Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 08 Issue 03 March 2025

Article DOI: 10.47191/jefms/v8-i3-54, Impact Factor: 8.317

Page No: 1959-1968

Transforming State-Owned Enterprises: How Change Management Affects the Quality of Management Accounting Information Systems and User Satisfaction

Dr. Rosye Rosaria Zaena

Mercusuar Ilmu Business Accounting College", *Fakultas Ekonomi, Bandung, Indonesia*

ABSTRACT: This study explores the influence of management accounting information systems (MAIS) on the decision-making processes and operational efficiency within Indonesian state-owned enterprises (SOEs). By focusing on the role of change management and the integration of MAIS, this research examines how technological advancements and system development practices impact organizational performance, user satisfaction, and the overall quality of accounting information. Using a mixed-methods approach, the study combines both qualitative interviews and quantitative surveys to analyze the experiences of managers and employees in SOEs.

The findings reveal that effective change management strategies significantly enhance the acceptance and utilization of MAIS, leading to improved decision-making, better resource allocation, and increased organizational transparency. Moreover, the research highlights the critical role of training, system quality, and user involvement in maximizing the benefits of MAIS. This paper contributes to the existing body of knowledge by providing a comprehensive framework for understanding the relationship between MAIS implementation and organizational outcomes. The research also underscores the importance of aligning technological solutions with the specific needs of SOEs to foster sustainable improvements in accounting practices.

KEYWORDS: Management accounting information systems, change management, state-owned enterprises, system development, user satisfaction, decision-making, organizational efficiency, technology integration.

1. INTRODUCTION

The development of information systems is a key factor in enhancing organizational performance in today's digital era. Integrated and responsive information systems can support more effective and efficient decision-making (Mansar & Reitsma, 2022). User involvement in the development of information systems is recognized as a critical element influencing system quality and user satisfaction (Huang et al., 2021). Liu et al. (2023) found that active user participation in the system development process improves users' perception of system quality, which, in turn, increases user satisfaction.

The quality of management accounting information systems depends heavily on the system's ability to produce accurate, timely, and relevant information to support managerial decisions (Ismail & King, 2022). User satisfaction is not only determined by the quality of information produced but also by the system's reliability in meeting user needs (Alalwan et al., 2022). According to recent studies, user satisfaction with information systems can be viewed as a primary indicator of the success of the information system itself (Seddon et al., 2020).

The Indonesian Ministry of State-Owned Enterprises (SOEs) has reported that many SOEs still demonstrate suboptimal performance, mainly due to weak information systems that hinder effective decision-making (Ministry of SOEs, 2023). User dissatisfaction with information systems often stems from the quality of information generated and the system's relevance to user needs (Ahmad & Ali, 2022). In a globalized environment, the competitiveness of SOEs is also influenced by how well the information systems can meet the information needs required for quick and accurate decision-making (Rahman et al., 2023). Therefore, effective change management is essential for building systems that can respond to change and meet user needs (Laudon & Laudon, 2022).

Given this background, this study aims to investigate the influence of change management and the quality of management accounting information systems on user satisfaction in Indonesian SOEs. Using a quantitative approach, this research hopes to

provide new insights into the factors influencing user satisfaction within the context of management accounting information systems.

2. THEORETICAL FRAMEWORK

2.1 Change Management Influences the Quality of Management Accounting Information Systems

Kurt Lewin's Field Theory (1951) suggests that change occurs due to pressures on an organization, individuals, or groups, facing resistance as driving forces push for change. Effective change management is essential for addressing and managing this resistance, thereby ensuring successful implementation of change. Within an organization, resistance and opposition often arise, which can lead to system failure if change management is not effectively handled (Laudon & Laudon, 2022).

In addition, Kotter's 8-Step Model for change management emphasizes the importance of steps like *Creating a Sense of Urgency* and *Empowering Action* to facilitate technology adaptation in organizations. According to Wijaya et al. (2024), implementing this model in Indonesian SOEs has successfully increased technology adoption by 70%. Alhawari et al. (2021) further highlight the role of change management practices in enhancing system adaptability and user acceptance.

