

Information Technology and Organizational Culture as Determinants of Accounting Information System Effectiveness

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Abstract: This study aims to analyze the influence of information technology and organizational culture on the effectiveness of the accounting information system at PT. Bozzetto Indonesia. In the digital era, the role of information technology is crucial in supporting the efficiency and effectiveness of accounting information systems. Organizational culture also plays a significant role in shaping employee behavior and work patterns that support the system's success. This research adopts a quantitative approach, with data collected through questionnaires distributed to 37 respondents. Data analysis was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. The results show that both information technology and organizational culture have a positive and significant effect on the effectiveness of the accounting information system. These findings emphasize the importance of integrating technology and organizational values in supporting the effective and efficient management of accounting information. This research contributes theoretically to the development of accounting knowledge and provides practical implications for companies to optimize the performance of their accounting information systems.

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INTRODUCTION

The effectiveness of an accounting information system (AIS) is a fundamental issue for organizations in ensuring accurate information, efficient operations, and sound managerial decision-making. AIS effectiveness reflects the extent to which the system supports organizational objectives through reliable, timely, and relevant accounting information. Several studies emphasize that an effective AIS contributes positively to organizational control, employee performance, and financial outcomes (Al-Okaily et al., 2020; Putu et al., 2021). Therefore, the ability of organizations to design and implement effective accounting information systems has become increasingly important in today's dynamic business environment.

The advancement of information technology has significantly transformed how organizations operate, including in the management of accounting information systems. According to Karim et al. (2020), information technology represents developments in the field of information that support daily tasks such as data processing and communication. Similarly, Athoillah et al. (2024) define information technology as a set of tools and



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systems that enable users to process, transmit, and store information efficiently. The adoption of appropriate information technology allows organizations to automate accounting processes, integrate data across functions, and process information in real time, thereby enhancing the overall effectiveness of AIS.

Information systems, particularly accounting information systems, play a crucial role in ensuring accurate and timely financial reporting. Accounting Information Systems records, processes, and communicates the outcomes of business transactions to support managerial and strategic decision-making (Richardson et al., 2021). Furthermore, AIS is essential for collecting, managing, and distributing accounting data used by both internal and external stakeholders, enabling organizations to strengthen transparency and internal control (Romney et al., 2021).

Empirical evidence demonstrates that information technology significantly improves system quality and information quality, which are core components of AIS effectiveness (Nguyen & Nguyen, 2020). Studies conducted in Indonesian organizations also confirm that information technology plays an important role in enhancing organizational performance through improved information systems (Rachman & Nuraeni, 2020). In addition, business strategy and environmental conditions supported by technological capability influence the characteristics and usefulness of management accounting information systems, highlighting the strategic importance of information technology in accounting system design (Jaya et al., 2024).

Recent studies further indicate that AIS effectiveness is shaped not only by technological infrastructure but also by organizational and human-related factors. Nguyen et al. (2024) show that determinants such as managerial involvement, system characteristics, and accounting knowledge significantly influence AIS effectiveness. Moreover, research in the MSME context reveals that high-quality AIS contributes to improved user satisfaction, decision-making quality, and organizational loyalty, emphasizing the behavioral outcomes of effective accounting information systems (Imtihan et al., 2025).

Despite technological advancement, AIS effectiveness cannot be achieved solely through investment in information technology. Organizational factors, particularly organizational culture, strongly influence how accounting information systems are implemented and utilized. Organizational culture shapes employee behavior, attitudes, and commitment toward system usage and compliance with organizational procedures. A supportive organizational culture encourages employees to interact positively with the accounting information system and strengthens their commitment to adopting technological tools, thereby improving AIS effectiveness (Rosita et al., 2024).

Several empirical studies provide evidence of the relationship between organizational culture and accounting information systems. Research in emerging economies shows that organizational culture is a dominant determinant of AIS quality and information reliability (Nguyen & Nguyen, 2020). More recent evidence confirms that innovative organizational culture enhances system quality and information quality, which ultimately strengthens the effectiveness of accounting information systems (Binh et al., 2022).

