of the potential benefits of the system. These challenges emphasize the importance of effective change management and employee training. According to (A. Ali et al., 2016), the effectiveness of an AIS depends on the type of information needed by various organizational users.

Recent Technology

Information systems have become more user-friendly and are better equipped to meet the need for timely and accurate information, allowing access from anywhere and providing up-to-date information (Apriyan & Nugroho, 2021). The clear objective of this research is to develop an efficient and practical attendance system based on modern technology for employee welfare management. This study aims to develop an efficient and practical attendance system utilizing modern technology to manage employee welfare. The findings of this research are expected to help develop and implement a more effective attendance system, thereby increasing overall organizational productivity and efficiency (Saied & Syafii, 2023).

As stated by (Weidemann et al., 2023), in industrial environments, enhancing human labor, health, and safety are critical factors in the digital transformation of manufacturing processes. This research provides insights into how robotics should be adapted to work alongside humans, improving efficiency and ergonomics in the industry. Additionally, the use of such technologies in educational settings has shown significant improvements in student performance and learning outcomes (Labadze et al., 2023).

Organizational Performance

When aiming to enhance organizational productivity, it is essential to carefully consider how the organization can withstand competitive pressures by employing appropriate strategies. Effective warning systems can identify the external environment of the organization and its reactions to the internal environment (Maryati & Siregar, 2022). The work process of an employee can be observed in relation to the tasks assigned to them (Merinda et al., 2022). As organizations strive to improve employee productivity, training for managers and staff has become more crucial than ever before. High-quality employees can significantly impact the work process of an organization, leading to increased productivity, innovation, customer satisfaction, and profitability (Idrus et al., 2023).

In the context of public organizations, performance refers to the degree of success or results achieved in establishing and managing the organization, considering various aspects (Mudhofar, 2021). According to (Rahmatullah et al., 2022), several methods can be used to improve organizational performance, including informal diagnostics that can be conducted by anyone interested in evaluating and enhancing their performance. Understanding one's

performance and seeking feedback from others in the group about why certain outcomes occur is crucial.

Summarizing a comprehensive system design for work schedule adjustments and setting a research agenda for the future helps understand the many factors affecting organizational work life and how to mitigate or improve them. Having a relative understanding of how work processes can be carried out implies that organizational work life is influenced by factors that can negatively impact it. For instance, every employee needs to be trained according to the organization's standards and policies to ensure consistent performance (Rohman et al., 2022).

Conceptual Framework

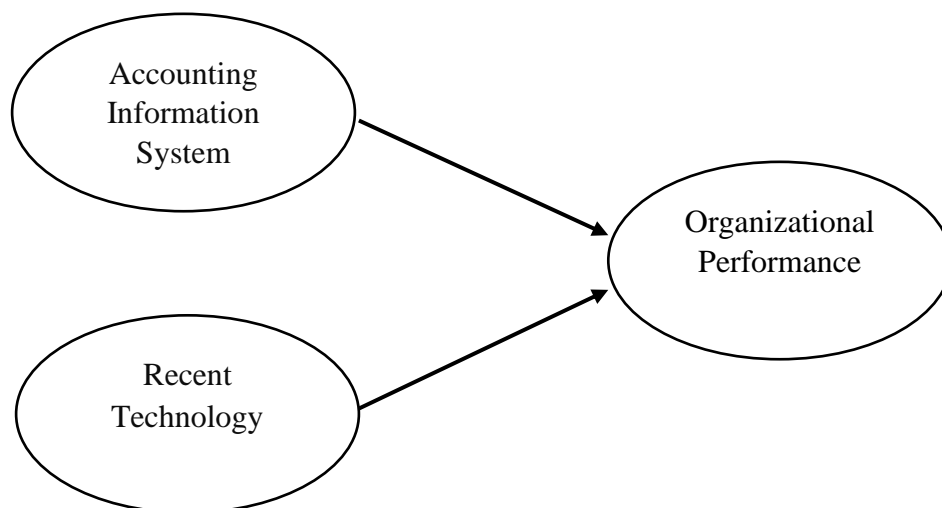


Figure 1: Conceptual Framework

The hypotheses of this research are as follows:

1. H1: The implementation of a technology-based accounting information system (AIS) enhances operational efficiency at Universitas Muhammadiyah Palopo.
2. H2: The quality of information generated by the technology-based AIS has a positive impact on decision-making at Universitas Muhammadiyah Palopo.
3. H3: User satisfaction with the technology-based AIS mediates the effect of system quality on organizational performance at Universitas Muhammadiyah Palopo.