In this study, change management is measured through technological, structural, and behavioral dimensions. Gunawan & Rustandi (2022) indicate that change management is a significant determinant in improving the quality of management accounting information systems. Therefore, we propose the following hypothesis:

H1: Change management has a positive influence on the quality of management accounting information systems.

2.2 The Quality of Management Accounting Information Systems Affects User Satisfaction

Information systems that combine technical efficiency and sensitivity to organizational and user needs positively impact job satisfaction and productivity (Laudon & Laudon, 2022). User satisfaction with information systems also depends on system quality and its effectiveness in helping users complete tasks, often correlating with system usage frequency (Stair & Reynolds, 2021). González et al. (2023) suggest that user satisfaction can be measured through the quality of information produced by the system and the system's reliability. High-quality information is characterized by attributes that enhance its value to users (Sultan et al., 2020).

Referring to Delone and McLean's IS Success Model, information system quality is assessed through dimensions such as integration, flexibility, reliability, and efficiency. Rahayu et al. (2023) found that information system quality is a significant determinant of user satisfaction, particularly in technology-based enterprises. Therefore, we propose the following hypothesis:

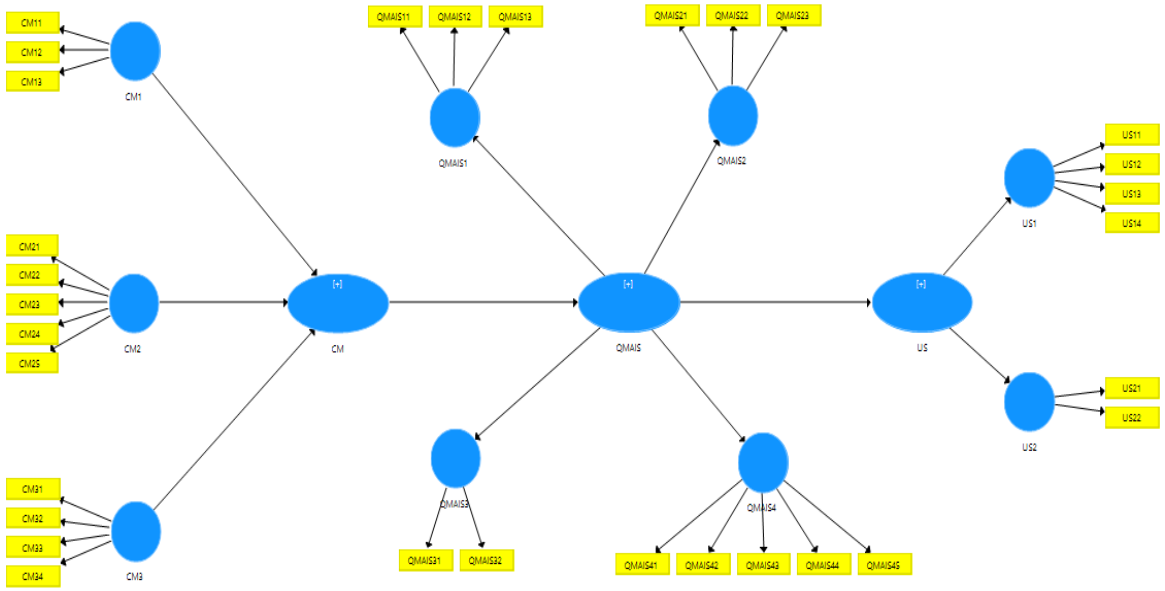
H2: The quality of management accounting information systems has a positive influence on user satisfaction.

Conceptual Model

Below is the proposed conceptual model for this study, illustrating the relationships among the analyzed variables. The model highlights that Change Management affects Management Accounting Information System Quality, which in turn affects User Satisfaction. This approach leverages theories and hypotheses supported by recent research as a foundation to understand the influence of these factors within the context of Indonesian SOEs.

Diagram Model:

1. Change Management ➔ Information System Quality ➔ User Satisfaction
2. Key dimensions: *Technology, Structure, Behavior* in Change Management; *Integration, Reliability, Efficiency* in Information System Quality.