In the Indonesian context, research has shown that organizational culture and AIS effectiveness jointly contribute to organizational and financial performance. (Putu et al., 2021) Found that effective AIS implementation, combined with a strong organizational culture, positively influences financial performance. Additionally, studies on employee performance reveal that organizational culture, supported by effective control systems, plays an essential role in improving individual and organizational performance outcomes (Rachman et al., 2022). Furthermore, research on accounting information system quality indicates that AIS effectiveness contributes to improved employee performance and organizational sustainability by supporting daily operations and decision-making processes (Rachman et al., 2024).

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Although prior studies have examined information technology, organizational culture, and accounting information systems from different perspectives, most of them focus on partial relationships. Some studies emphasize technological aspects (Nguyen & Nguyen, 2020; Jaya et al., 2024), while others focus on organizational and behavioral dimensions (Binh et al., 2022; Rachman et al., 2022). Research that integrates information technology and organizational culture simultaneously as determinants of accounting information system effectiveness remains limited, particularly in developing-country contexts. Therefore, this study aims to examine information technology and organizational culture as determinants of accounting information system effectiveness by integrating technological and organizational perspectives to provide a more comprehensive understanding of AIS effectiveness.

Based on the theoretical framework and relevant empirical studies, this research formulates the following hypotheses to examine the effect of information technology and organizational culture on the effectiveness of the accounting information system :

- H1: Information Technology has an influence on the Effectiveness of the Accounting Information System
- H2: Organizational Culture has an influence on the Effectiveness of the Accounting Information System

METHODS

In this study, all variables use an ordinal scale. The data sources used in this research are primary and secondary data. The data collection method was carried out by distributing 37 questionnaires to employees of PT. Bozzetto Indonesia. The sampling technique used in this study is probability sampling with random sampling of employees at PT. Bozzetto Indonesia. This study uses validity and reliability tests to measure the accuracy and consistency of the data. This study employs a quantitative explanatory research design to examine the causal relationships among variables using Partial Least Squares–Structural Equation Modeling (PLS-SEM).

RESULTS AND DISCUSSION

Information Technology

The information technology variable is measured using six dimensions: capturing, processing, generating, storing, retrieving, and transmitting. These dimensions are reflective, so the estimated parameters of the variable measurement method can be examined in the figure below.

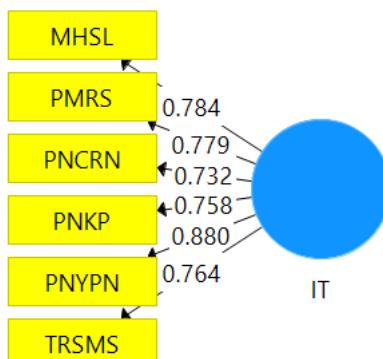


Figure 1. Information Technology Path Diagram
Source: Processed primary data SEM-PLS (2024)

From the information technology path diagram above, it can be seen that the values contained in each indicator are generated through the dimensions derived from the reflective information technology measurement model as follows:

Table 1. Calculation Results of Information Technology Measurement Model

Item	Loading Factor	Indicator Reliability	t-count	p-value
Capturing	0,758	0,75	6,182	0,000
Processing	0,779	0,772	6,837	0,000
Generating	0,784	0,777	7,513	0,000
Storing	0,880	0,880	18,180	0,000
Retrieving	0,732	0,732	7,681	0,000
Transmitting	0,764	0,758	8,675	0,000
Average Variance Extracted (AVE)			0,615	
Composite Reliability (CR)			0,905	

Source: Processed primary data SEM-PLS (2024)

All indicators have met convergent validity and have high values because the outer loading values of the reflective information technology construct are all above 0.70.

Meanwhile, the average variance extracted (AVE) value is greater than 0.50, indicating that the information technology variable meets convergent validity.