Research Methodology

This study employs a quantitative method to evaluate the relationship between independent and dependent variables. The sample for this research was selected using purposive sampling, which involves gathering data based on specific criteria to ensure that the sample accurately represents the population. The population in this study consists of 120

respondents, including students and lecturers at Universitas Muhammadiyah Palopo. Data were collected by distributing questionnaires directly to the respondents, with measurements using a Likert scale. Data analysis was conducted using IBM SPSS 29 software, as SPSS provides more comprehensive information, facilitates result interpretation, and enhances accuracy.

Descriptive Data Analysis

Descriptive analysis aims to provide a general overview of the characteristics of the respondents and their perceptions of technology implementation and organizational performance, thus making the information clearer and easier to understand. Descriptive statistics can be observed from the mean, median, mode (most frequent value), standard deviation, maximum, and minimum values (Risdayanti et al., 2024).

Data Quality Testing

Data quality testing includes several steps, namely:

- a) Descriptive Statistics Test
- b) Validity Test
- c) Reliability Test

Classical Assumption Test

In the classic assumption test, several tests are carried out to check whether the data meets certain requirements, such as:

- a) Normality Test
- b) Multicollinearity Test
- c) Heteroscedasticity Test

Hypothesis Testing

Hypothesis testing includes:

- a) Simultaneous Test (F-test)
- b) Individual Test (T-Test)

Results and Discussion

Data from Table 1 shows that the majority of respondents are female, totaling 77 individuals or 64,2%. Meanwhile, male respondents number 43 individuals, accounting for 35,8%.

Tabel Percentage of Respondents

Gender	Amount	Percentage
Laki Laki	43	64,2%
Perempuan	77	35,8%
TOTAL	120	100%

Data Quality Test

Tabel 1 Descriptive Statistics Data					
	N	Minimum	Maximum	Mean	Std.Deviation
X1	120	5	25	18,25	3,120
X2	120	4	20	13,83	2,367
Y	120	4	20	14,13	2,215

Valid N 120
(listwise)

Source: Primary data processed with SPSS 29, 2024

The data variability (standard deviation) for variable X1 is greater than for variables X2 and Y, which means that respondents' assessments of variable X1 vary more. The value for variable X1 (18,25) is higher than for variables X2 (13,83) and Y (14,13), which indicates that in general respondents gave a higher value to variable X1. The values (from minimum to maximum) for variable X1

are from 5 to 25, for variable X2 are from 4 to 20, and for variable Y are from 4 to 20. This shows that respondents gave a range of assessments for each variable, but the values remain within reasonable limits

Validity test

Tabel 3 Validity test

VAR	r hitung	r tabel	KET
X1			
X1.1	0,791	0,179	valid
X1.2	0,677	0,179	valid
X1.3	0,692	0,179	valid
X1.4	0,761	0,179	valid
X1.5	0,741	0,179	valid
X2			
X2.1	0,811	0,179	valid
X2.2	0,670	0,179	valid
X2.3	0,688	0,179	valid
X2.4	0,739	0,179	valid
Y			
Y.1	0,719	0,179	valid
Y.2	0,656	0,179	Valid
Y.3	0,668	0,179	valid
Y.4	0,786	0,179	valid

Source: Primary data processed with SPSS 29, 2024

Based on the table above, it has a calculated r value that is greater than the r table value (0,179). Therefore, it can be concluded that all items in this questionnaire are valid. This means that each item in the questionnaire is able to effectively measure the variable in question.