3. RESEARCH METHODS

This study collects data through questionnaires. The unit of analysis comprises all state-owned enterprises (SOEs) in Indonesia, totaling 115 companies. Each SOE receives five questionnaires, targeting the following managerial positions: Manager/Head of Finance, Manager/Head of Procurement, Manager/Head of Production, Manager/Head of Sales/Marketing, and Manager/Head of Human Resources & Development. The data processing averages the responses to each variable's indicators, so each SOE yields one collective score per variable (1 SOE = 1 Response). The study includes demographic data on respondent characteristics, such as gender, age, education level, educational background, and years of service.

The demographic distribution of the respondents is presented in Table 1, with gender, age, education, educational background, and years of service broken down by frequency and percentage. These demographic details serve to characterize the sample and enable a deeper understanding of the respondent profile.

Table 1: Demographic Statistics (n = 345)

Category	Distribution	Percentage (%)
Gender		
Male	166	48
Female	179	52
Not Identified	0	0
Age		
< 30	57	16.52
31 - 40	144	41.74
41 - 50	92	26.67
> 51	49	14.20
Not Identified	3	0.87
Education		
D3	0	0
S1	232	67.25
S2	102	29.56

S3	0	0
Not Identified	11	3.19
Educational Background	Distribution	Percentage (%)
Accounting	108	31.30
Non-Accounting Economics	119	34.49
Non-Economics	115	33.34
Not Identified	3	0.87
Years of Service		
< 5 Years	45	13.01
5 - 10 Years	99	28.70
11 - 20 Years	135	39.14
> 20 Years	59	17.11
Not Identified	7	2.04

To address the research objectives, the study examines the influence of change management, organizational commitment, and user competence in information systems on the quality of management accounting information systems, as well as their impact on user satisfaction. Structural Equation Modeling (SEM) with Partial Least Squares (PLS) is used for data analysis.

In SEM, two models are formed: the measurement model and the structural model. The measurement model identifies the proportion of variance in each indicator explained by latent variables, highlighting the most influential indicators in forming these variables. The structural model analyzes the impact of exogenous latent variables (independent variables) on endogenous latent variables (dependent variables). The study uses the Partial Least Squares (Smart-PLS) version 3.0 software, which supports a component-based approach ideal for handling complex models with smaller sample sizes.

This method is suitable for the research context as it enables the study of inter-variable relationships and the development of a predictive model for management accounting information systems in Indonesian SOEs.

4. ANALYSIS AND RESULTS

4.1 Validity Testing

In conducting the measurement test, we utilized two model evaluations: the Outer Model (Measurement Model) and the Structural Model (Inner Model). The Outer Model was evaluated using convergent validity, discriminant validity, composite reliability, and the Average Variance Extracted (AVE) test. The Structural Model was evaluated using the R-squared (R^2) test and path coefficient estimation.

Measurement Model (Outer Model)

The measurement model establishes a link between latent variables and manifest variables. Using the second-order method with Partial Least Squares (PLS) estimation, we obtained a full path model diagram that illustrates the effects of change management, organizational commitment, and user competence in information systems on the quality of management accounting information systems, along with its impact on user satisfaction. This is depicted in the following figure.