Based on Table 1, the composite reliability (CR) value is 0.905, which is above the minimum of 0.70, indicating that the information technology construct shows a high level of internal consistency.

Organizational Culture

Using seven dimensions, the organizational culture variable can be measured. These reflective dimensions consist of innovativeness and risk-taking, attention to detail, outcome orientation, people orientation, team orientation, aggressiveness, and stability. The following are the results of the estimated parameters of the variable measurement model.

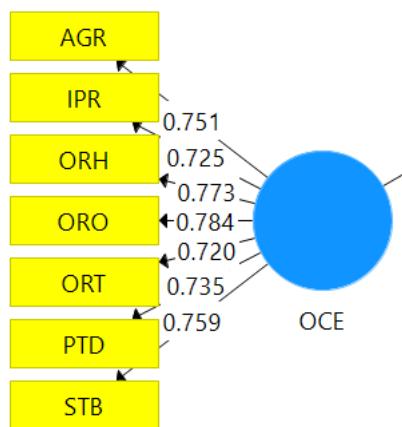


Figure 2. Organizational Culture Path Diagram

Source: Processed primary data SEM-PLS (2024)

From the organizational culture path diagram above, it can be seen that the values contained in each indicator are generated through the dimensions derived from the reflective organizational culture measurement model as follows:

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Table 2. Calculation Results of Organizational Culture Measurement Model

Item	Loading Factor	Indicator Reliability	t-count	p-value
Innovative and Risk-Taking	0,725	0,710	4,887	0,000
Attention to Detail	0,735	0,723	4,922	0,000
Outcome Orientation	0,773	0,741	5,235	0,000
People Orientation	0,784	0,753	6,119	0,000
Team Orientation	0,72	0,685	4,366	0,000
Aggressiveness	0,751	0,744	6,214	0,000
Stability	0,759	0,783	8,675	0,000
Average Variance Extracted (AVE)			0,562	
Composite Reliability (CR)			0,900	

Source: Processed primary data SEM-PLS (2024)

All indicators meet convergent validity and have high values because the outer loading values of the reflective organizational culture construct are all above 0.70.

Meanwhile, the average variance extracted (AVE) value is above 0.50, indicating that the organizational culture variable has met convergent validity.

Based on Table 2, the composite reliability (CR) value is 0.900, which is above the minimum threshold of 0.70, indicating that the organizational culture construct has a high level of internal consistency.

Effectiveness Of Accounting Information Systems

The variable related to effectiveness in the accounting information system is measured using six dimensions. The effectiveness of the accounting information system can be assessed through these dimensions, which include system quality, information quality, service quality, information user, user satisfaction, and benefits of use. The following are the results of the estimated parameters of the measurement model for this variable.

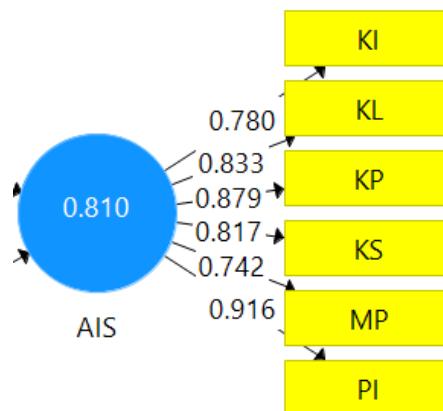


Figure 3. Effectiveness of Accounting Information System Path Diagram

Source: Processed primary data SEM-PLS (2024)

From the organizational culture path diagram above, it can be seen that the values contained in each indicator are generated through the dimensions derived from the reflective organizational culture measurement model as follows:

Table 3. Calculation Results of the Effectiveness of the Accounting Information System Measurement Model

Item	Loading Factor	Indicator Reliability	t-count	p-value
System Quality	0,817	0,816	10,501	0,000
Information Quality	0,780	0,788	9,013	0,000
Service Quality	0,833	0,828	8,201	0,000
Information User	0,916	0,918	30,614	0,000
User Satisfaction	0,879	0,873	15,142	0,000
User Benefits	0,742	0,731	6,330	0,000
Average Variance Extracted (AVE)				0,689
Composite Reliability (CR)				0,930

Source: Processed primary data SEM-PLS (2024)

The outer loading values of the reflective construct for the effectiveness of the accounting information system are all above 0.70, indicating that all indicators have met convergent validity and have high values.