Reliability test

Tabel 4 Reliability test

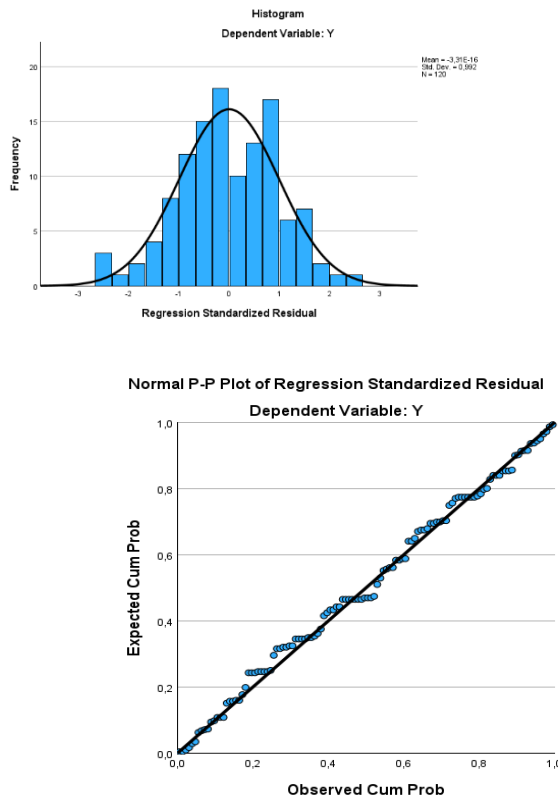
Variabel	Nilai Cronbach Alpha	Cut Off	Ket
X1	0,779	0,60	Reliabel
X2	0,703	0,60	Reliabel
Y	0,665	0,60	Reliabel

Source: Primary data processed with SPSS 29, 2024

Has a Cronbach's Alpha value greater than 0,60, so all are considered reliable. This shows that the measurement instruments used in this study have good internal consistency and are reliable.

Classical assumption test

Normality Test



Gambar 2 Validity test

Tabel 5 Validity test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	
N		120	
Normal Parameters ^{a,b}			
Mean		0,000000	
Std. Deviation		1,18127243	
Most Extreme Differences	Absolute	0,057	
	Positive	0,052	
	Negative	-0,057	
Test Statistic		0,057	
Asymp. Sig. (2-tailed) ^c		,200 ^d	
Monte Carlo Sig. (2-tailed) ^e	Sig.	0,426	
	99% Confidence Interval	Lower Bound	0,413
		Upper Bound	0,438

Source: Primary data processed with SPSS 29, 2024

From the results of the Kolmogorov-Smirnov Test with a result of $0,200 > 0,05$, it can be concluded that the variables in this study are normal.

Multicollinearity Test

Table 6 Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	2,521	0,686		3,675	0,000		
X1	0,356	0,056	0,502	6,401	0,000	0,396	2,525
X2	0,370	0,073	0,395	5,043	0,000	0,396	2,525

Source: Primary data processed with SPSS 29, 2024

Melihat dari hasil uji di atas menunjukkan bahwa nilai tolerance (0,396) $>$ 0,10, dan nilai VIF (2,525) $<$ 10,00, maka dapat disimpulkan tidak terjadi adanya multikolinearitas.

Uji Heterokedastisitas

Table 7 Uji Heterokedastisitas

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	1,195	0,414		2,883	0,005		
X1	0,044	0,034	0,191	1,320	0,189	0,396	2,525
X2	-0,078	0,044	-0,254	-1,752	0,082	0,396	2,525

Source: Primary data processed with SPSS 29, 2024

Based on the test results above, it shows that the sig value of X1 (0,189) and X2 (0,082) is greater than 0,05, it can be concluded that there is no heteroscedasticity.

Hypothesis test

Individual Test (F-test)

Tabel 8 Individual Test (F-test)

Model	Sum of Squares	df	Mean Square	F	Sig.
<hr/>					

1	Regression	417,814	2	208,907	147,194	<,001 ^b
	Residual	166,053	117	1,419		
	Total	583,867	119			

Source: Primary data processed with SPSS 29, 2024

Based on the results of the simultaneous statistical test, the significance value (0,001) <0,05, while the results of the calculated f value X1 (147,194) > f table (HO) null hypothesis which states that there is no significant influence between the independent variables on the dependent variable simultaneously, it can be concluded that there is a simultaneous influence of variable X on Y.