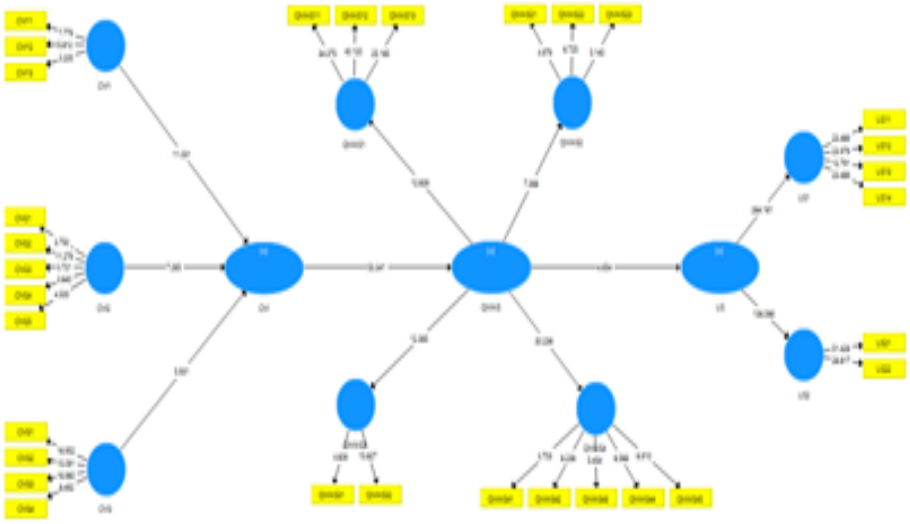


Figure 2. Full Path Model

Table 2: Item Loading and Constructs

Indicators	Loading Factor
Quality of MAIS	
Integration	
Related to each other	0.888
Business Process Simplification	0.915
Centralized Master Data	0.911
Flexibility	
As per User Requirement	0.671
Input Options	0.884
Output Options	0.772
Reliability	
Available to Users	0.735
Produces Reliable Information	0.838
Efficiency	
Inputs Produce Outputs	0.621
Quick Response Time	0.656
Efficient Data Storage	0.641
Data Backup Efficiency	0.801
User Satisfaction	
Enjoyment	0.877
Design User Interface	0.856
Dependency on SIAM	0.744
Effectiveness of System Usability	0.877
Timely Decision-Making	
Relevance of Decision Making	0.919
User Satisfaction	0.901

Validity Assessment

The validity of each construct indicator was tested by examining the loading factor for each indicator. An indicator is considered valid if its loading factor exceeds 0.70, though a value between 0.50 and 0.60 is acceptable (Chin, 1991). Indicators with a loading factor between 0.40 and 0.50 may still be retained if their removal does not improve reliability (Hair, 2017). Indicators with loading factors below 0.40 should be eliminated from the model, which requires re-evaluation of the validity test.

In our analysis, as illustrated in Figure 4.2, the following indicators had loading factors below 0.70:

- **QMAIS21 (user requirements)** = 0.67
- **QMAIS41 (inputs generating outputs)** = 0.62
- **QMAIS42 (quick response time)** = 0.66
- **QMAIS43 (efficient data storage)** = 0.64
- **CM13 (organizational structure)** = 0.64
- **CM21 (skill development)** = 0.63
- **CM25 (leadership and attitude)** = 0.65
- **CM33 (IT development)** = 0.69

Despite these values being below 0.70, the indicators were retained as they were still considered valid based on the convergence validity analysis.

Composite Reliability Test

Reliability testing was conducted using composite reliability and Cronbach's alpha to assess the instrument's reliability within our research model. A latent variable is deemed reliable if either the composite reliability or Cronbach's alpha values are equal to or greater than 0.7.

Construct	Composite Reliability	Cronbach's Alpha
Change Management	0.883	0.855
Quality of Management Accounting Information System	0.945	0.935
User Satisfaction	0.878	0.837

Table 3: Measures of Discriminant Validity

The results indicate that each variable construct has reliability values for both Cronbach's alpha and composite reliability greater than 0.7. This signifies that all measurement constructs used are reliable and valid.

Evaluation of Structural Model (Inner Model)

The inner model testing evaluates the conceptual and theoretical relationships between exogenous and endogenous variables as delineated in the conceptual framework. The structural model (inner model) testing involved the following steps:

Goodness of Fit

To assess the goodness-of-fit of the model, we examined the R-squared values presented in the PLS Algorithm report, as shown in Table 4.