Meanwhile, the average variance extracted (AVE) value is above 0.50, which means that the effectiveness variable of the accounting information system has met convergent validity.

Based on Table 3, the composite reliability (CR) value is 0.916, which is above the minimum threshold of 0.70, indicating that the construct for the effectiveness of the accounting information system has a high level of internal consistency.

Collinearity Testing

The measurement of the Variance Inflation Factor (VIF) is used to determine collinearity. In PLS-SEM, a tolerance value of 0.20 or less than 5, as well as a VIF value of 5 or more, indicates the presence of a collinearity issue (Hair et al., 2022:195). It can be concluded that the VIF value should be above 0.20 and below 5 ($5 > \text{VIF} > 0.20$).

Table 4. Collinearity Assessment

Construct	VIF
Information Technology	2,087
Organizational Culture	2,087

Source: Processed primary data SEM-PLS (2024)

In this study, collinearity testing was conducted on the structural model that illustrates the relationship between the latent variables of information technology and organizational culture, which also serve as predictors for the effectiveness of the accounting information system. The results of the VIF value calculations for each variable, information technology, and organizational culture are presented in Table 4. Based on this table, the VIF values are outside the tolerance threshold for collinearity issues, indicating that there is no significant level of collinearity between the two predictor variables. Therefore, structural model evaluation can be carried out, which includes testing the two research hypotheses.

Structural Model

The results of the standardized path coefficient calculation in the structural model show the impact of information technology and organizational culture on the effectiveness of the accounting information system.

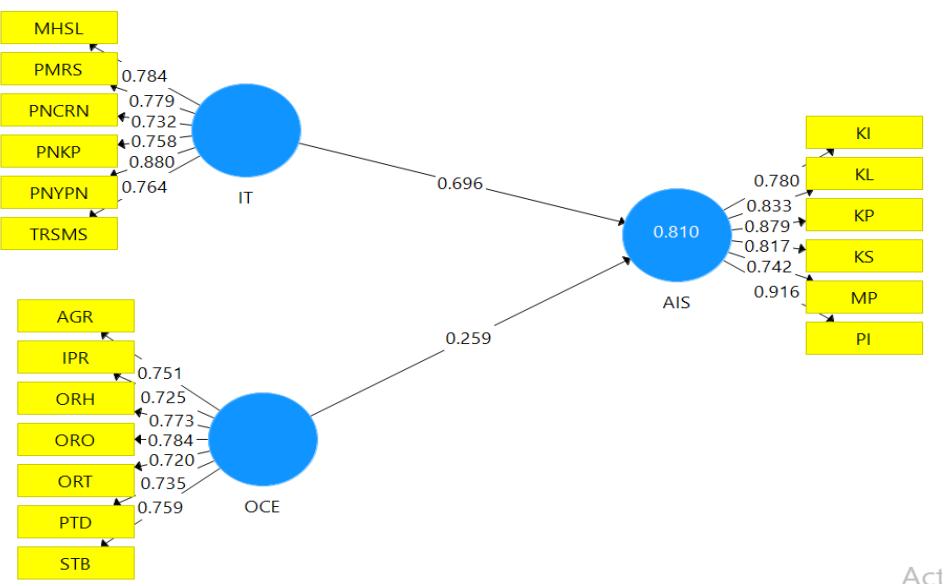


Figure 4. Standardized Structural Model Coefficients

Source: Processed primary data SEM-PLS (2024)

Hypothesis Testing

Statistical Hypothesis 1

$H_0 : \gamma_{11} = 0$ Information technology has no effect on the effectiveness of the accounting information system.