Simultaneous Test (T Test)

Table 9 Simultaneous Test (T Test)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2,521	0,686		3,675	0,000
X1	0,356	0,056	0,502	6,401	0,000
X2	0,370	0,073	0,395	5,043	0,000

Source: Primary data processed with SPSS 29, 2024

This test aims to determine the individual impact of the independent variables on the dependent variable. The analysis involves assessing statistical significance and comparing the t-table value with the t-calculated value. The t-table value is typically found in statistical tables at a 5% significance level (0,05), with degrees of freedom (df) calculated as $df = n - k - 1$, where nn is the sample size and kk is the number of independent variables. In this case, $df = 120 - 2 - 1 = 117$. From the statistical table, the t-table value at a 5% significance level (0,05) is approximately 1,657.

The test results show that the variable for the implementation of the accounting information system has a t-calculated value of 6.401, while the corresponding t-table value is 1,657. Therefore, it can be concluded that $t_{calculated} > t_{table}$ with a significance level of $0,000 < 0,05$. Hence, the first hypothesis (H1) is accepted, indicating a positive influence of the accounting information system implementation on organizational performance.

Similarly, the results show that the variable for current technology has a t-calculated value of 5,043, while the corresponding t-table value is 1,657. Therefore, it can be concluded that $t_{calculated} > t_{table}$ with a significance level of $0,000 < 0,05$. Hence, the

hypothesis (H2) is accepted, indicating a positive influence of current technology on organizational performance.

Discussion And Suggestions

The implementation of the accounting information system (AIS) has a significant impact on organizational work processes. The AIS enhances the speed and efficiency of currency exchange transactions, thus supporting the formulation of more accurate decisions.

The quality of information produced by the AIS also significantly impacts organizational work processes. Accurate, timely, and relevant information is crucial for developing effective business plans. With high-quality information, managers can formulate more precise decisions, which in turn enhances the overall productivity of the organization.

The increase in organizational productivity can be attributed to improved operational efficiency, employee performance, and higher quality services provided by the university. The implementation of a modern technology-based AIS optimizes business processes and daily inventory management, ultimately supporting the achievement of the university's strategic goals.

Recommendations

Based on the findings of this study, several recommendations can be made to further enhance the benefits of the AIS implementation:

Continuous Training and Development; It is essential to provide ongoing training for staff and management to ensure they are proficient in using the AIS. Regular training sessions will help users stay updated on new features and best practices, maximizing the system's potential.

System Updates and Maintenance: Regular updates and maintenance of the AIS are crucial to keep up with technological advancements and address any system issues promptly. This will ensure that the system remains reliable and efficient.

Enhanced Data Security: As the AIS handles sensitive financial information, it is vital to implement robust data security measures. This includes regular security audits, implementing strong access controls, and ensuring compliance with relevant data protection regulations.

User Feedback Mechanisms: Establishing mechanisms for users to provide feedback on the AIS can help identify areas for improvement. This feedback can be used to make necessary adjustments and enhancements to the system, ensuring it continues to meet the needs of its users.

Integration with Other Systems: Integrating the AIS with other administrative and academic systems within the university can streamline processes and improve overall efficiency. This integration can facilitate better data sharing and reduce redundancy.

Performance Monitoring: Implementing performance monitoring tools can help track the effectiveness of the AIS and its impact on organizational performance. Regular monitoring and evaluation will provide insights into areas where further improvements can be made.

Conclusion

This study on the implementation of a technology-based Accounting Information System (AIS) to enhance organizational efficiency at Universitas Muhammadiyah Palopo concludes the following:

Increased Efficiency and Effectiveness: Utilizing modern technology, the implementation of AIS has significantly improved the operational efficiency and effectiveness of the university.

The financial recording and reporting processes have become more accurate and faster.

Better Data Management: The system allows for more structured and integrated data management, enabling more precise decision-making based on the available data.

Transparency and Accountability: The use of technology in the AIS enhances transparency and accountability in financial operations. Financial information can be easily accessed by relevant parties, aiding in internal audits and reviews.

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