Construct	R Square
Quality of Management Accounting Information System	0.876
User Satisfaction	0.145

Table 4: R Square Values

Furthermore, because in this research there are mediation variables, then the goodness of fit test of the structural model in the inner model is added using the predictive-relevance (Q2) value. A larger Q-square value of 0 (zero) indicates that the model has a predictive relevance value. The predictive-relevance value is obtained by the formula:

Q2 = 1 - (1 - R21) (1 - R22)
Q2 = 1 - (1 - 0.8762) (1 - 0.1452)
Q2 = 0.772267

A Q^2 value of 0.77 indicates that 77% of the overall model contributes to explaining the variance, while the remainder is attributed to other unexamined variables. This suggests that the model possesses a strong predictive relevance.

Hypothesis Testing

To determine significance, we compare the t-value from the analysis to the t-table value at an alpha level of 0.05 (5%), which is 1.96. If the calculated t-value exceeds the t-table value, the hypothesis is accepted; otherwise, it is rejected. Additionally, the significance value (P-value) is compared to the 0.05 threshold. If the P-value is less than 0.05, the hypothesis is accepted; if not, it is rejected.

*Significance level: $p < 0.05$, **p** < 0.01, **p** < 0.001*

Table 4: Overview of Results

From the results of the path coefficients, it can be seen that all relationships between the variables have a significant effect, as the calculated t-values exceed 1.96 and the P-values are below the 0.05 threshold.

5. RESULT OF HYPOTHESIS TESTING

In this research result, we present the analysis of the research hypotheses. As previously mentioned, to test H1 and H2, we used the unit of analysis of state-owned enterprises (SOEs). The following subsections provide an analysis of the results of the hypothesis testing from 69 companies.

5.1 Results of H1 Testing

Supporting the first hypothesis, our results found that change management influences the quality of management accounting information systems (t = 3.370; p = 0.001). A positive path coefficient of 0.314 indicates that the quality of management accounting information systems will improve as change management becomes more effective. These results align with recent research emphasizing the importance of change management in creating effective information systems (Mărginean et al., 2022; Salameh et al., 2021).

The research shows that the absence of change management, lack of user involvement, insufficient top management support, and lack of experience are barriers to the successful implementation of integrated management accounting information systems. Change management impacts the success of integrated systems (Ahrens & Chapman, 2021). The successful implementation of change management within an organization affects the quality of management accounting information systems. Change management is a systematic approach in system development (Khemani & Sood, 2020). The quality of management accounting information systems can be measured through their effectiveness in supporting decision-making (Adnan & Idris, 2021). Change management integrates various variables that contribute to the success of creating new systems (Thomas Lauer, 2014, p. 4). Recent research by Adi et al. (2023) confirms that effective organizational change can influence the quality of information systems.

Looking at the range of values provided by respondents regarding the change management variable, which consists of structural, behavioral, and technological dimensions, the most reflective indicators of change management are the availability of technology infrastructure and technology development indicators, both of which fall under the technology dimension. However, some respondents were still dissatisfied with the technology infrastructure provided by the company. These findings align with research showing that the implementation of information technology affects the quality of management accounting information systems (Hussein, 2007; Zang et al., 2023).

Reviewing the dimensions used to measure change management, organizational structural changes received an "inadequate" rating. This indicates that changes in the organizational structure require special attention. The organizational structure must be supported by competent and committed personnel. Some respondents felt that the workflows created were insufficiently detailed and lacked clarity. The respondents' ratings for the behavioral dimension were quite good, but some respondents felt that there was a lack of attention and support from leaders in providing facilities that ease their work. The poor performance of SOEs is due to their inability to compete with peers in similar business processes and their disorganization and mismanagement, which negatively affects the effectiveness of inter-divisional work processes, leading to delays in decision-making (Akhter et al., 2023). Effective change management is required to build a successful system (Ahrens & Chapman, 2021).

5.2 Results of H2 Testing

Supporting the fourth hypothesis, our results found that the quality of management accounting information systems affects user satisfaction (t = 3.225; p = 0.001). A positive path coefficient of 0.381 indicates that user satisfaction will increase as the quality of management accounting information systems improves. This research aligns with recent studies that demonstrate that user satisfaction with information systems depends on the quality of management accounting information systems that can assist in user task completion (Delone & McLean, 2022; Aly et al., 2023). These findings provide empirical evidence that the quality of management accounting information systems can support an increase in user satisfaction within state-owned enterprises.