$H_1 : \gamma_{11} \neq 0$ Information technology has an effect on the effectiveness of the accounting information system.

Statistical Hypothesis 2

$H_0 : \gamma_{12} = 0$. Organizational culture has no effect on the effectiveness of the accounting information system.

$H_1 : \gamma_{12} \neq 0$ Organizational culture has an effect on the effectiveness of the accounting information system.

To test these hypotheses, the Student's t-test statistical test is required, as described in the previous chapter. The testing criterion is that H_1 is rejected if the p-value is less than α , with $\alpha = 0.05$. The test results are presented in the table below.

Table 5. Hypothesis Testing Result

Hypothesis	Path Coefficient	t-value	f^2	p-value	Conclusion
$H_1: \gamma_{11} = 0$ vs $\gamma_{11} \neq 0$	0.696	5.568	1.223	0.048	Accepted
$H_2: \gamma_{12} = 0$ vs $\gamma_{12} \neq 0$	0.259	1.978	0.169	0.000	Accepted

Source: Processed primary data SEM-PLS (2024)

Hypothesis Testing Results 1

According to Table 5, it can be observed that the information technology variable has a t-value (5.568) greater than the critical t-value (1.96), indicating that the result of hypothesis test 1 is that H_1 is accepted. Thus, the statistical analysis shows that information technology has a significant impact on the effectiveness of the accounting information system.

The magnitude of the influence of information technology on the effectiveness of the accounting information system is 0.696.

The calculation results show that the f^2 value is 1.223. Since the f^2 value is above 0.5 (the threshold for a large effect size), it can be concluded that the effect size of the

influence of information technology on the effectiveness of the accounting information system is large.

Hypothesis Testing Results 2

It can be seen from Table 4.34 that the organizational culture variable has a t-value of 1.978, which is greater than the critical t-value of 1.96, indicating that the result of hypothesis test 2 is that H2 is accepted. Thus, the statistical results show that organizational culture has an influence on the effectiveness of the accounting information system.

The magnitude of the influence of organizational culture on the effectiveness of the accounting information system is 0.259.

The calculation results show that the f^2 value is 0.169. Since the f^2 value is above 0.15 (the threshold for a medium effect size) but below 0.5 (the threshold for a large effect size), it can be concluded that the effect size of the influence of organizational culture on the effectiveness of the accounting information system is medium.

CONCLUSION

Based on the results of the study, the conclusion of the study is that Information technology at PT. Bozzetto Indonesia has been functioning well; however, there is still room for improvement due to weaknesses in the processing dimension, which recorded the lowest score compared to other dimensions. Therefore, it requires attention and enhancement to fully optimize information technology in order to support the effectiveness of the accounting information system. Organizational culture at PT. Bozzetto Indonesia has been running well; however, it is not yet fully optimal due to weaknesses in the stability dimension, which recorded the lowest score compared to other dimensions. Therefore, it requires attention and improvement to comprehensively optimize the organizational culture in order to support the effectiveness of the accounting information system.