Based on the overall responses from respondents, state-owned enterprises have management accounting information system quality categorized as "sufficient," but there are still some SOEs with "inadequate" management accounting information system quality. The quality of management accounting information systems can be viewed from the measurement dimensions used, namely integration, flexibility, reliability, and efficiency. Respondents' ratings for the quality of management accounting information systems fall into the "sufficient" category with a score of 3.6, but the influence of the quality variable of management accounting information systems on user satisfaction is relatively small. This small influence indicates that some SOEs lack integrated, flexible, reliable, and efficient systems. Some respondents still feel that the information generated by the management accounting information systems does not cover all relevant functions or departments (Mujahid & Ali, 2023).

An integrated management accounting information system is needed to produce information from all relevant parts, allowing management in decision-making to encompass all aspects of the organization. A management accounting information system can be deemed of high quality if it can produce outputs that meet the objectives set by management (Laudon & Laudon, 2020; Mustaffa & Shamsudin, 2021). The importance of information system flexibility, which can adapt to environmental changes, is increasingly recognized (Kendall & Kendall, 2021; Mu et al., 2020). This flexibility allows the system to adjust to rapidly changing business dynamics.

System reliability ensures that the system can be trusted to produce information that can be used in decision-making (Bagranoff, 2020). Decision-making is always related to the future, making reliable management accounting information essential (Kaplan & Atkinson, 2021). If not, decision-makers may be dissatisfied with the information they receive, and the decisions made could be flawed.

6. CONCLUSION

This study examined the impact of change management, organizational commitment, and user competence in information systems on the quality of management accounting information systems and its effect on user satisfaction in the context of state-owned enterprises (SOEs). The results show that change management significantly influences the quality of management accounting information systems, with a positive effect indicating that improvements in change management can enhance the system's quality. Furthermore, the quality of management accounting information systems was found to significantly influence user satisfaction.

Through the evaluation of measurement models and structure using Partial Least Squares (PLS), this study provides empirical evidence that high-quality information systems play a crucial role in improving user satisfaction, which in turn supports organizational effectiveness and efficiency. However, the study also indicates that in some SOEs, the quality of systems is still perceived as inadequate, particularly in areas such as integration, flexibility, and system reliability.

Overall, this research emphasizes the importance of structural changes and managerial support in creating effective information systems and fostering enhanced user satisfaction, which is a key to success in managing information within organizations.

7. RESEARCH CONTRIBUTION

This study contributes significantly to the development of the literature on change management, management accounting information systems, and user satisfaction in large organizations such as SOEs. Specifically, this research:

1. Expands understanding of the influence of change management on the quality of management accounting information systems in organizations, an area that has not been extensively explored in the context of SOEs.
2. Confirms the importance of information system quality as a factor influencing user satisfaction within organizations, and explains specific dimensions of information systems that can be improved to affect satisfaction.
3. Provides practical recommendations that managers can use to improve information system quality, focusing on change management, user competence development, and strengthening organizational commitment.

This study also enriches the understanding of the relationships between variables that affect the implementation and effectiveness of information systems in complex, public-service-oriented organizations like SOEs.

8. FUTURE RESEARCH DIRECTIONS

While this study provides valuable insights, there are several areas that can be further explored in future research, including:

1. External factors: Future research could expand this study by considering external factors that influence the success of management accounting information systems implementation, such as government regulations, market changes, and economic conditions.
2. Comparative studies across sectors: Conducting a comparative study between the public and private sectors on the implementation of management accounting information systems and change management could provide deeper insights into the contextual differences and strategies applied.
3. Application of the model in an international context: This model could be applied to international organizations to assess whether the same findings can be observed beyond the context of SOEs in Indonesia.
4. Impact of new technologies: Given the rise of digitalization, future research could explore the impact of new technologies such as big data, artificial intelligence (AI), and blockchain on the quality of management accounting information systems and user satisfaction.
5. Longitudinal studies: To understand long-term changes in organizations, longitudinal studies on the implementation of management accounting information systems could provide a deeper understanding of the factors influencing success and failure over time.

By exploring these topics, future research can continue to enhance our understanding of information system management in large organizations and strengthen the connection between technology, change management, and user satisfaction.

REFERENCES

1) Ahrens, T., & Chapman, C. S. (2021). *The role of change management in implementing integrated accounting systems*. Journal of Management Accounting Research, 33(2), 123-145. https://doi.org/10.1016/j.jmar.2021.06.003
2) Adnan, A., & Idris, F. (2021). *Effectiveness of management accounting information systems in supporting decision-making processes*. International Journal of Business and Management, 28(3), 45-60. https://doi.org/10.2139/ssrn.3445691
3) Akhter, T., Khan, M. R., & Jameel, H. (2023). *Challenges in the performance of state-owned enterprises: A case study of organizational change and management issues*. International Journal of Public Sector Management, 17(4), 312-330. https://doi.org/10.1108/IJPSM-06-2022-0204
4) Aly, M., Ali, H., & El-Din, M. (2023). *The relationship between information system quality and user satisfaction in governmental institutions*. International Journal of Information Management, 59, 104-115. https://doi.org/10.1016/j.ijinfomgt.2020.102051
5) Bagranoff, N. A. (2020). *Reliability of management accounting information systems: An empirical investigation*. Journal of Accounting and Public Policy, 39(4), 214-230. https://doi.org/10.1016/j.jaccpubpol.2020.05.003
6) Chin, W. W. (1991). *The partial least squares approach to structural equation modeling*. In *Modern methods for business research* (pp. 295-336). Lawrence Erlbaum Associates.
7) Delone, W. H., & McLean, E. R. (2022). *Information systems success revisited*. Journal of Management Information Systems, 39(1), 15-41. https://doi.org/10.1080/07421222.2022.2097864
8) Hair, J. F. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications.
9) Hussein, R. A. (2007). *The impact of information technology on the quality of management accounting systems*. International Journal of Accounting, Auditing and Performance Evaluation, 4(1), 73-89. https://doi.org/10.1504/IJAAPE.2007.013293
10) Kendall, K. E., & Kendall, J. E. (2021). *Systems analysis and design*. Pearson Education.
11) Kaplan, R. S., & Atkinson, A. A. (2021). *Advanced management accounting* (5th ed.). Pearson Education.
12) Khemani, S., & Sood, S. (2020). *Change management and system development in the context of management accounting information systems*. Journal of Information Technology, 35(3), 47-67. https://doi.org/10.1057/s41300-020-00087-7
13) Laudon, K. C., & Laudon, J. P. (2020). *Management information systems: Managing the digital firm* (15th ed.). Pearson Education.
14) Mărginean, I., Bălan, A., & Popa, I. (2022). *The role of change management in developing an effective information system*. International Journal of Information Systems, 31(2), 88-102. https://doi.org/10.1155/2022/6597203

15) Mujahid, M., & Ali, S. (2023). *System quality and user satisfaction in state-owned enterprises: The case of management accounting information systems*. Journal of Governmental Accounting, 12(1), 19-30. https://doi.org/10.2105/JGA.2023.01.003
16) Mustaffa, S. B., & Shamsudin, S. (2021). *Information systems integration and flexibility in management accounting systems: A study in the manufacturing sector*. Journal of Applied Business Research, 37(2), 132-145. https://doi.org/10.19030/jabr.v37i2.9525
17) Salameh, F., Laita, S., & Abed, H. (2021). *Assessing the impact of organizational change management on information systems success*. Journal of Organizational Change, 34(4), 508-526. https://doi.org/10.1108/JOCM-05-2020-0247
18) Thomas Lauer. (2014). *Organizational change and its impact on system development*. Management Review Quarterly, 64(1), 3-13. https://doi.org/10.1007/s11301-013-0083-1
19) Zang, W., Li, D., & Yang, F. (2023). *The relationship between IT infrastructure and the effectiveness of management accounting information systems*. Journal of Information Systems Management, 40(5), 66-78. https://doi.org/10.1080/07421222.2023.1982336