REFERENCES

- Al-Okaily, A., Al-Okaily, M., Shiyyab, F., & Masadah, W. (2020). Accounting information system effectiveness from an organizational perspective. *Management Science Letters*, 10(16), 3991–4000. <https://doi.org/10.5267/j.msl.2020.7.010>
- Athoillah, M., & et al. (2024). *Akselerasi Teknologi informasi*. PT. Refika Aditama. <https://kbk1724291.perpustakaandigital.com/detail/akselerasi-teknologi-informasi-cakap-dan-beretika-di-era-digital/85278>
- Binh, V. T. T., Tran, N. M., & Vu, M. C. (2022). The Effect of Organizational Culture on the Quality of Accounting Information Systems: Evidence From Vietnam. *SAGE Open*, 12(3). <https://doi.org/10.1177/21582440221121599>
- Imtihan, K., Mardi, M., Tantoni, A., Bagye, W., & Zulkarnaen, M. F. (2025). Enhancing User Satisfaction and Loyalty in MSMEs: The Role of Accounting Information Systems. *Journal of Information Systems and Informatics*, 7(1), 714–729. <https://doi.org/10.51519/journalisi.v7i1.1044>
- Jaya, A. P., Octaviany, S. I., & Rachman, G. G. (2024). The Influence of Business Strategy and Environmental Uncertainty to The Characteristics Management Accounting Information System. *Journal of Economics* ..., 4(03), 1–2. [https://jecombi.seaninstitute.or.id/index.php/JECOMBI/article/download/84/91](https://jecombi.seaninstitute.or.id/index.php/JECOMBI/article/view/84%0Ahttps://jecombi.seaninstitute.or.id/index.php/JECOMBI/article/download/84/91)
- Karim, A., & et al. (2020). *Pengantar teknologi Informasi*. Yayasan Labuhanbatu Berbagi Gemilang. https://www.researchgate.net/profile/Abdul-Karim-26/publication/348805601_PENGANTAR_TEKNOLOGI_INFORMASI/links/60112708a6fdcc071b95005d/PENGANTAR-TEKNOLOGI-INFORMASI.pdf

- Nguyen, H. T., & Nguyen, A. H. (2020). Determinants of accounting information systems quality: Empirical evidence from Vietnam. *Accounting*, 6(2), 185–198. <https://doi.org/10.5267/j.ac.2019.10.004>
- Nguyen, H. T., T. R., Kweh, Q. L., Tran, P. T. K., & Tran Duong Minh, H. (2024). Determinants of accounting information system effectiveness and moderating role of external consultants: Empirical research in the Ben Tre Province of Vietnam. *Helijon*, 10(7), e28847. <https://doi.org/10.1016/j.helijon.2024.e28847>
- Putu, I., Pratama, N., Luh, N., & Widhiyani, S. (2021). The Effect of the Effectiveness of Accounting Information Systems, Implementation of Good Governance, And Organizational Culture on Financial Performance. *American Journal of Humanities and Social Sciences Research*, 5, 84–92. www.ajhssr.com
- Rachman, G. G., Juniarti, S. S., & Nurcholishah, K. (2024). The Influence of Accounting Information System Quality and Work Motivation on Employee Performance. *Almana : Jurnal Manajemen Dan Bisnis*, 8(3), 581–588. <https://doi.org/10.36555/almana.v8i3.2721>
- Rachman, G. G., Makiyah, N. I., & Adrian, M. I. (2022). Relationship in Organizational Culture, Management Control System and Employee Performance in Perspective Model. *Almana : Jurnal Manajemen Dan Bisnis*, 6(3), 590–603. <https://doi.org/10.36555/almana.v6i3.1976>
- Rachman, G. G., & Nuraeni, S. (2020). The Influence of Information Technology and Management Control Systems on Employee Performance. *JASA (Jurnal Akuntansi, Audit Dan Sistem Informasi Akuntansi)*, 4(3), 365–377. <https://doi.org/https://doi.org/10.36555/jasa.v4i3.1461>
- Richardson, V. ., Chang, C. ., & Smith, R. (2021). Accounting Information System. In *McGraw-Hill Education*. McGraw-Hill Education.
- Romney, M. B., Steinbart, P. J., Summers, S. L., & Wood, D. A. (2021). Accounting Information Systems,. In *Pearson Education Limited*. Pearson Education Limited.
- Rosita, S., Tialonawarmi, F., Musnaini, & Hendriyaldi. (2024). *Perilaku Organisasi*. WIDA Publishing. https://books.google.co.id/books?id=dQsGEQAAQBAJ&printsec=frontcover&hl=id&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false